

COLLIERY DAM PARK QUESTIONS AND ANSWERS

What is the Colliery Dam Preservation Society?

On October 29, 2012, Nanaimo City Council announced that the upper and lower Colliery dams in South Nanaimo would be removed and the lakes drained. In November, a group of people dedicated to both the preservation of the Colliery Dam Park and the safety concerns of the dams, came together and began the process of urging Nanaimo City Council to explore the option of keeping both lakes intact, while at the same time, ensuring public safety.

Why does the C D P S want to keep the dams?

The park is an integral part of our history and an important part of our present. Generations have grown up around the lakes, which provide incredible recreational value. Many of us enjoy summers of swimming, fishing and picnicking beside the lakes. Just as waterfront real estate is highly valued, our Colliery Lakes provide our community with accessible waterfront. It is why many of us choose to live in the area. The Colliery Dam Park, with its lakes, is as important to our community as is Piper's Lagoon, Westwood Lake, Linley Valley, or Neck Point, is to others. This is **our** special place.

Do most people want to keep the lakes?

The feedback that we have received is overwhelmingly supportive of keeping the lakes. About 600 people came out on a cold, wet, November night to voice their support. Our last community meeting to discuss options was attended by 150 people and from feedback received, there was only one person supporting the city's plan of dam removal. The general feeling is that the lakes are the essence of the park.

What is the Colliery Dam Preservation Society's objection to naturalization of the Chase River?

It is our position that this area has had over 100 years to develop its own eco-system. It is home to many species of birds and wildlife, including beavers and otters. This type of environment is rare in an urban setting. We believe it is natural and beautiful as it is.

If the Lakes are removed will there still be a park?

The city has said that the park will continue to exist but, it will not resemble anything like its current state. There will be walking trails and bridges

around two deep chasms with only a small stream in the summer at the base. One city staff member agreed that fencing may have to be erected around the chasms due to danger of the grade.

Is there concern of damage to the Chase River if the dams are removed?

The Chase River is a good salmon spawning river. If the dams are removed, it will be a very difficult task to control the silt and sediment in the existing lakes in order to ensure that the river is maintained as a viable fish-bearing stream.

Is there a risk of the dams collapsing?

There were safety concerns on record for years regarding the state of the dams. The dam safety review of 2003 highlighted specific concerns regarding the ability of the dams to withstand a seismic event, as well as to safely convey flood flows. The review of the structures in 2008 concluded that up to 10 people would die in the event of dam failure. The seismic study of 2010 noted a similar consequence and included a report for the work required. It was also suggested at that time, that an early warning system be put in place until the dams could be made safe and that the public should be consulted.

Was there anything done to reduce the risk during the last few years and were people informed?

The engineer of the 2010 study stated in his report that dam removal, or even prolonged drawdown of the reservoir could be a contentious issue as the dams are part of a popular park. He also noted the importance of including the community in the decision. However, the public was not informed. An early warning system was not put in place as was suggested in the report. This report was never brought to a city council meeting before Oct 22, 2012. An inundation study was then requested.

We have correspondence between a resident on March 12, 2011 and our City Manager of Water Resources. The resident wrote that she lives downhill from the park and wanted to know what would be the chances of the dams failing in the event of a major earthquake. She was told that there was no reason for a concern. Please refer to [letter from City Manager](#) of Water Resources to the concerned resident, dated March 22, 2011.

Why was the decision to remove the dams brought to city council on an emergency basis to an in-camera meeting on Oct. 22?

The inundation report to determine consequence in the floodplain was completed in 2012. This report showed an extreme consequence if the dams were to fail. People in the floodplain were then alerted and encouraged to sign up for an early warning system. Since that initial emergency situation, City staff have said that the dams were stable and there was no immediate risk. Given that you can't have it both ways, our group has continuously pushed for the dams to be drained immediately to ensure that people in the flood plain are safe. We have also described how the dams could be drained by siphoning and have provided cost estimates. We have been told that environmental reviews would be done first, and then the dams would be drained in the summer.

Is this flood inundation study accurate?

It is as accurate as the software allows. It is based on a worst case scenario with many assumptions, which includes both dams failing in a matter of three minutes each due to a seismic event, neither dam having been upgraded, the lakes being at full capacity, the event occurring at night, and people not being aware of the potential consequence. The engineer also qualifies his estimates by stating that it is very difficult to predict consequence.

Is a flood inundation study required for every dam and how often are they done?

We asked the Dam Safety Branch. Please refer to [correspondence from Scott Morgan](#) dated, March 25, 2013. The first response was confusing so we asked for clarification. Staff told us in our meeting on Dec. 06 that they were unsure as to which 10 people would die in the case of dam failure thus prompting the study.

Why were options not proposed to keep the dams and the lakes rather than remove them?

There appears to have been a decision made years ago that the Colliery Dams would not be given similar treatment as was Westwood Lake, which was upgraded in 2008. Staff said that it was a no-brainer to fix Westwood but that Colliery Dam was another issue. Please refer to [Comparison Analyses of Westwood Lake and Chase River Dams](#) by Lawrence Rieper, March, 2013.

Staff also gave direction in 2009 to the engineer, who did the seismic study, that “significant investment in new dams or extensive or expensive in-situ treatment of the fill within the dams to maintain a public park may not be

considered to be a wise use of taxpayer funds (page 40 Seismic Study). This seems to indicate that a decision was made in 2009 by staff without direction from council, that the Colliery Park dams were not worthy of keeping. As has been quoted by staff several times “They serve no real purpose. They are for recreation only.”

Have the minutes of the in-camera meeting on Oct. 22 ever been released?

The minutes were requested, but Mayor Ruttan said that they would need legal advice before releasing the minutes and there was no time frame offered.

Is the city now considering options to keep the dams?

Many in our community were in shock after the announcement was made to remove the dams and there was significant outrage that this was done without community consultation. The community made it very clear that the decision to remove the dams was unacceptable and that options needed to be explored to keep the lakes. After presenting our ideas for keeping the Dams, Council then directed that options be explored. However, despite numerous requests for the plan of deconstruction of the dams be put on hold, this process was to continue as well.

What does the Society feel are the viable options to keep the dams and ensure that the safety concerns are addressed?

We have suggested rehabilitating both dams without their removal as this would be the least costly measure. After discussion with the Dam Safety Branch regarding reasonable safety measures, our group went before council on Dec. 17 to make a presentation based on rehabilitating the dams to a 1:3000 year standard. All of the information that Lorne presented to council on this date was taken directly from engineering reports that has cost the city tens of thousands of dollars. The proposed cost, as indicated in the 2010 study, was about 3 million dollars. Our group also offered information from a qualified engineer regarding the potential for hydro generation at the dams. As the city was budgeting 7 million for deconstruction, we thought that this proposal should be given strong consideration. The Dam Safety Branch then told us that the dams could no longer be built to the standard proposed. Council requested that costs for building new dams be included but this would most certainly be the most expensive option. We have now proposed

that the dams be rehabilitated to **withstand** an event that could occur some time in the next 5000 years (1:5000) and would include reducing the volume of water in the dams to allow for reclassification. This would make the dams the strongest structures that we are aware of in our region. By comparison, the new emergency ward at the Nanaimo hospital was built to a 1:3000 year standard and new schools to a lesser standard. We have asked that the city determine the amount of water that would have to be removed to allow for a lower classification of the dams. We have been told, at this point, that they will not pursue this re-calculation.

Information from the city indicates that the dams need to be built to a 1:10000 standard. What does that actually mean?

In Oct. 2011, the Provincial Dam Authority adopted federal guidelines. This highest standard is difficult to describe as it is an effort to build to an unachievable level. One engineer contracted by the city has said that “the structure should withstand God himself attempting to strike down everything on earth.” Another engineer in the U.S. who works on seismic issues for nuclear plants, said that 1:10000 is not a real number and that they do not use these numbers. The Dam Safety Branch has informed us that B.C. Hydro is spending \$20 million dollars of our money to investigate these standards. Imagine what the associated costs would be if every one of the province's 1,650 dams had the same inundation study done and were required to be built to these new standards that are being demanded for our little lakes.

Would having less water in the lakes impact their health?

In general, a deeper lake is healthier. However, losing some water in the lakes would probably not dramatically impact their viability and would still allow for recreational use, including fishing and swimming. Also, there may be the added value of having more beach areas. Placing clean fill in the lakes and/or deepening the spillways are ways to decrease volume. However, it will be important to know how much volume would need to be removed in order to determine the impact on the lakes.

Has it been suggested that only one dam should be removed?

We have talked about that at some length. It is our position that the city should never have proposed destroying both dams and that keeping one should have been a starting point for discussion. After all, this would have been reasonable in terms of both cost and consideration of the community. One staff member was clear that this option was never mentioned in 2010

when they had discussed amongst themselves the removal of the dams. We have told staff and council that the community has stated very clearly that they want to have water in both lakes and that this goal should be achievable.

A letter from the Dam Safety Branch indicates that the Colliery Dams are the most dangerous in the province. Is this true?

The letter stated that the Middle and Lower Chase River Dams are currently at risk Level 1 (extreme). This is the highest level.

This letter arrived three months after the emergency meeting in Oct. and happened to be the same day that our group presented to city council a request to arrange a meeting of stakeholders including the Dam Safety Branch. In a previous conversation, Lorne had been told by DSB that his proposal on Dec. 17 would be acceptable, as logic dictated that if the dams were upgraded, they would not fail and the sequence of assumed events described in the inundation report would not occur

When will we know the costs for rebuilding and rehabilitation of the dams and how can it be confirmed that these estimates are accurate?

The costs are not currently known. Any estimates that have been publicized are nothing more than best guesses. There is now work being done to more accurately predicts costs for the different options. However, we have been told that these estimates will have a plus or minus 35% range. Given that there has been no previous willingness to consider options, and the fact that the same company who was hired for deconstruction of the dams is also the company looking at alternative options, there is legitimate skepticism about this process. A peer engineer has also been hired to review the findings at a further cost to taxpayers of \$28,000. Our group had advocated for a separate, local firm to consider options, thus making a peer review unnecessary.

Is there any chance for other levels of government to contribute to the costs of keeping the dams?

Our MLA Doug Routley has spoken in the legislature regarding the importance of retaining the dams for our community, while Ron Cantelon has also stated that he would pursue support should the city make a request. Mayor Ruttan has since asked senior levels of government for financial assistance with this project.

Is it absolutely necessary that a decision be made in April to remove or rehabilitate the dams?

Although the Dam Safety Branch is expecting the city administrators to make sure the Dams are made safe as soon as possible, the timeline proposed by the city is arbitrary. The lakes can be drained at any point. This would eliminate any risk to our citizens and allow for a complete inspection of the structures, which cannot be done until they are drained.

Is your group now satisfied that the city is making a sincere effort to deal with your concerns?

Many people have come forward from our community and volunteered time and expertise in an effort to stop the destruction of this precious part of our city and yet, thousands of taxpayers' dollars have been used to produce glossy brochures, advertisements, and support communication from staff to discount, minimize, or ignore the community's very clear desire to keep the dams. On two occasions, staff signed contracts in support of their deconstruction plan, just days before our group was able to provide input.

It is completely unacceptable that our citizens were not previously advised of the risks, that development was allowed to continue in the floodplain, that new subdivisions were encouraged directly across from the park on Harewood Mines Road with no warning that there were plans to remove the dams, and that this issue suddenly became an emergency that required a drastic decision to be made on an immediate basis. This entire process has been shameful and has put into question the ability of the community to trust that their elected city officials and hired city administrators have their best interests at heart.