

Regional Community Liaison Committee Project Briefing

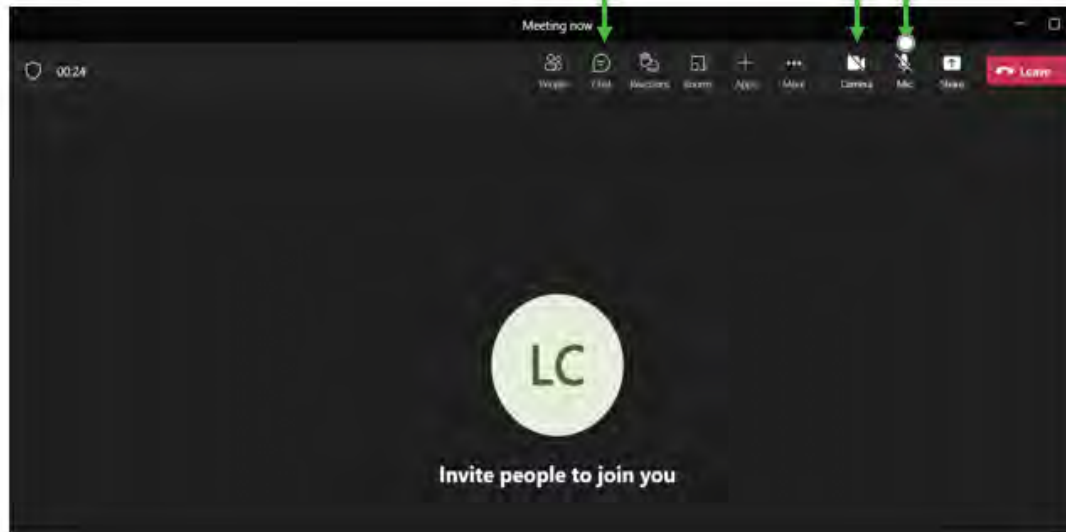
September 21, 2022

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, September 21, 2022
1:30 – 3:30 pm

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

AGENDA

Opening & Welcome (Bob Gammer)	1:30 PM
Review of Agenda & Action Items (Bob Gammer)	1:35 PM
Dam On-site Construction Update (Chris Waite) <ul style="list-style-type: none">o Main Civil Workso Right Bank	1:45 PM
Dam Off-site Construction Update (Matt Drown) <ul style="list-style-type: none">o Highway 29 Realignmento Boat Launcheso Berm Updateo Reservoir Clearing Worko Tunnel Conversion and Reservoir Filling Update	2:00 PM
Fish Habitat Enhancement (Greg Scarborough)	2:25 PM
BREAK (Optional)	2:30 PM
Jobs and Businesses Update (Kate O'Neil)	2:35 PM
Contractor Updates	2:40 PM
Roundtable (Committee members)	3:05 PM
Next Steps & Closing (Bob Gammer) <ul style="list-style-type: none">o Next meeting – December 7	3:25 PM

Regional Community Liaison Committee

Action Items Tracking Log: January – December 2022



Item No.	Action Item	Responsibility	Meeting Date	Status / Outcome*
2022-001	Matt Drown to confirm the dates, details and public access to the trails around the berm and D.A. Thomas Road area with Mayor Heiberg.	Matt Drown	March 16, 2022	In Progress. Matt Drown to provide verbal update, September 21. At the last CEC meeting (May 18, 2022) we committed to schedule a meeting with DoHH staff on site at the berm to discuss trail access following berm construction (summer 2022) and prior to recreational site construction (summer 2023).
2022-005	Katrina Kelly to confirm how old highway sections will be removed.	Katrina Kelly	June 15, 2022	Complete. Highway sections will be removed by removing all signs and concrete barriers, then removing the asphalt and a portion of the subgrade. Bridges at Cache Creek and Lynx Creek will be removed. Bridges at Halfway River and Farrell Creek will have their railings removed and will remain in place. The highway right-of-way will be reclaimed by placing coarse woody debris and/or reseeding with native plants.
2022-006	James Thomas to confirm how the land at Wilder Creek will be put back in to use after the fish habitat is created.	James Thomas	June 15, 2022	In progress. The land will be leased to a farmer to ensure it remains in agricultural production.
2022-007	Bob Gammer to arrange a meeting to discuss Peace Area Aggregate with interested members.	Bob Gammer	June 15, 2022	Complete. Bob arranged for the North Peace Rural Roads Coalition to meet with Site C Properties manager James Thomas. The meeting was held on August 11, 2022.
2022-008	Troy at AFDE to share success stories of employees. Wendy to distribute.	Wendy Laluk	June 15, 2022	Complete. Wendy distributed success stories June 15, 2022 to the committee.

Dam Site Construction Update

Chris Waite



Dam Site Construction Update

- Main Civil Works
- Approach Channel
- Tailrace Pile Installation
- Spillway, Intakes and Penstocks
- Powerhouse, Turbines and Generators
- Balance of Plant

Dam Construction



Main Civil Works – 85th Avenue Glacial Till Extraction



Mid-stream Island



Area E



Area 24



P6 Fish Enhancement



Approach Channel



Foundation Enhancement - Tailrace



Spillways, Intakes, Penstocks



Spillways, Stilling Basin and Headworks



Intakes



Penstocks





Powerhouse Turbine and Generators Units 6 to 1

Unit 1 Stator Laminations



Lamination Stacking



Unit 2 Pit Free



Balance of Plant Isophase Bus



Balance of Plant Dewatering Gallery



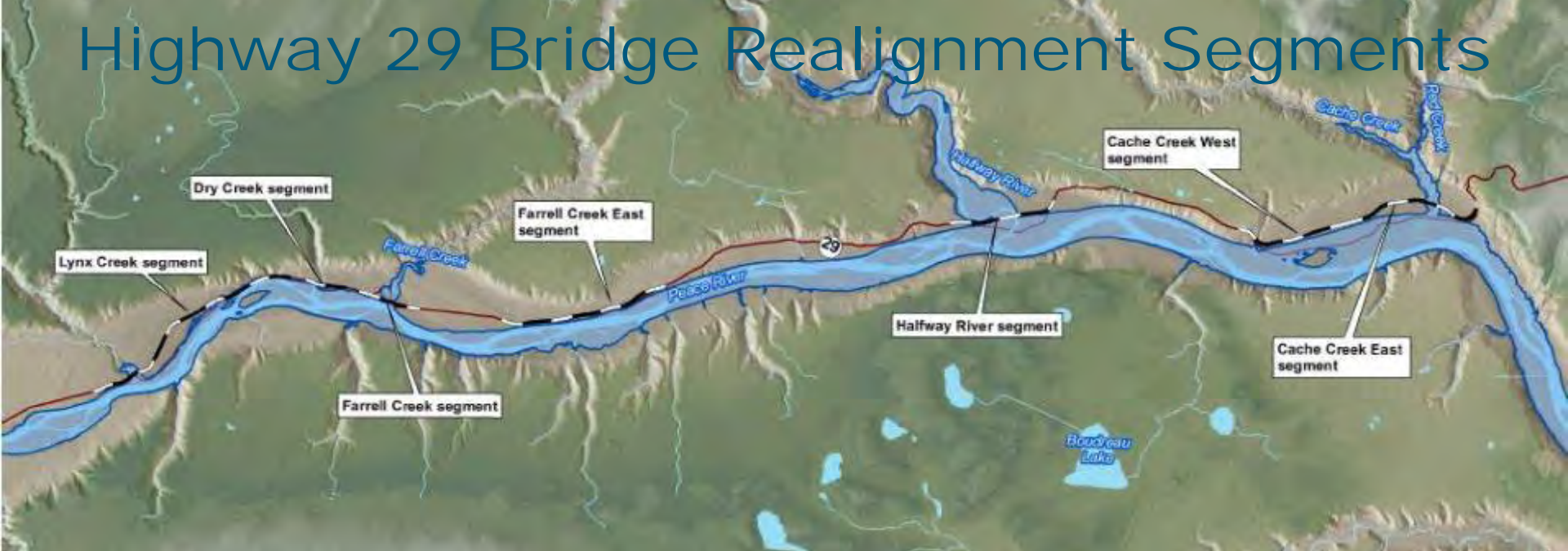
Questions?

BC Hydro
Power smart

Off Dam Site Construction Update

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

Highway 29 Bridge Realignment Segments



Construction Schedule Start to Finish

Lynx Creek – 8.1 km	2019 to 2022	Halfway River – 3.7 km	2018 to 2022
Dry Creek - 1.4 km	2020 to 2022	Cache Creek West – 4.0 km	2018 to 2020
Farrell Creek – 1.9 km	2020 to 2022	Cache Creek East – 8.6 km	2019 to 2022
Farrell Creek East – 3.0 km	2021 to 2022	Highway decommissioning:	2022 to 2023

Highway 29 Realignment Cache Creek Bridge Concrete Deck Pour Complete



Cache Creek Bridge Installation of Expansion Joint at West Abutment



Highway 29 Realignment Halfway River Bridge



Highway 29 Realignment Farrell Creek Bridge Concrete Bridge Deck Complete



Highway 29 Realignment

Dry Creek Complete and Open to Traffic



Highway 29 Realignment Lynx Creek East Embankment



Highway 29 Realignment Lynx Creek Bridge





Highway 29 Realignment Lynx Creek West Embankment Ready for Asphalt



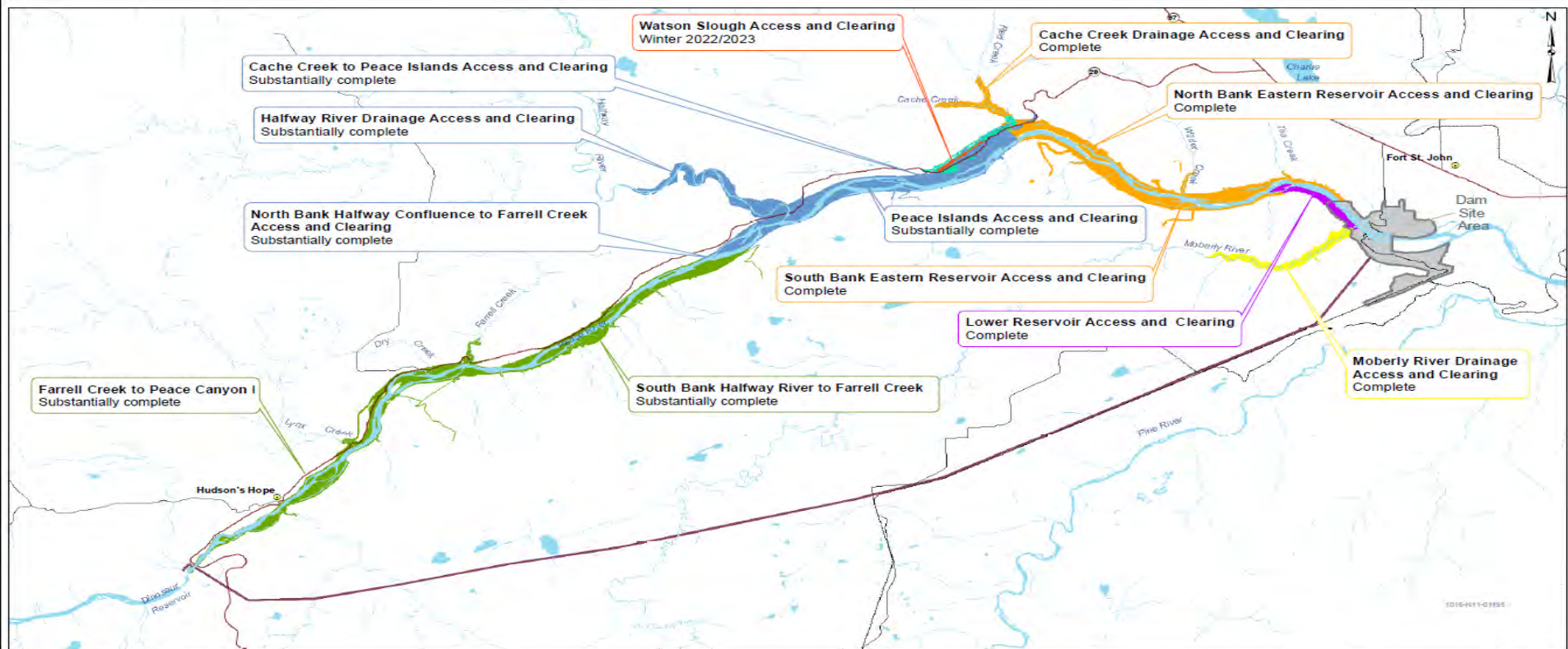
Halfway River Boat Launch Construction Started

Lynx Creek Boat Launch





Hudson's Hope Shoreline Protection



Map Notes:
 1. Datum: NAD83
 2. Projection: UTM Zone 10N
 3. Base Data: Province of B.C.

Legend

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

- Notes:
1. Reservoir clearing timelines include wood waste disposal
 2. The remaining Highway 29 realignment clearing areas to be added
 3. Timing is based on:
 - September 2024 - Start river diversion
 - September 2023 - Start Reservoir Filling

1:215,000

BC Hydro

Site C Reservoir Clearing

DATE	Nov 24, 2021	1016-N11-01196	R 1
------	--------------	----------------	-----

© BC Hydro 2021 - all rights reserved. This map is for information purposes only and accuracy is not guaranteed.

Construction of the Site C Clean Energy Project is subject to required regulatory and permitting approvals.

Our history with Watson Slough

- 2017 Planned to clear Watson Slough
 - Revised clearing work schedule at request of PRRD.
 - Revised plan, committed to work starting winter before reservoir fill.
- 2022
 - Update letter/ notification sent to PRRD (August) and posted publicly.
 - Clearing work to begin in fall (October/ November).
- 2023
 - Clearing work continues through winter.
 - Reservoir filling may begin as early as 2023; in service 2025.

Why clear Watson Slough now?

- Area will be covered with water when reservoir is filled.
- To reduce safety hazards.
- To meet our in-service date of 2025.



Site C - Tunnel Conversion & Reservoir Filling

Chris Hatton

Project Manager, MCW/Reservoir Filling – Site C

Objective:

Safe tunnel conversion and filling of the Site C reservoir to meet the project schedule while minimizing risks to the project, the environment, upstream facilities, and the greater BC Hydro System

Steps:

Complete the work required for reservoir filling:

- Sufficiently complete required construction activities
- Prepare the Peace River system (Peace Canyon and GMS facilities)

Convert the Tunnel:

- Safely convert Tunnel #2 over 2 months

Fill the Reservoir:

- Upon completion of tunnel conversion, and within the reservoir filling window, complete the controlled filling of the reservoir over approximately 4 months

Reservoir filling considerations & constraints

- **Environmental constraints**

- Bird Nesting Window, Animal Denning Window, Total Dissolved Gas from spillway impacting fish

- **Weather**

- Spring Freshet, Early Summer Rains, Ice Management

- **Operational constraints**

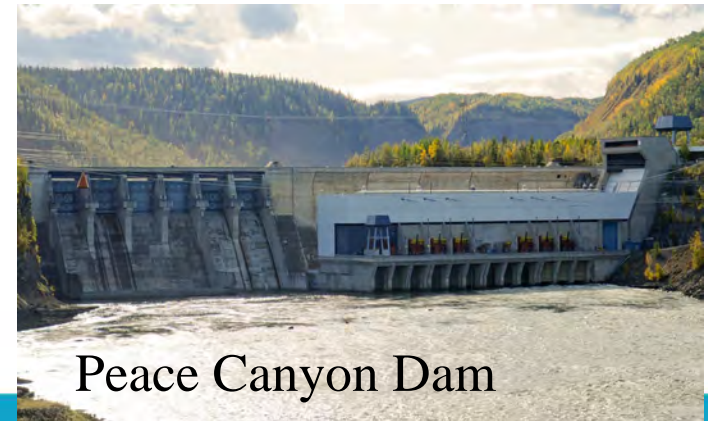
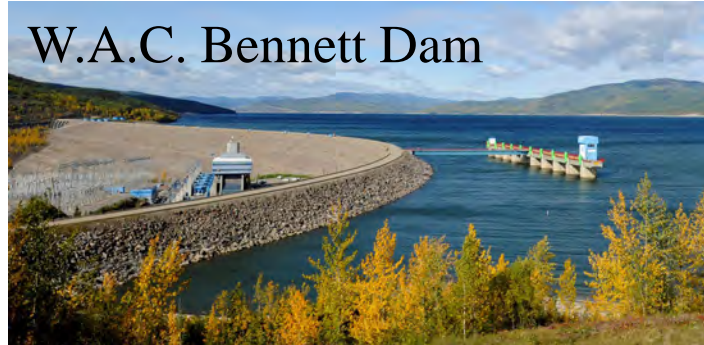
- Water Management on the Peace, System Load Management

- **Construction progress**

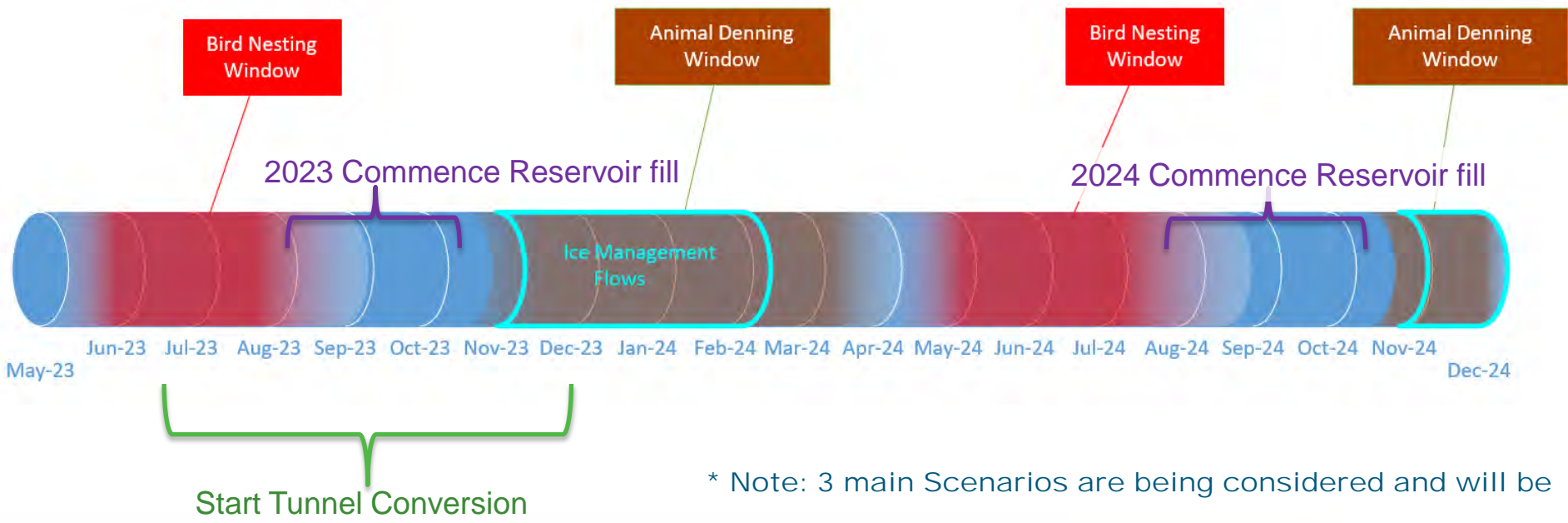
- Key project components progressed sufficiently to start reservoir filling

Water Management on the Peace River

- Williston Reservoir – 60% of BC Hydro energy storage
- GM Shrum & Peace Canyon generating stations – 30% of BC Hydro capacity
- Williston basin runoff: 50% snowmelt, 50% rainfall
- Multi-year reservoir operation
- Discharge is constrained by downstream ice formation/break-up in the winter



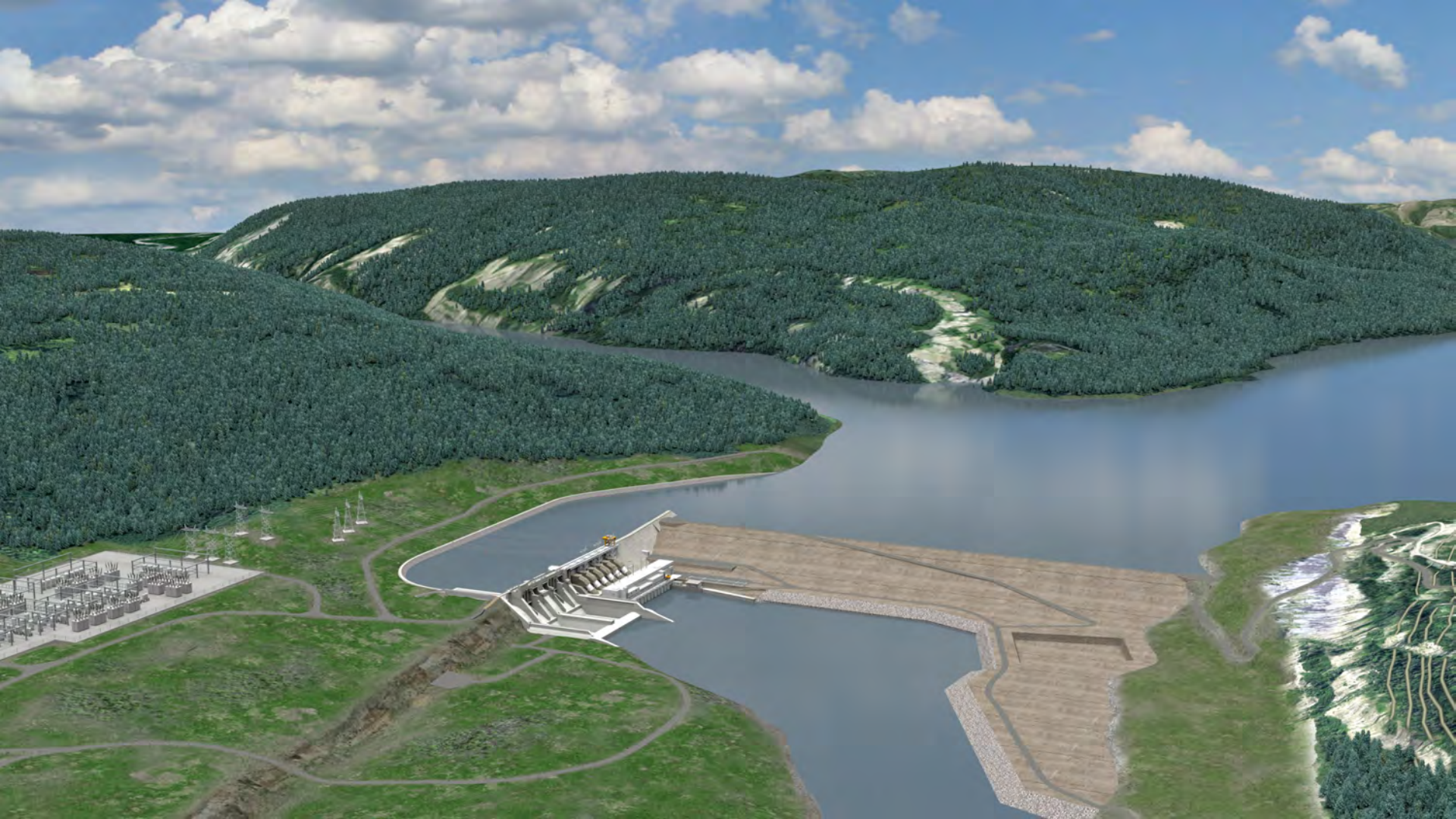
Constraints for Conversion and Filling



* Note: 3 main Scenarios are being considered and will be covered in future presentations

2022/23 Construction - Scenarios

- Considering the constraints there are three scenarios for timing of the conversion and filling works.
 - Scenario 1 – Convert in 2023, reservoir fill in 2023
 - Scenario 2 – Convert in 2023, reservoir fill in 2024
 - Scenario 3 – Convert in 2024, reservoir fill in 2024



Questions?

BC Hydro
Power smart

Fish Habitat Enhancement

Greg Scarborough

P6 Island Fish Habitat Construction



P6 Fish Habitat – Design History

Initial designs started in 2014



NOTE:
MATURITY: BC HYDRO (2015)
TOPOGRAPHY FROM BC HYDRO DIGITAL ELEVATION MODEL

LEGEND	
	EXCAVATION
	ELEVATION

Drawing Information	
Description	25 February 2014
DATE FOR REVIEW	ISSUED FOR REVIEW
DESIGNED BY	JJK
DRAWN BY	JJK
CHECKED BY	BMC
FILE NAME	300228 109L_Preliminary.dwg
PLotted Scale	0 1 2

SITE C FISH HABITAT MITIGATION
SITE 109L PRELIMINARY DESIGN

Plan View



Jobs and Business Opportunities

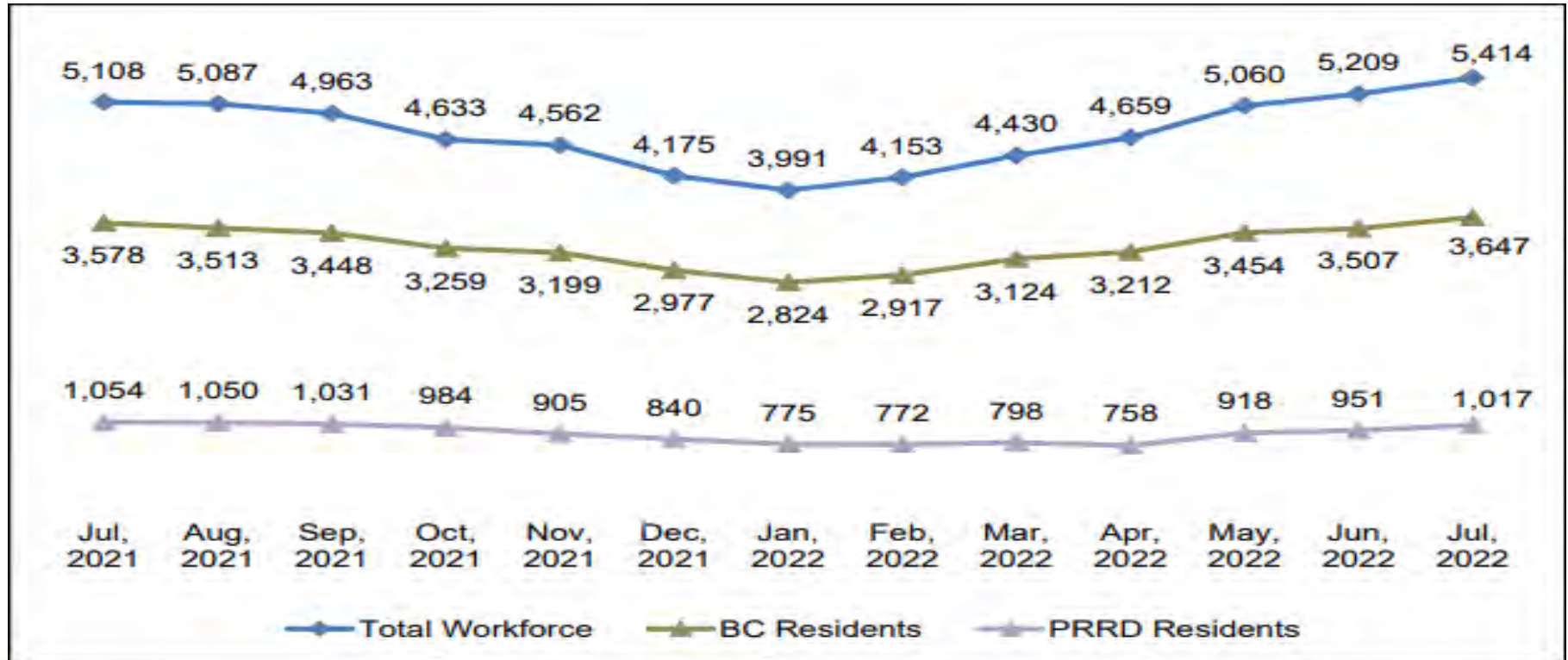
Employment Statistics

The July 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 **5,414** workers in July 2022: **3,647** from BC (67%), **1,017** from PRRD (22%)

Site C Employment Statistics – July 2022			
	# of total workers	# of B.C. primary residents	% of B.C. workers
Construction and non-construction contractors	4,609	2,906	63%
Engineers and project team	805	741	92%
Total workforce	5,414	3,647	67%

Site C Jobs Annual Trends (July 2022)



2022 Q2 Regional Business Participation

Companies engaged by BC Hydro and Site C contractors to provide goods and services in relation to Site C construction between March – June 2022

Community	# of businesses	Community	# of businesses
Baldonnel	1	Montney	2
Cecil Lake	1	Pink Mountain	2
Charlie Lake	23	Pouce Coupe	2
Chetwynd	43	Prince George	13
Dawson Creek	25	Rolla	2
Fort Nelson	1	Rose Prairie	2
Fort St. John	408	Taylor	4
Hudson's Hope	18	Tumbler Ridge	2
Moberly Lake	9	Wonowon	2
Total			560



BC Hydro

Power smart