

Replacement of Kasshabog Lake Dam Logs

October 17, 2013

Bancroft District, Water Control Infrastructure Managers and Operators, Service Providers and Colleagues,

The logs at the Kasshabog Lake dam, <http://goo.gl/maps/AbXWz>, were changed yesterday for the first time in decades. The following photos illustrate some of the steps taken in the unusual method used to remove and replace the logs.

This photo shows the leakage around the old logs. The bottom two are an even older vintage than the ones above. At seven logs deep it is very difficult to remove them all at once, without drawing the lake down and shocking the North River with high flows. Kasshabog Lake is shallow, rocky and has 600 cottages around it so there is lots of interest in what goes on at the dam.



This project called for outside expertise so a request for tenders to replace the stop logs was issued. The RFT stipulated that a cofferdam was to be used with limited leakage. The camouflaged contractor in this site meeting photo was successful with his bid.



The contractor devised a scheme to place logs on the downstream side of the dam to temporarily block the flow. Without drive-up access, all materials were brought in by boat from a nearby marina. The 5 metre long fir logs do float but out of the water they weigh 200 kg each.



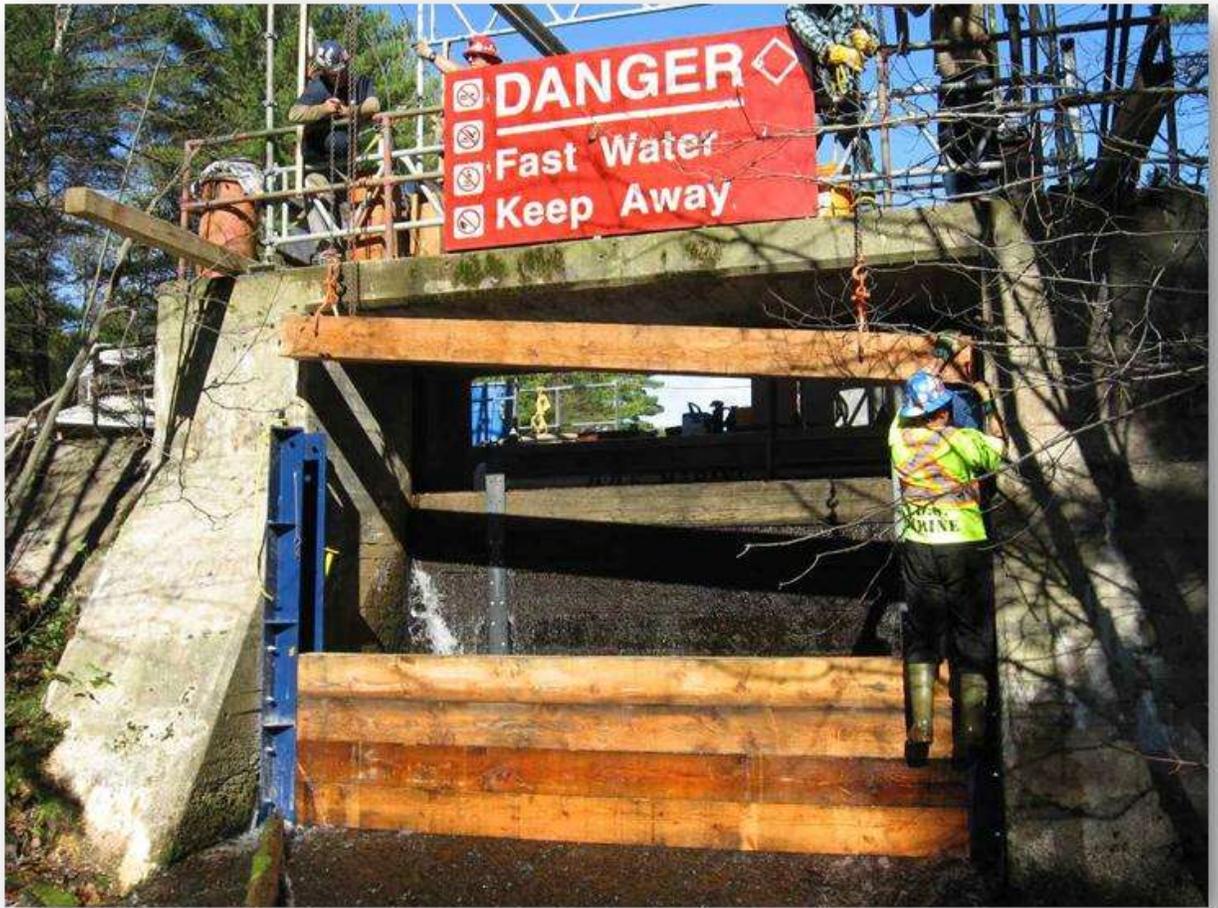
The temporary overhead gantry cranes were used to hoist the logs up from the water, move them from one side of the dam to the other and into position. Below, the temporary logs are being cut to the correct length to fit into the service gains, before being lowered into position.



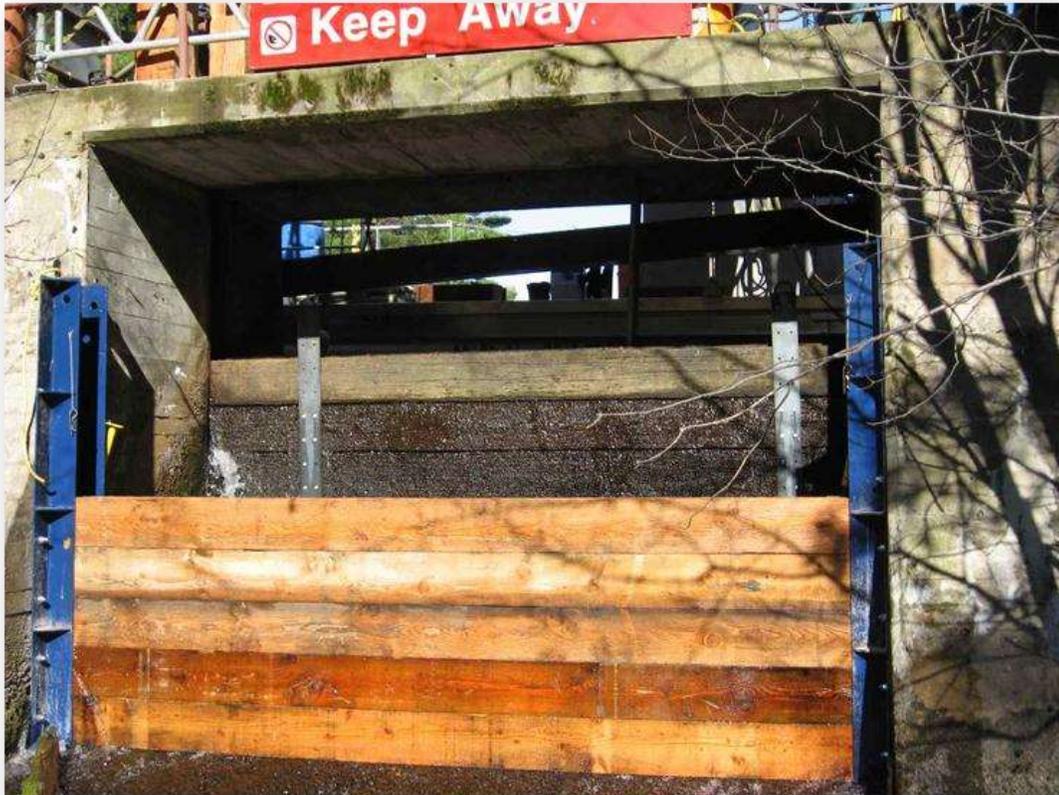
The contractor custom manufactured these blue service gains and attached them to the downstream side of the dam. They hold the logs in place that hold back the water while the olds logs are being removed and replaced.



Log being lowered into the service gains:



Before this the contractor bolted the old logs together using two flat pieces of steel.



Using the flat pieces of steel on the old logs the contractor lifted them up a little, using a chain hoist. This allowed water to pass underneath the bottom log, flushing out the sill, and filling the space between the two sets of logs with water. The old logs began to float and a diver was used to unbolt them from one another so they could be lifted out separately.



After the old logs were removed some debris in front of the dam was removed to make sure none of it would get stuck underneath the new bottom log or between the new logs. The new logs were then lowered down into place. This picture also shows one of the black jacks, beside the pail, that was to be used to jack the new logs down, pressing them into place and sealing any gaps between the logs to prevent water leakage.



These are the old logs. They will be disposed of off-site.



Today the temporary logs, service gains and overhead gantry were being removed to restore the dam to the way it was, with the exception of its shiny new logs.

Notes from:

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