Happy Holidays!

- BC Hydro and ASL-JV were pleased to participate in the Campbell River Big Truck Parade on December 4.
2015 Year In Review

• A lot of good work, pride and teamwork has happened on the site this year and now is a good time for reflection. We’re 18 months in to the five year construction period. There’s now just over a kilometre of underground tunneling and work is progressing at all the key site areas. Looking forward to an exciting 2016 as the project continues to take shape.

From January 2015, two pictures showing the beginning of the service tunnel entrance. Much work has happened over the last 12 months.
Project Status

- Bracing of the truss frame at the intake cofferdam is complete – this included some dredging to clear space near shore for work on the frame;
- Drilling and blasting to build the access road to the new water intake is substantially complete with blasting set to begin for the water intake structure;
- Earth works for widened road access from the existing dam along the penstock corridor to the new surge tank continued with power pole relocation beginning at the end of December;
- Probing boreholes and other tests have been occurring to assess alternative routing around the loose rock area in the main access tunnel. A proposed detour tunnel route to go around the area has begun (see page 14 for more information);
- Excavation of bench two, of seven, within the powerhouse cavern is complete. More than 15 metres of the vertical excavation now complete; and
- Adit D (connecting power tunnel to main access tunnel) continues to progress, with roughly 40 metres completed.
Project Schedule

- December 2015: Intake Operating Gate Structure excavation underway;
- January 2016: Drilling and blasting for draft tube elbow off surge chamber begins;
- January 2016: Begin forward progress on new alignment of main access tunnel;
- Mid-January 2016: Begin excavation of surge tank area;
- April 2016: Water intake gate installation work under John Hart dam;
- Spring 2016: Surge chamber blasting and excavation to be complete; and
- Spring 2016: Concrete placement work to begin in powerhouse.

View of powerhouse cavern looking back to the service tunnel entrance.
Project Awareness

- The John Hart project recently had coverage in the journals Hydro Review and North American Tunneling; and
- The two covers and a link to the project articles are provided below.

Story link: [http://www.hydroworld.com/articles/hr/print/volume-34/issue-10.html](http://www.hydroworld.com/articles/hr/print/volume-34/issue-10.html)

John Hart Site Orientation

- A refresher on the site orientation and where the work is taking place.

New water intake.
Two underground portal entrances.
Tailrace.
Service road to the surge tank area.
Construction Pictures – Cofferdam
Construction Pictures – John Hart Dam Area
Construction Pictures – Downstream of John Hart Dam
Construction Pictures – Surge Tank Area

- The project team is managing the road crossing to the penstock pedestrian bridge to ensure mud does not restrict access for wheelchairs;
- The roadway has been widened, with power pole relocation now underway. Crushed rock will be laid once that is complete;
- The rock base at the surge tank site (east of the pedestrian crossing) has been installed; and
- Excavation of the ramp at the surge tank site will begin in mid-January.
Construction Pictures – Powerhouse Cavern

The orange coloured areas show the rock removed to date.
Construction Pictures – Powerhouse Cavern
Main Access Tunnel

• Since the May 2015 report, we have reported out on the loose rock area of cobbles and sand encountered about 155 metres into the main access tunnel. InPower BC had worked out a method to work through the area, that’s about 50 metres long, before re-entering the solid rock mass;

• At the same time, as other areas of the underground work expanded, InPower BC took the opportunity to proactively explore a potential detour route around the loose rock area. Mainly, by probe drilling upwards from the excavated surge chamber area;

• The exploratory drilling has revealed solid rock mass for an alternate main access tunnel route. There is a proposed detour tunnel alignment in place that’s about 80 metres in length and curves around the majority of the loose rock area before continuing along the original main access tunnel alignment;

• The section of the tunnel that was slowly going through the loose rock area will be sealed off. In mid-December, drilling and blasting of this detour route began. This is a good example of positive work to identify an alternative option when coming across a challenging situation. This detour plan may be beneficial for the project schedule as we aim for facility commissioning in fall 2018; and

• Residents may hear blasting noise now that the regular blasting method has resumed within the main access tunnel. This is expected to become quieter as the contractor moves deeper into the tunnel, along with the angled tunnel direction.
Starting the detour tunnel route.
Tailrace

- The tailrace excavation is progressing well, with the rock removed to the ground level of the existing generating station;
- In the new year, excavation of the tailrace outlet will continue, and a retaining wall will be built to support the rock; and
- Concrete work is expected to begin in the spring of 2016.
Construction Pictures – Tailrace
Environment Update

- Management of water and runoff to the surrounding environment continue to be a focus for the project team. This is achieved by using a range of approaches such as directing site water to the water treatment plants, and filtering runoff using swales, rock check dams and sediment fences.

- With the continually changing landscape at the intake, adaptive plans are regularly being developed, implemented, monitored and assessed.

- Water testing at the reservoir continues to show effective control of sediment in the cofferdam area. The silt curtain is regularly checked to ensure the water supply is protected.

- ASL-JV removed fallen trees, replaced broken hand rails and fixed rail posts along the Millennium Trail within Elk Falls Park.

Downstream of John Hart dam.
First Nation Relationships

- BC Hydro has worked with First Nations since 2007 and was proud to develop Impact Benefit Agreements with the three First Nations: K’ómoks, We Wai Kai and Campbell River Indian Band. With SNC-Lavalin as our contractor, that relationship has expanded and good communication and opportunities are happening for First Nations. These relationships are benefiting the project.
- Local First Nations have been working on the project since 2013, when BC Hydro was doing early site preparation works (i.e. trails and roads). In addition, First Nation subcontractors and joint ventures have been awarded various project subcontracts to provide a variety of services. Examples include the FMI and K’ómoks First Nation electrical contract, and the We Wai Kai, Campbell River Indian Band and A. Woods waste rock hauling contract. Campbell River band members have also been involved in environmental monitoring for the project.

Councillor Brian Assu, We Wai Kai Nation: “This is a massive project within this community and we are pleased to see some of our people are working at the site and we look forward to further opportunities. It’s been a good opportunity to be involved with the rock hauling contract.”

Chief Bob Pollard, Campbell River Indian Band: “There is good work happening at the project site and we are involved. Our relationship has also extended beyond this project to work and collaborate on the Salmon River Diversion Project and the Campbell River water licence requirements work that BC Hydro is doing.”
People Profile - Alana Gow

About Alana

Background:
Alana started as a Paramedic with the BC Ambulance Service and as a First Aid Attendant/Traffic Control person with construction and control burn crews. She was introduced to Occupational Health and Safety while working as a labourer with the 1611 Union Cariboo District, and then went on to complete the Construction Safety Officer Course. She continued to build her experience with projects like the Sea to Sky Hwy, Run of the River Projects, Kearl Lake Project and Cape Scott Wind Farm. She received her CHSC designation in 2013, and was hired by SNC-Lavalin in 2014 for the John Hart project.

Home:
She and her husband moved to Campbell River 2010, though she was raised on Vancouver Island. Despite having lived all over the province, Alana always seems to find her way back home: the Island has always been just that, home.

Hobbies:
Always busy, Alana fills her time with photography, crochet, gardening and canning, to preserve that garden year round.

Project Responsibility:
As safety coordinator, Alana is responsible for providing support to the construction team for execution of the safety plan. That includes overseeing risk assessment processes, safety training requirements, monitoring subcontractor adherence to the safety program and more.

“I think Katherine Hepburn said it best with, “If you always do what interests you, at least one person is pleased.” What can I say, I love what I do!”
Construction – Point Of Interest

Each month, BC Hydro and InPower BC will provide a construction fact, occurrence, or situation.

Dewatering the area between the cofferdam and the John Hart dam.

- With the cofferdam pilings installed on the reservoir side of the existing dam, the next step will be removing the water between the pilings and the dam to seal the structure;
- When the structure is sealed, work will be able to continue in the dry area;
- Removing the water from the unsealed cofferdam will require particular planning;
- Water will have to be removed as quickly as possible while respecting environmental protections for the surrounding area; and
- It will take about two days to complete the sealing, with water removal continuing to take out water that seeps in through cracks.