

Bluefish dam back on schedule



photo courtesy of NWT Power Corp.

Construction of the replacement Bluefish Dam, located 400 metres downstream of the original, 70-year-old dam, started in March 2011.

Excellent winter road conditions permit transport of materials and equipment to site

by Samantha Stokell
Northern News Services
NWT

An ideal ice road season this winter has allowed the Bluefish dam project to finally transport materials and equipment to the site, 20 km north of Yellowknife between Bluefish and Prosperous lakes.

The Mackenzie Land and Water Board approved the Northwest Territories Power Corporation land use permit on April 1, opening the door for construction to begin.

NTPC delayed the project for one year due to a poor ice road season, which did not allow for the transport of the heaviest equipment.

This year, the project is right on schedule. A 49-person camp is established, a fuel storage tank and fuel are on site and a temporary bridge across the river is 90 per cent complete. Construction will be done by North American Construction Ltd., based out of Edmonton.

The project went out to tender in April 2010 and North American Construction was awarded the project after a competitive discussion with the other lowest bidder.

Northern and Aboriginal content should comprise \$10 million through supplies and services. Estimates currently put the budget between \$33 and \$37.5 million, depending on what the land and water

board deems it requires.

"They might require permits for site mitigation and fish monitoring," said Mike Bradshaw, director of corporate communications for NTPC. "We won't know the budget until we hear from them."

The new dam will replace the 70-year-old rockfill timber crib dam, which suffers from timber deterioration on the overflow spillway and collapsing timber crib. In 2008, NTPC added a spillway when a leak threatened to break the dam.

Located 400 metres downstream along the Yellowknife River, the replacement dam will be constructed with local rock fill and an impermeable membrane of stainless steel.

Construction crews will blast a two-metre-deep trench, line it with concrete and then seam weld panels of stainless steel into a single panel in the centre.

Local rock will be blasted to a fine sand and gravel and then placed around the stainless steel centre. The gravel will increase in size, up to 12 inches, to form the exterior of the dam.

"The bigger rocks provide stability and protect against erosion," said Daniel Roberts, director of engineering for NTPC. He added, stainless steel is not commonly used in dam construction but is less prone to corrosion and is a good compromise between function and cost.

The dam will measure approximately 400 metres across the river, between 10 and 13 metres tall and 5.5 metres across, with the base measuring between 40 and 50 metres.

NTPC has scheduled for completion of the spillway, bottom outlet construction and dam construction that is not in-stream before October 2011. In March 2012, construction will start on in-stream work, construction of the diversion and closing the dam across the Yellowknife River.

It should be operational in 2013, with decommission of the former dam starting in March 2013.

The dam provides 20 per cent of Yellowknife's electrical needs and also provides energy for Behchoko and Detah.

"The bigger rocks provide stability..."



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