

# Mayo B Project



July 2010

## Mayo B Progress Report

The Mayo B construction site is a busy place these days. With all the necessary permits in hand, land-based work began in early June. The construction contractor Peter Kiewit Infrastructure Company (formerly Peter Kiewit Sons Ltd.) has set up a work camp that includes, along with other things, office buildings, equipment storage facilities and living quarters. Currently there are about 75 people working on site and the workforce will soon exceed 100.

The route for the penstock (underground pipe) that will carry water from Wareham Lake to a new powerhouse three kilometers downstream from the existing powerhouse has been cleared and excavation of the surface soil has started.

Kiewit has set up a hiring office in Mayo and is working with the community and the Na-Cho Nyak Dun to ensure local employment and business opportunities during construction. See *page 3* for details about the numbers of people hired and local businesses working on this project.

## What to Expect During Tunneling

Part of the Mayo B construction involves tunneling through some rock so that our new penstock can be connected to our existing infrastructure. The tunneling will occur on and off for about two months starting in early August. This will involve some blasting of rock. However since it will take place underground you should not hear the noise and you should not notice any falling rocks. As a safety precaution though, we ask that you keep away from the penstock route during construction.

Yukon Energy will post notices around Mayo to let you know when the blasting will begin, and will also notify you when it has ended. If you would like to be notified by email, please send a note to [janet.patterson@yec.yk.ca](mailto:janet.patterson@yec.yk.ca) and ask to be put on an email list.



*Aerial view of cleared penstock route to the Mayo B powerhouse.*



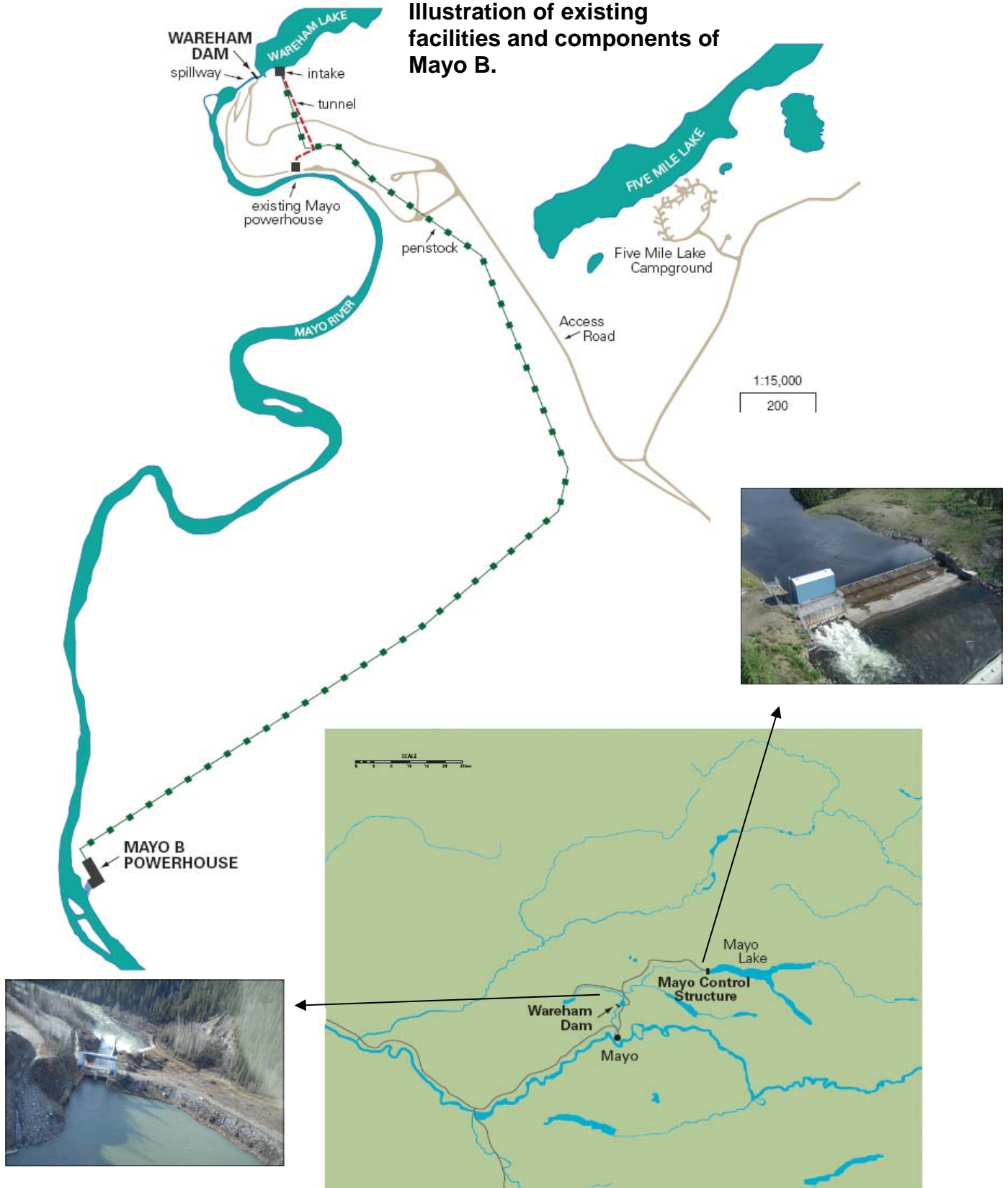
*A closer view of the cleared penstock route and the location for the portal, which is the area where the penstock will enter underground.*

## Looking for Firewood?

During the initial clearing at the Mayo B site over 110 cords of spruce, pine, and birch were salvaged. This material is available by permit from the Yukon government's Natural Resource Office in Mayo (996-2343) for personal use only. Wood is available on a first come, first served basis.



### Illustration of existing facilities and components of Mayo B.





## Job Opportunities

Yukon Energy and Kiewit are working with the First Nation of Na-Cho Nyak Dun and the community of Mayo to provide local employment and business opportunities during the construction of Mayo B. As well, Yukon Energy and the First Nation of Na-Cho Nyak Dun have signed a Project Benefits Agreement. The agreement provides the First Nation an investment opportunity equal to at least 25 percent of Mayo B ownership and it will provide priority hire to qualified Na-Cho Nyak Dun citizens by Kiewit and all its subcontractors.

Non-First Nations Yukoners are also encouraged to apply for the up to 120 anticipated jobs. Kiewit is in the process of hiring carpenters, welders, welders' assistants, mechanics, heavy equipment operators, survey helpers and labourers.

Of the 74 people working on site right now, 35 of them are Yukoners (both NND citizens and non-First Nations citizens).

Yukon businesses involved in this project include:

34783 Yukon Inc.  
Acklands Grainger  
Ben's Electric  
EBA Engineering  
Environmental Dynamics Inc.  
Ewing Transport  
Finning  
Laberge Environmental Services  
NND Development Corp.  
Northern Climate Engineering  
NuLine Power  
Underhill Geomatics  
Wilfs Excavating

## Cost Breakdown

The total estimated cost of Mayo B and the Carmacks-Stewart Transmission Project Stage 2 is \$160 million. The federal government will pay up to \$71 million of that amount as part of its Green Infrastructure Fund. The Yukon Development Corporation, Yukon government and Na-Cho Nyak Dun will contribute \$52.5 million. Electrical customers will provide the remaining \$36.5 million. Because of the government contributions and because the cost of the projects can be spread out over 50 years or more, these initiatives will not result in an increase in electricity bills.

## Summer Repairs

With so much focus on the Mayo B project, you might not know that work was also done earlier this summer on our existing Mayo facilities: in particular, the Mayo Lake control structure. The wooden planking on the overflow section of the structure was deteriorating. Contractors removed the planking from the top three levels, re-filled and compacted the underlying cribbing with rocks and gravel, and installed new decking. Similar work was done around the near-by building that houses the valves for the control structure.



*Before and after*



## Studying Fish...



*NND summer student Charles Blysak helped with the fish netting program on Mayo Lake.*

Yukon Energy is currently looking into the possibility of using additional water from Mayo Lake for power production at the Mayo generating plant. Before we know if this is feasible we must study the lake's ecosystem to better understand what the potential effects might be.

To that end Yukon Energy recently finished a fish gillnetting program, aimed at providing information about the health and age class strength of the lake's trout and whitefish. This is similar to studies done on Aishihik Lake every five to ten years.

The number of fish allowed for capture was set after consulting with NND, Yukon Fisheries and the Department of Fisheries and Oceans. In total 346 lake trout and 408 lake whitefish were processed.

Biologists took the otoliths (small bones located in the head that allows scientists to determine the fish's age). Then the NND distributed most of the fish to people in the community.

Once we have the final results of the study we will share the information with NND, Yukon Fisheries, Fisheries and Oceans and other interested parties.

## ...and Watching Birds

Before any clearing could take place on the Mayo B site, it was important to have bird nesting surveys done to ensure the protection of any migratory



birds in the area. In most cases Yukon Energy does project clearing in the winter when migratory bird nesting isn't an issue. However for the Mayo B project the clearing couldn't start until the spring, once we had all our permits.

A team of biologists from EDI Environmental Dynamics surveyed about 30 hectares and identified 12 active nests. They flagged the nests with brightly-coloured tape and marked a ten metre buffer around each one.

Our contractor is not allowed to do any clearing inside the buffer until biologists have determined the nests are no longer in use (all nests are usually abandoned by the end of July and are only used one season). The nesting survey work will continue for another week or so until all areas are cleared.



*A team of biologists works together to locate bird nests in the Mayo B construction zone.*





## You Asked...

Residents of Mayo have asked a number of questions concerning the Mayo B project and about Yukon Energy's operations in general. Here are some of those questions, answered.

### **Why is Yukon Energy building the Mayo B facility?**

Yukon Energy is committed to meeting the Yukon's growing demand for electricity by producing clean energy. The Mayo B project enhances existing hydro infrastructure to increase the power that can be generated at the site from the current five megawatts to 15 megawatts.

### **What economic benefits were negotiated for the First Nation of Na-Cho Nyak Dun (NND) as part of the Yukon Energy and NND agreement?**

The agreement provides NND with a long term source of income through an investment opportunity equal to at least 25 percent of Mayo B ownership. As well, Yukon Energy contributed \$100,000 to NND at the Yukon Energy/NND Agreement signing ceremony this spring. Another \$100,000 will be paid to NND in one year. If the Mayo Lake project is approved by regulators an additional \$800,000 will be paid out. The Mayo Lake project is looking at the future use of water for hydro-electrical production (additional information provided in the next question).

Kiewit has subcontracted several components of the work and documented benefits to NND were required with each subcontract. These benefits include:

- Priority hire to qualified NND citizens
- Percentage of profits or revenue to NND Development Corporation
- Where appropriate a fixed dollar amount for equipment and labour for use on NND projects
- An opportunity to acquire equipment when the project is complete
- An NND Liaison hired for the duration of the project as a point of contact between Kiewit and NND members looking for work/employed on site.

### **What is the Mayo Lake project? What work is being done this summer?**

The Mayo Lake project would see Yukon Energy using additional water from Mayo Lake for power production at the Mayo generating station. Yukon Energy is doing various field studies to better understand what the potential effects might be. If the studies suggest it would be possible to use additional water without significant adverse impacts, Yukon Energy would likely prepare and submit a proposal to the Yukon Environmental & Socio-economic Assessment Board for review. The Corporation would also need to apply to the Yukon Water Board to amend the existing water use license on the lake and to the Department of Fisheries and Oceans for a Fisheries Act Authorization.

### **How is Yukon Energy supporting NND with work underway on Mayo Lake?**

- NND government staff and expenses associated with the study and review of the Mayo Lake project.
- NND involvement in the preparation and review of information related to the potential submission of a project proposal to YESAB for Mayo Lake.
- NND-led research projects associated with the upper Mayo River, Roop Lake Wetlands, a Mayo Lake control structure fishway feasibility study, heritage training and study of traditional uses of Mayo Lake, artefact recovery, and heritage site protection/preservation on Mayo Lake.

### **How are heritage sites in the Mayo B construction area being protected?**

A detailed heritage resources study was done as part of the Mayo B project planning in 2008 and 2009. Follow-up work was done later in 2009 and again in advance of construction in the spring of this year. As part of the project design, heritage resources that we knew about were protected where possible. For sites that could not be avoided, detailed recovery operations were done in consultation with the NND and Yukon governments.



*A buffer zone protects an historic log building near the Mayo B site. The area around the building will be recontoured and revegetated after construction is finished. Interpretive signage will also be installed on the site.*

### **Will our power go out or be intermitted because of the construction?**

We don't expect there to be outages as a result of the construction. However there are times when events happen that are out of our control i.e. lightning strikes on the line, a vehicle hitting a power pole, etc. What we can promise is that Yukon Energy will do everything possible to ensure you don't have power outages as a result of the Mayo B construction.

### **Will we suffer more power outages in Mayo because the grids are interconnected?**

No. The interconnected electrical system will work the same way the system currently operates and should not result in more outages.

### **When will the salmon habitat enhancement work be completed below the new powerhouse? What type of habitat work is being done?**

We expect this work will be done in 2011 and 2012. Yukon Energy is working with the Department of Fisheries and Oceans (DFO) and local stakeholders (e.g. NND) to finalize plans for a fish rearing channel directly downstream of the new Mayo B powerhouse and possibly the addition of more spawning gravel to the river downstream of the existing Mayo A powerhouse. These measures are in addition to higher minimum flows for the Lower Mayo River than are currently licensed.

### **Why do we need to share the power generated here? Why don't we get a cheaper rate because the hydro is generated here?**

Yukon Energy's job is to provide clean, affordable and reliable power to all Yukoners and not just those in one particular community. People in Whitehorse don't receive a break on their power because of the Whitehorse dam, and people in Aishihik don't get a break on their power because of the Aishihik dam. Our regulator, the Yukon Utilities Board, has decided that everyone in the territory, no matter where they live, should pay the same rate for the first 1,000 kilowatt hours of power. Above that, isolated diesel communities such as Old Crow pay more than you do for power.

Yukon Energy, Box 5920, #2 Miles Canyon Rd., Whitehorse, Yukon Y1A 6S7  
867.393.5333

janet.patterson@yec.yk.ca

[www.yukonenergy.ca](http://www.yukonenergy.ca)

[blog.yukonenergy.ca](http://blog.yukonenergy.ca)