

Regional Community Liaison Committee Project Update

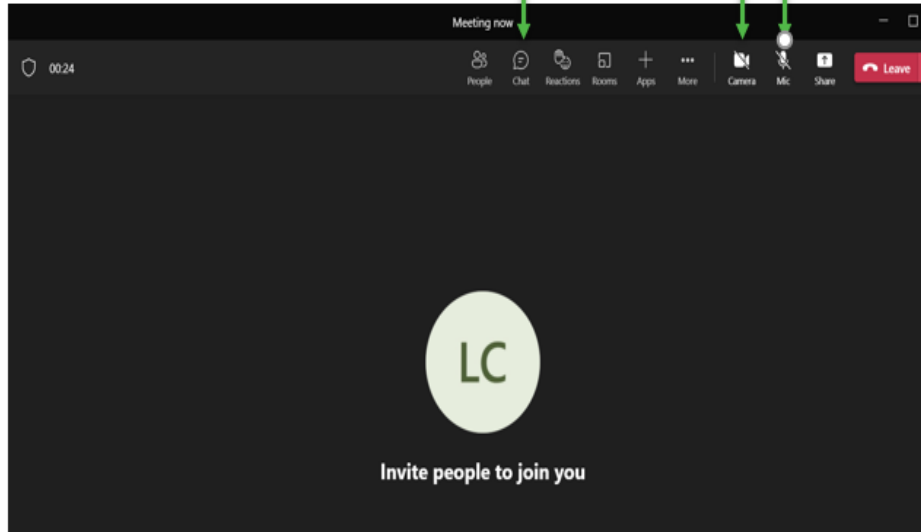
March 8, 2023

Microsoft Teams Reminders

We'll be using a few basic tools, which you can find on your screen

open chat box for
q's & feedback

turn video on/off &
mute/unmute mic



**Site C Clean Energy Project
Regional Community Liaison Committee**

Wednesday, March 8, 2023
1:30 – 3:30 pm MST

This meeting will be held by MS Teams, a link will be sent out as well as a phone number for those unable to connect through the link.

AGENDA

Opening & Welcome & Acknowledgement (Bob Gammer)	1:30 PM
Review of Agenda & Action Items (Bob Gammer)	1:35 PM
Dam On-site Construction Update (Chris Waite) o Main Civil Works	1:40 PM
Dam Off-site Construction Update (Katrina Kelly) o Highway 29 Realignment o Reservoir Clearing Work	2:05 PM
Reservoir Filling (Dave Hunter)	2:15 PM
BREAK (Optional)	2:30 PM
Communications Update (Bob Gammer/Greg Alexis/Shanna Mason)	2:40 PM
Dam Configuration (Andrew Watson)	2:50 PM
Jobs and Businesses Update (Kate O'Neil)	3:05 PM
Contractor Updates	3:10 PM
Roundtable (Committee members)	3:20 PM
Next Steps & Closing (Bob Gammer) o Next meeting – Wednesday, June 7, 2023	3:30 PM

Regional Community Liaison Committee

Action Items Tracking Log: January – December 2022

Item No.	Action Item	Responsibility	Meeting Date	Status / Outcome*
2022-009	Mayor Fraser asked what happens to the insulating panels used to cure the concrete on the Buttress.	Chris Waite	June 15, 2022.	In Progress: Update December 7, 2022. Chris confirmed that preliminary conversations have been had with the contractor who confirmed that the panels have been reused when possible. As the project approaches completion some well-used panels will go to the land fill. BC Hydro will continue to work with the contractor to if there could be other uses for the panels.
2022-010	Karen Goodings asked for an explanation of how a dam built at right angles is designed and how is it secure	Chris Waite	September 21, 2022	In Progress: Update December 7, 2022. In March 2023 Engineer Andrew Watson will discuss with the committee why the design of the facility and the dam buttress are at a 90-degree angle. Andrew will explain why this is a safe and robust design.

*Please see the Action Items Outcome Summary for more information on the outcome.

*Please see the 2017, 2018, 2019-2020 and 2021 Action Item Tracking Log for previous year's completed action items (ShamPoint)

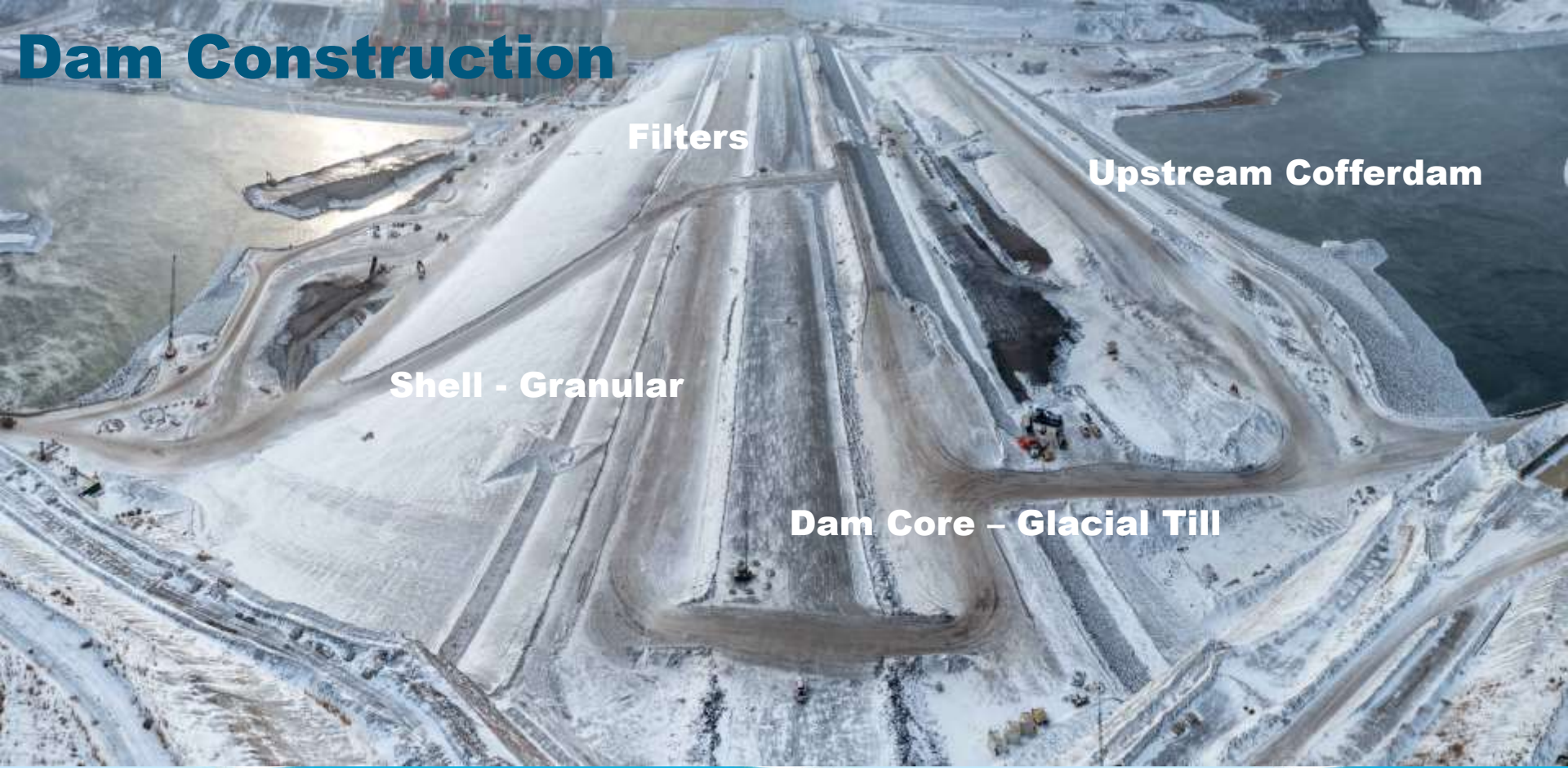
Dam Site Construction Update

- **Dam Construction**
- **Approach Channel**
- **Foundation Enhancement Pile Installation**
- **Spillway, Intakes and Penstocks**
- **Powerhouse**

Dam Site Construction Update



Dam Construction



Filters

Upstream Cofferdam

Shell - Granular

Dam Core – Glacial Till



Dam Construction: 85th Avenue Glacial Till Extraction

Approach Channel



Pile Installation and Permanent Upstream Fish Passage



Spillways



Intakes



Penstocks





Unit 1 Rotor Lift

Unit 1 Rotor



Tailrace Gantry Crane



Intake Gantry Crane

Powerhouse Generator Floor Electrical Installation



Questions?



Off Dam Site Construction Update

Katrina Kelly

- **Highway 29**
- **Boat Launches**
- **Hudson's Hope Shoreline Protection**
- **Reservoir Clearing**



Construction Schedule Start to Finish

Lynx Creek – 8.1 km
 Dry Creek - 1.4 km
 Farrell Creek – 1.9 km
 Farrell Creek East – 3.0 km

2019 to 2023
 2020 to 2022
 2020 to 2022
 2021 to 2022

Halfway River – 3.7 km
 Cache Creek West – 4.0 km
 Cache Creek East – 8.6 km
 Highway decommissioning:

2018 to 2023
 2018 to 2020
 2019 to 2023
 2022 to 2023



Highway 29 Realignment: Halfway River Bridge





Highway 29 Decommissioning

Halfway River Boat Launch



Lynx Creek Boat Launch



Hudson's Hope Shoreline Protection Completed

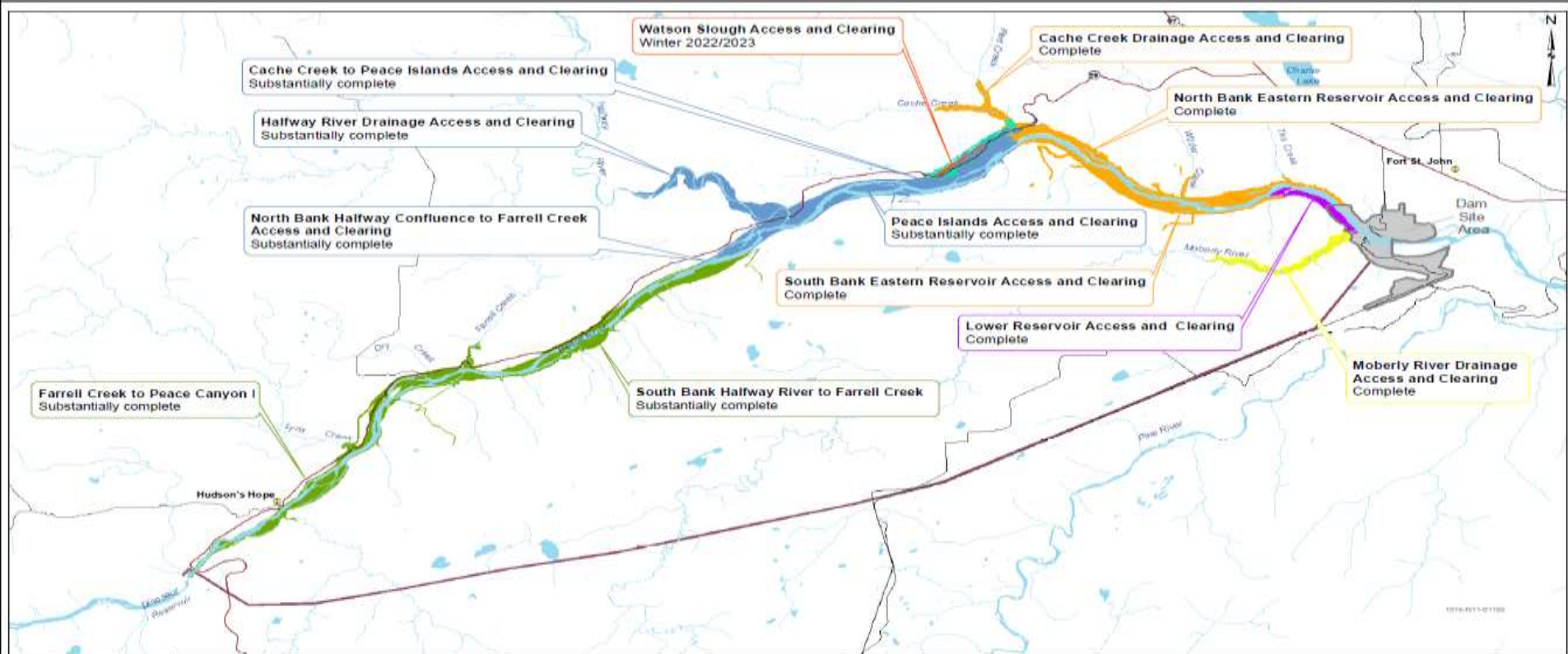




Spawning Shoal Enhancement Complete

Portage Mountain Quarry - Reclamation





Farrell Creek to Peace Canyon | Substantially complete

Cache Creek to Peace Islands Access and Clearing Substantially complete

Halfway River Drainage Access and Clearing Substantially complete

North Bank Halfway Confluence to Farrell Creek Access and Clearing Substantially complete

Watson Slough Access and Clearing Winter 2022/2023

Cache Creek Drainage Access and Clearing Complete

North Bank Eastern Reservoir Access and Clearing Complete

Peace Islands Access and Clearing Substantially complete

South Bank Eastern Reservoir Access and Clearing Complete

Lower Reservoir Access and Clearing Complete

South Bank Halfway River to Farrell Creek Substantially complete

Moberly River Drainage Access and Clearing Complete

Legend

- Lower Reservoir
- Eastern Reservoir
- Hwy 29 Cache Creek
- Middle Reservoir
- Western Reservoir
- Watson Slough
- Moberly River Drainage
- Transmission Line
- Dam Site

Notes:
 1. Reservoir clearing includes flood zone waste disposal.
 2. The remaining highway 29 realignment clearing areas to be added.
 3. Timing is based on September 2020 - Start River Diversion September 2022 - Start Reservoir Filling



MAP NOTES:
 1. DATUM: NAD83
 2. PROJECTION: UTM Zone 12N
 3. BASE DATA: PROVINCE OF B.C.

1:215,000



BC Hydro

Site C Reservoir Clearing

DATE	NOV 24, 2021	1018-011-01195	R 1
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Construction of the Site C Clean Energy Project is subject to required regulatory and permitting approvals.

Questions?



Site C - Reservoir Filling

Dave Hunter

Reservoir Filling Information Video



Video [Link](#) (3 minutes); Reservoir Filling [Information Page](#)

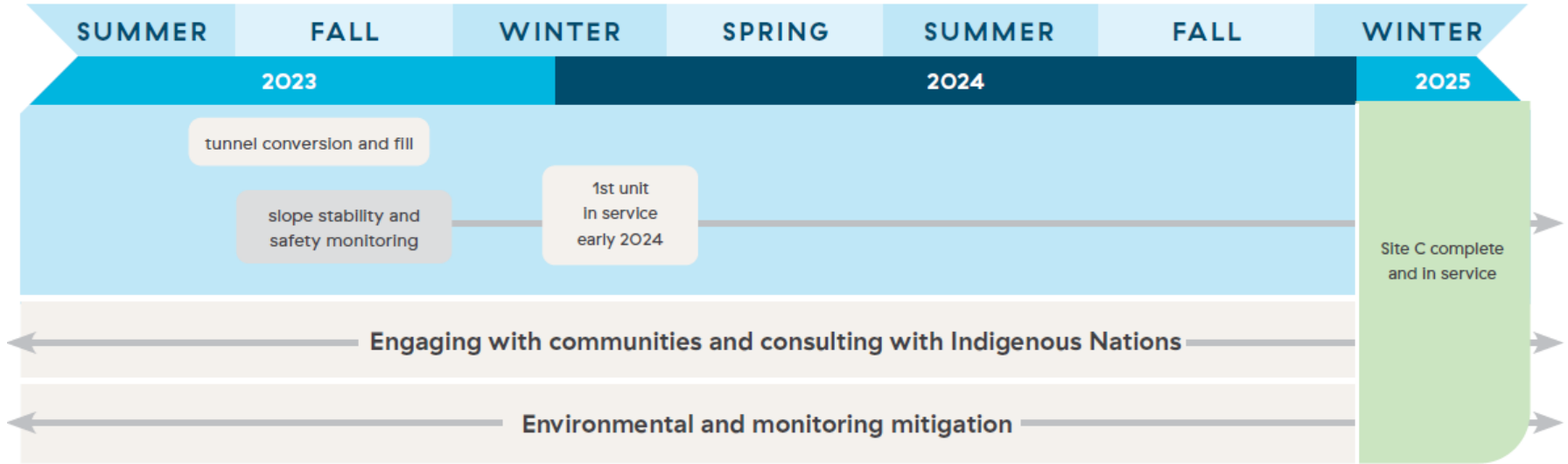
Tunnel Orifice Fabrication Progress



Tunnel Conversion - Model testing



Current reservoir filling schedule



Questions?



Communications Update

Greg Alexis / Shanna Mason



Communications Approach

To inform of the possibility of reservoir filling in the fall and focus on public safety:

- Communicate closing of public access points (**late spring**)
- Advertising in newspapers, radio, and online (**mid-May**)
- Installing signage in priority locations (**early June**)

Reservoir Filling Communications

- **Site C website update:**
 - ✓ New reservoir page: www.sitecproject.com/construction-activities/the-reservoir
 - ✓ Video: tunnel conversion and filling
 - ✓ Factsheet – downloadable and printable
- **Upcoming:**
 - *Safe Boating on the Reservoir* webpage – coming soon
 - Regular posts to our social media and website updates
 - Continue to document activities with drone video and images

Reservoir community engagement

- Ongoing updates with RCLC and other key stakeholders
- Public and virtual events (**early May**);

Community information sessions:

- Fort St. John – May 2
 - Hudson's Hope – May 3
 - Virtual meeting – May 9
- **Indigenous communities:**
 - Environmental forums, Peace River tours, project update meetings, dam site reservoir filling ceremony

Reservoir Area Access

- **Peace River boat access prior to fall 2023 reservoir filling:**
 - **Halfway River boat launch will remain open for the 2023 season until permanently closed in September**
 - **DA Thomas and Lynx Creek Boat launches will remain closed**
- **New reservoir boat launches at DA Thomas, Lynx Creek and Halfway River will remain closed a minimum of a year based on the results of monitoring reservoir conditions related to slope stability and debris management**

Existing Halfway River boat launch



Lynx Creel reservoir boat launch concept





BC Hydro

Power smart

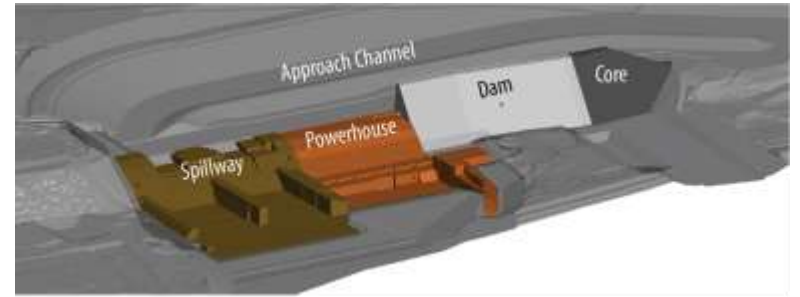
Reasoning for Orientation of Structures

Andrew Watson





Site C Project Design

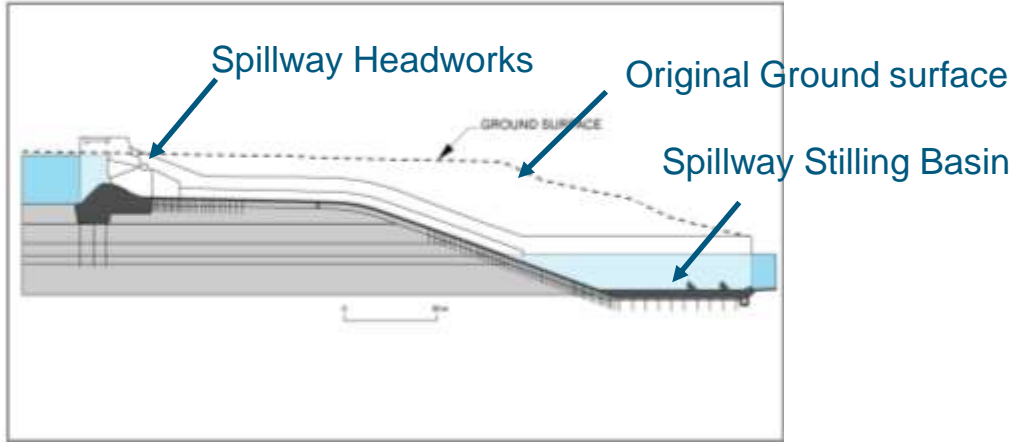


Roller Compacted Concrete (RCC) foundation

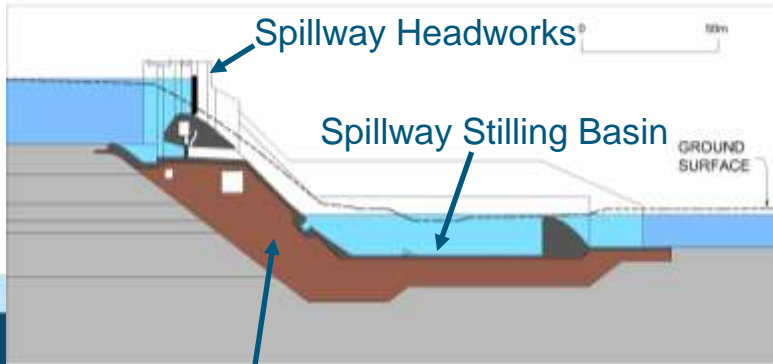
Site C Project Design:

- Earthfill dam type is the most suitable structure across the valley
- Structures are at right angles to earthfill dam
- Structures are built on a large and strong concrete (RCC) foundation
- RCC foundation replaces weathered rock on valley wall

Historic Spillway Design

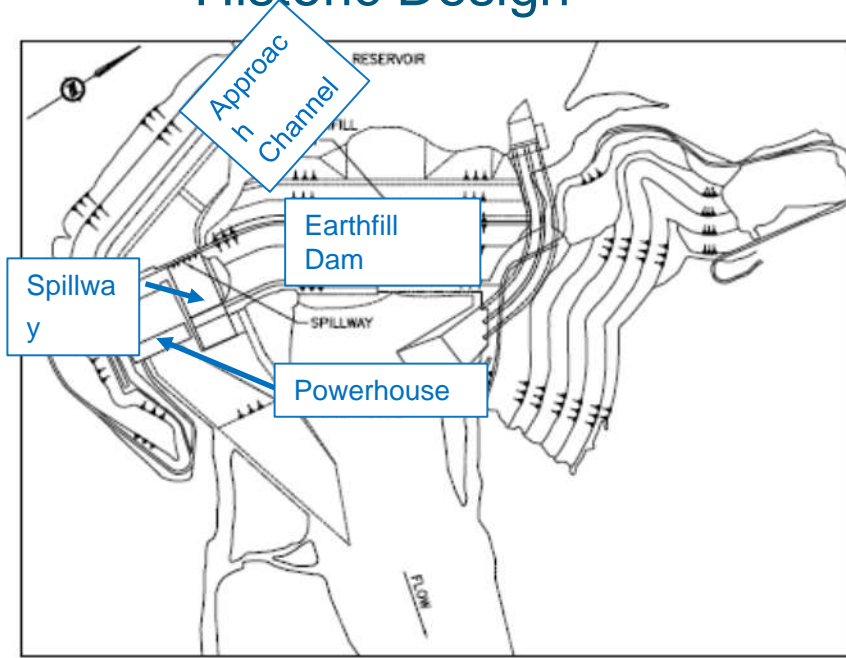


Upgraded Spillway Design

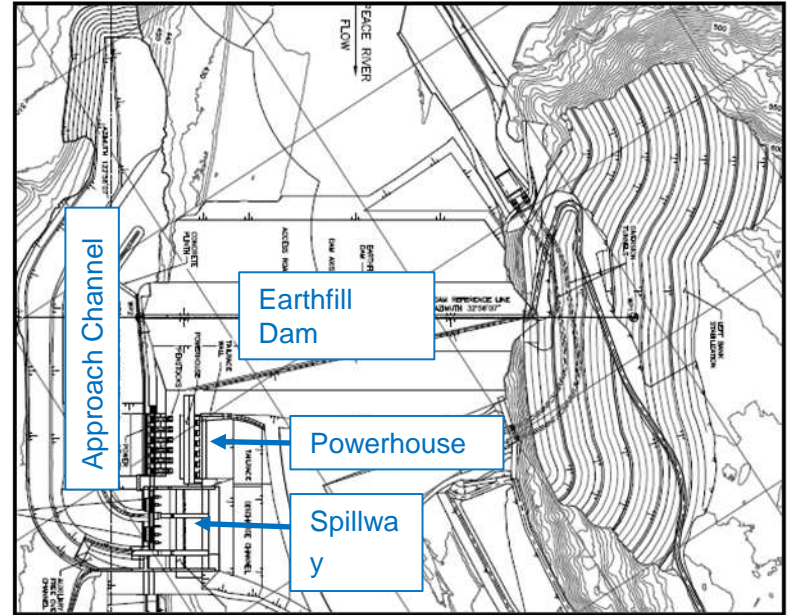


- Site C design has strong structural connection between the upper spillway headworks and power intakes to the structures on valley floor (powerhouse and spillway basin) by including an RCC buttress.
- Provides increased stability

Historic Design



Upgraded Design



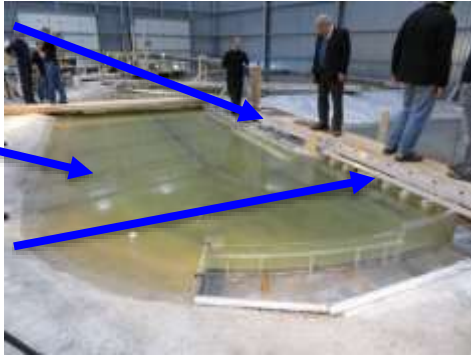
- Orientation of RCC Buttress removes weathered rock on valley side and replaces with RCC to provide a stable robust foundation.
- This orientation addresses non-uniform loading on the structures from long term rebound potential of rock foundation. The excavations are minimized and similar (ie uniform) across the structures.

Hydraulic design and models

Power Intakes

Approach
Channel

Spillway
Headworks



Spillway



Hydraulic performance and design of the approach channel and headworks were optimized to account for the orientation with numerical and physical models



BC Hydro

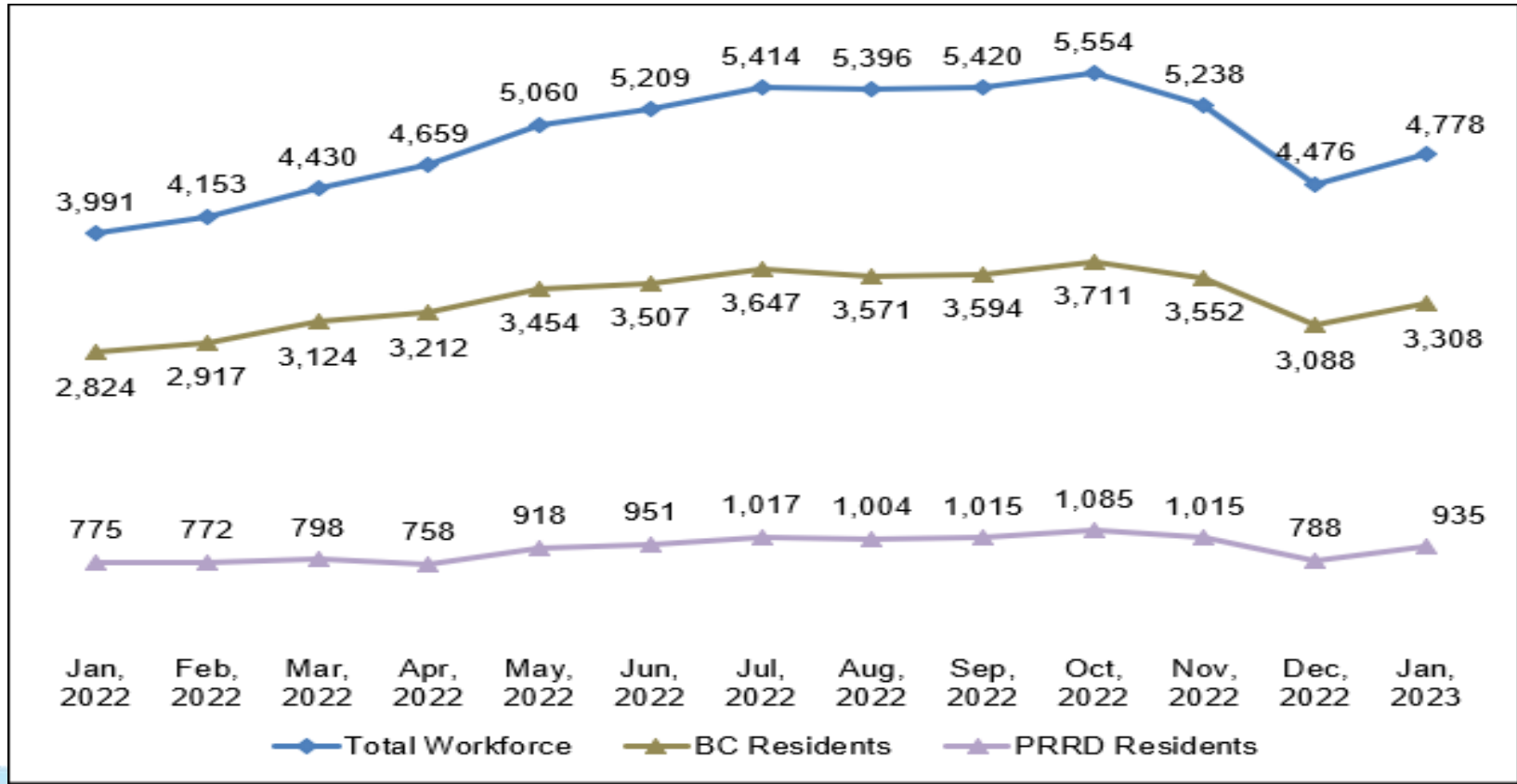
Power smart

Employment Statistics – January 2023

- The **January** workforce numbers are the total workforce numbers and include workers working off the dam site area, workers working from home and/or workers who may have been on site at any time in that month.
- BC Hydro requires all major contractors to report employment information.
- Total of **4,778** workers in **January 2023**: **3,308** from BC (69%), **935** from PRRD (24%)

Site C Employment Statistics – January 2023			
	# of total workers	# of B.C. primary residents	% of B.C. workers
Construction and non-construction contractors	3,978	2,559	64%
Engineers and project team	800	749	94%
Total workforce	4,778	3,308	69%

Site C Jobs Annual Trends



2022 Q4 Regional Business Participation

Companies engaged by BC Hydro and Site C contractors to provide goods and services in relation to Site C construction between October to December

Community	# of businesses	Community	# of businesses
Arras	1	Montney	2
Baldonnel	1	Pink Mountain	2
Cecil Lake	1	Pouce Coupe	2
Charlie Lake	23	Prince George	25
Chetwynd	35	Rolla	2
Dawson Creek	27	Rose Prairie	2
Fort St. John	410	Taylor	9
Hudson's Hope	17	Tumbler Ridge	3
Moberly Lake	10		
Total		572	

Questions?

