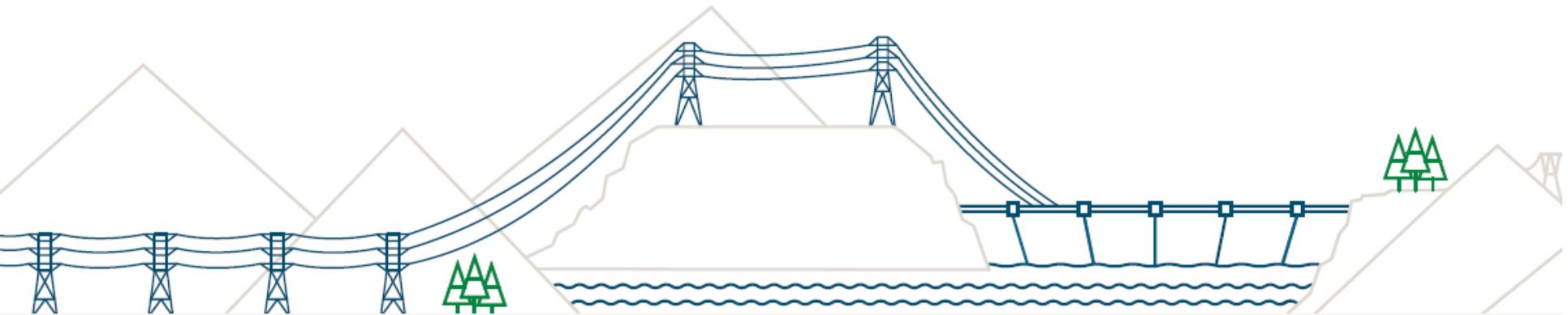


Site C Clean Energy Project

Regional Community Liaison Committee Project Briefing

June 19, 2019



On Dam Site Construction Update

Ross Turner & Steve Abbey



On Dam Site Construction Update

- **2019 Summary Schedule**
- **Drone Video**
- **Left Bank**
 - **Diversion Tunnels**
 - **85th Avenue Industrial Lands & Till Conveyor**
 - **Core Trench & Earthfill Dam**
 - **Worker Accommodation Lodge Expansion**
- **Right Bank**
 - **Powerhouse Concrete Placement**
 - **Spillway RCC Placement**
 - **Penstock Shipments**
- **General**
 - **Care of Water**
 - **Fish Habitat Enhancement**
 - **Peace River Navigation Closure Prior to Diversion**

On Dam Site Construction Schedule

Construction Activity	Anticipated Schedule
Excavation & material relocation	Q3 2015 – Q1 2023
Cofferdams & diversion tunnels	Q2 2016 – Q3 2020
Earthfill dam	Q1 2019 – Q4 2023
Roller compacted concrete buttress	Q2 2017 – Q3 2020
Generating station and spillways	Q2 2018 – Q3 2024
Turbines and generators	Q2 2017 – Q3 2024
SBK substation	Q1 2018 – Q4 2020

On Dam Site Summary Schedule: 2019

Construction Activity	Anticipated Schedule
Diversion Tunnels	Q3 2018 to Q4 2019
Assemble Till Conveyor	Q4 2018 to Q2 2019
Left Bank Dam Grout & Fill	Q3 2019 to Q3 2020
Crusher & Aggregate Production	Q1 2017 to Q3 2021
Spillway RCC	Q2 2019 to Q4 2019
Powerhouse Concrete	Q3 2018 to Q4 2020
Penstock	Q2 2019 to Q1 2021
Infrastructure Upgrades	Ongoing
*All major construction activities	*To be completed by Q4 2024

Drone Video: May 2019

Left Bank



Left Bank



Left Bank: Diversion Tunnels

- Inlet Portal



Left Bank: Diversion Tunnels

- Outlet Portal



Left Bank: 85th Avenue Industrial Lands & Till Conveyor



Left Bank: 85th Avenue Industrial Lands & Till Conveyor



Left Bank: Core Trench & Earthfill Dam



Left Bank: Worker Accommodation Lodge

- Expansion Update



Right Bank



Right Bank



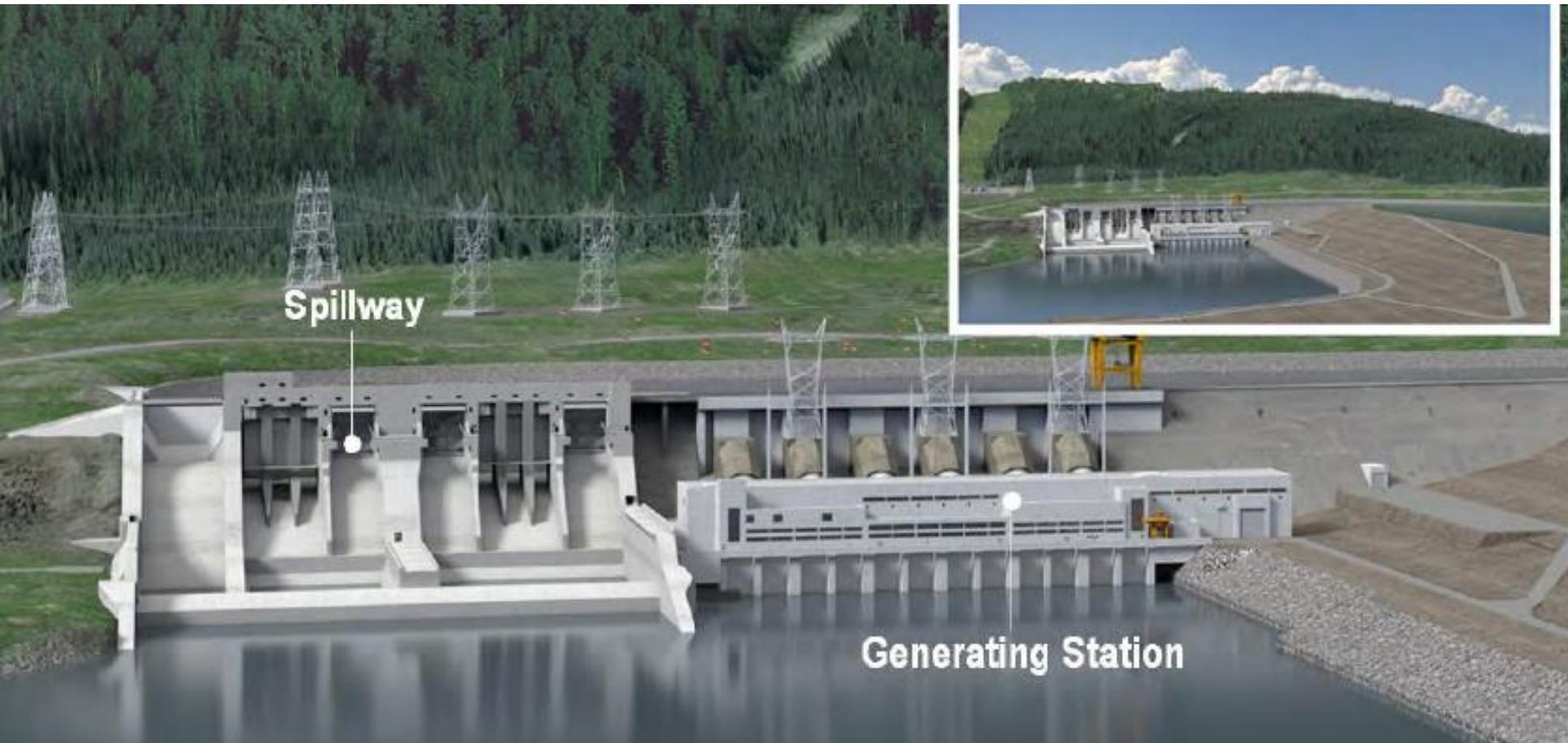
Right Bank: Powerhouse

- Concrete Placement



Right Bank: Spillway

- RCC Placement



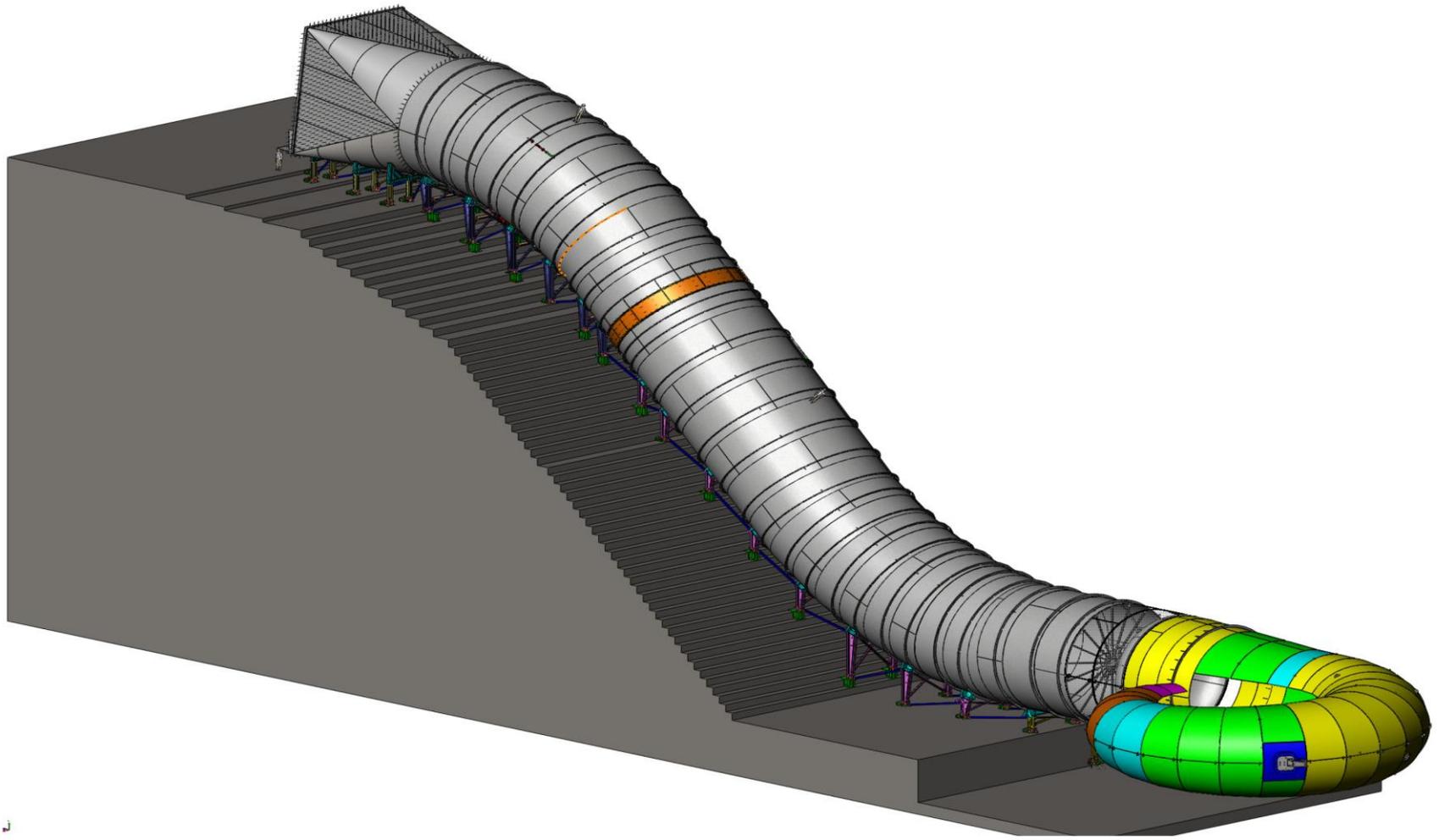
Right Bank: Spillway

- RCC Placement



Right Bank

- Penstock Shipments



Right Bank

- Penstock Shipments



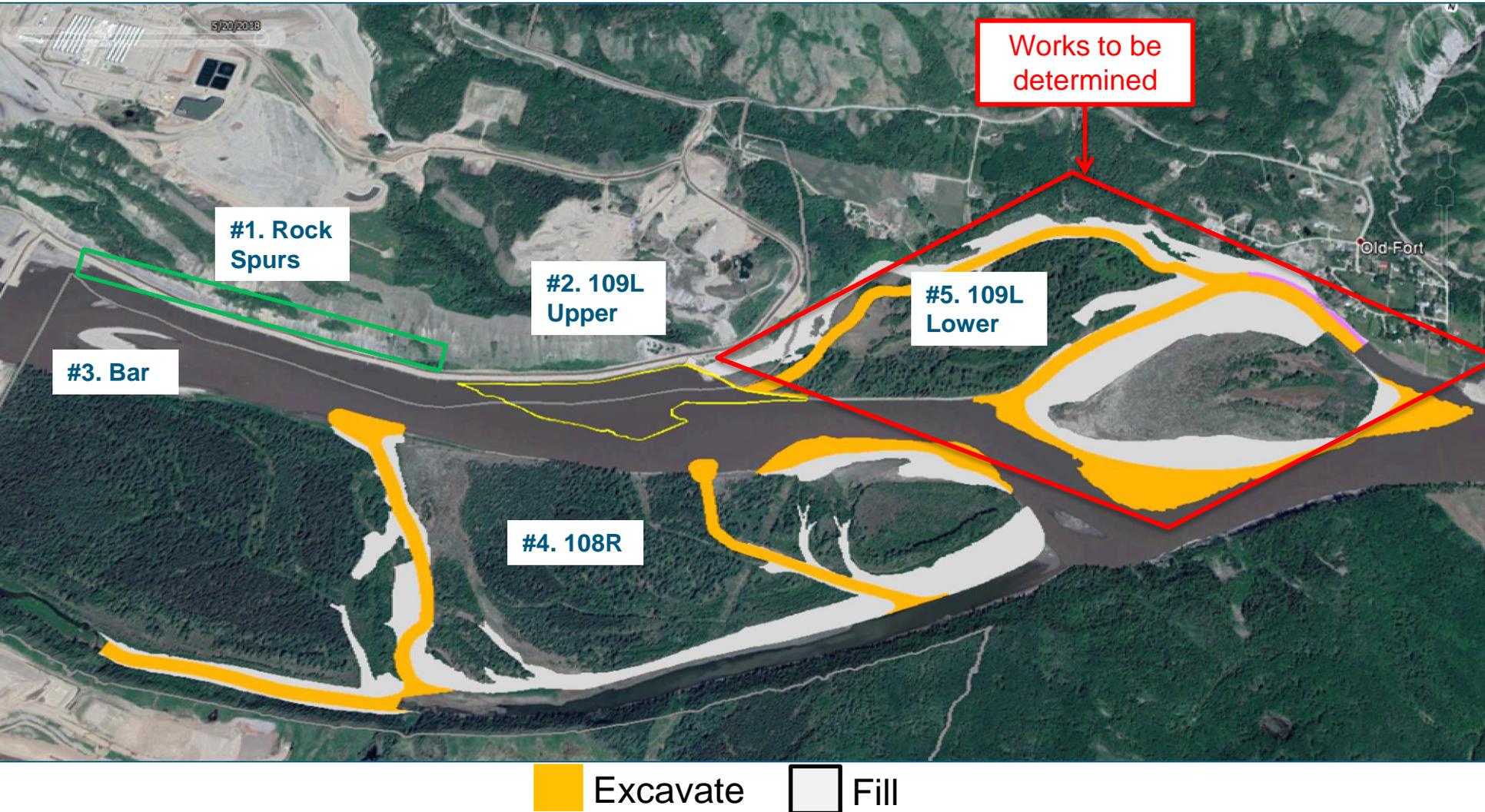
General: Care of Water

- Spring Thaw Summary



General: Fish Habitat Enhancement

- Downstream Offsets



General: Fish Habitat Enhancement

- Side-channel Enhancement



General: Peace River Navigation Closure Prior to Diversion



Off Dam Site Construction Update

Chris Waite



Off Dam Site Construction Update

- **Transmission Work**
 - **Site C Substation**
 - **Transmission Lines**
 - **Peace Canyon Gas Insulated Switchgear Building Expansion**
- **Highway 29 Realignment**
 - **Schedule**
 - **Cache Creek West**
 - **Halfway River**
- **Reservoir Clearing Work**
 - **Work Plan for 2019 / Winter 2020**
- **Hudson's Hope Shoreline Protection**

Transmission Work: Site C Substation



- Installation of electrical equipment and steel structures
- Date of photos: May 1, 2019



Transmission Work: Transmission Lines



- New 500 kV transmission towers installed on the transmission right-of-way

Date of photo: May 6, 2019

Transmission Work: Peace Canyon Gas Insulated Switchgear Building Expansion



- Steel structures where the new 500 kV lines will terminate
- Date of photo: April 25, 2019



- Installing new circuit breaker – 5CB4
- Date of photo: May 17, 2019

Highway 29 Realignment: Schedule

Segment name	Stage of Construction
Cache Creek West	<ul style="list-style-type: none"> • Construction has resumed
Halfway River	<ul style="list-style-type: none"> • Procurement: July – September, 2019 • Contractor mobilization: approximately one month after contract award
Cache Creek East	<ul style="list-style-type: none"> • Environmental Assessment Certificate amendment application: submitted May, 2019 • Procurement for embankment: July – September, 2019 • Contractor mobilization: approximately one month after contract award
Lynx Creek East	<ul style="list-style-type: none"> • Procurement for embankment: August – October, 2019 • Contractor mobilization: approximately one month after contract award
Portage Mountain Quarry	<ul style="list-style-type: none"> • Haul road under construction

Highway 29 Realignment: Cache Creek West



- Install 1800mm culvert outlet (looking south towards the Peace River)
- Date of photo: May 18, 2019



- Excavation of unsuitable material from below the sub-grade
- Date of photo: May 11, 2019

Highway 29 Realignment: Halfway River



- Site preparation activities including clearing and waste wood disposal completed

- Date of photo: May 17, 2019

Highway 29 Realignment: Halfway River Bridge

Reservoir Clearing Work



Next Season:

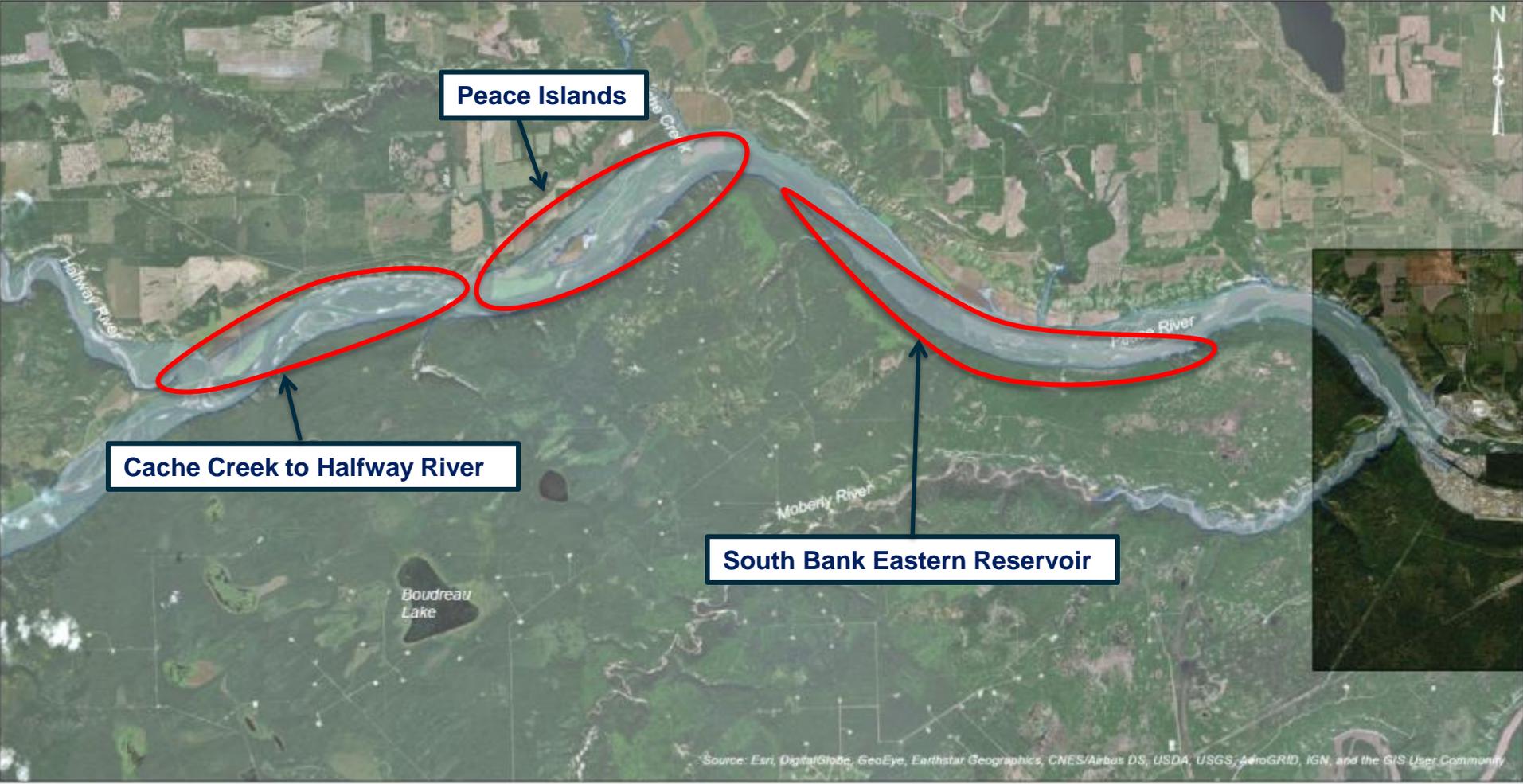
- South Bank Eastern Reservoir
- Peace Islands
- Cache Creek to Halfway River

Last Season:

- Moberly River Drainage
- North Bank Easter Reservoir
- Cache Creek Drainage

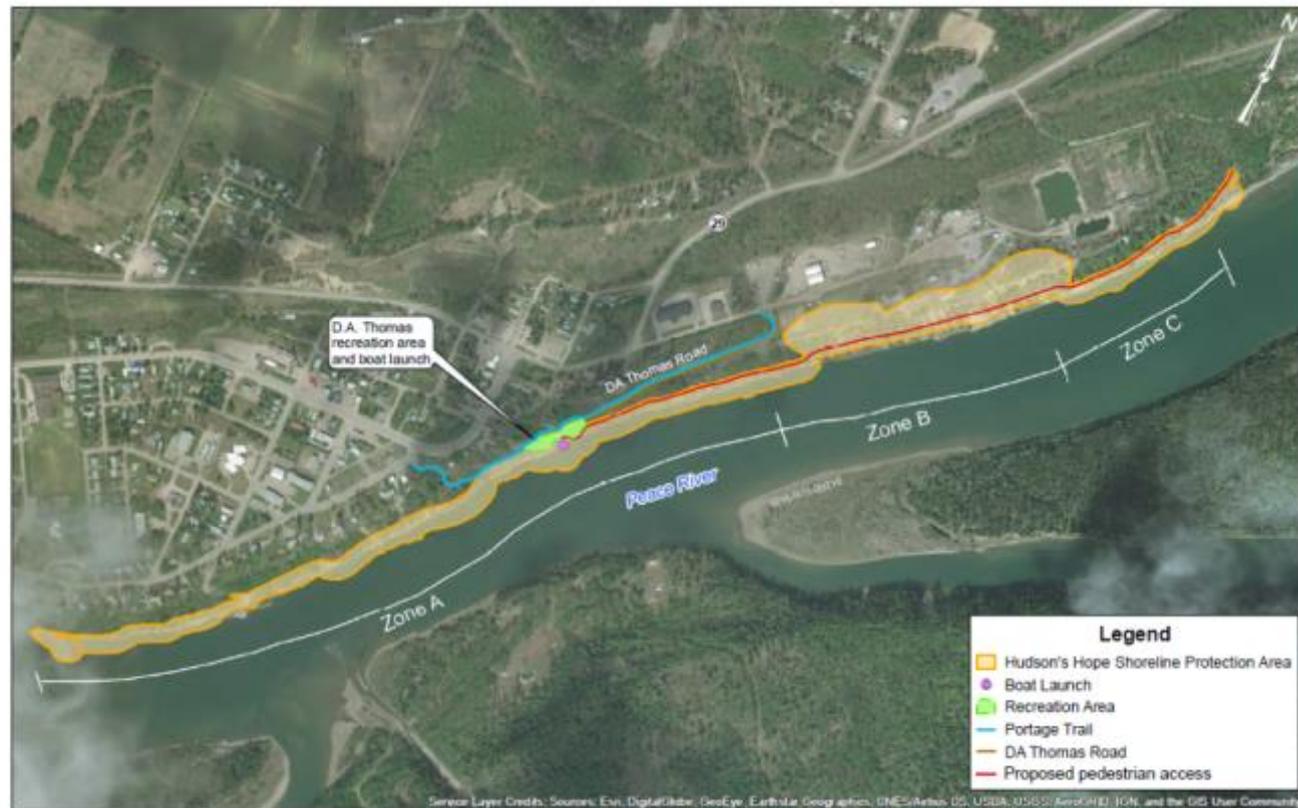


Reservoir Clearing: Work Plan for 2019 / Winter 2020



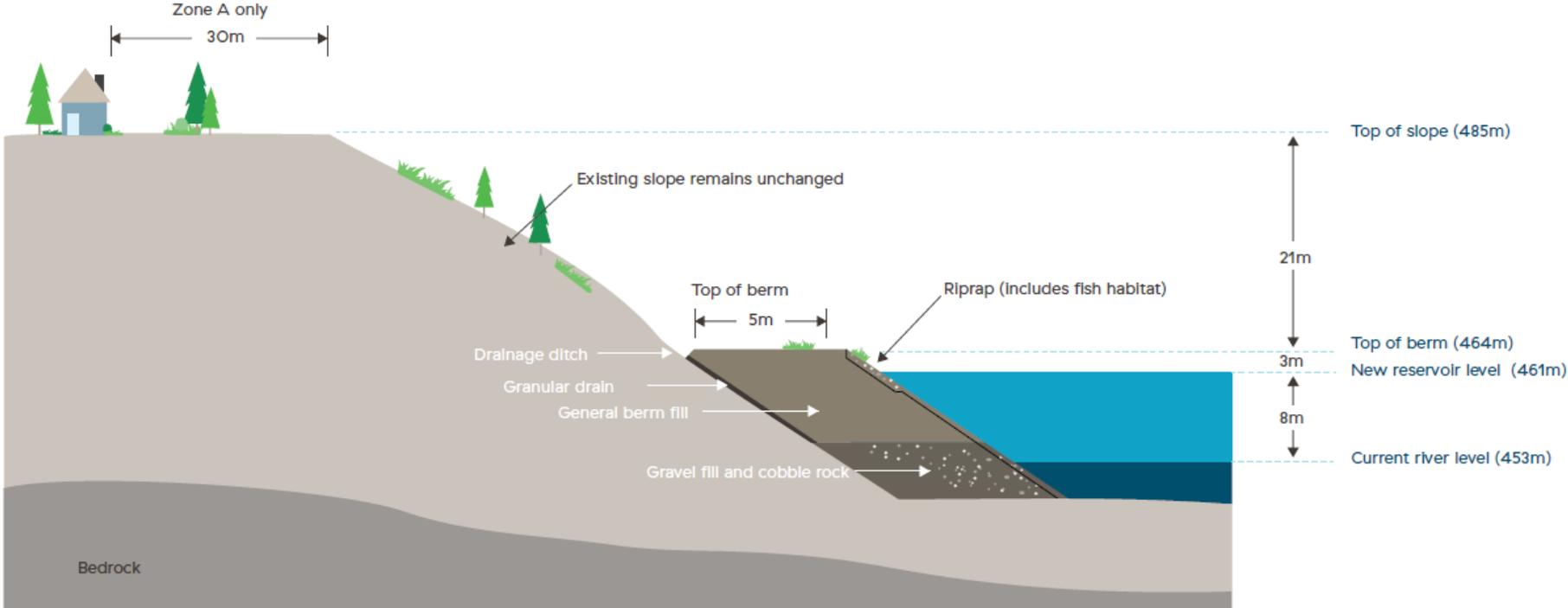
Hudson's Hope Shoreline Protection

Location	Type of shoreline protection
Zone A: Below the residential area and extends just downstream of the hotel on Clarke Ave	1,650 metre berm
Zone B: Below the light industrial land	550 metre slope flattening and armoring of the shoreline
Zone C: Below the municipal sewage treatment lagoons	450 metre berm



Hudson's Hope: Shoreline Protection

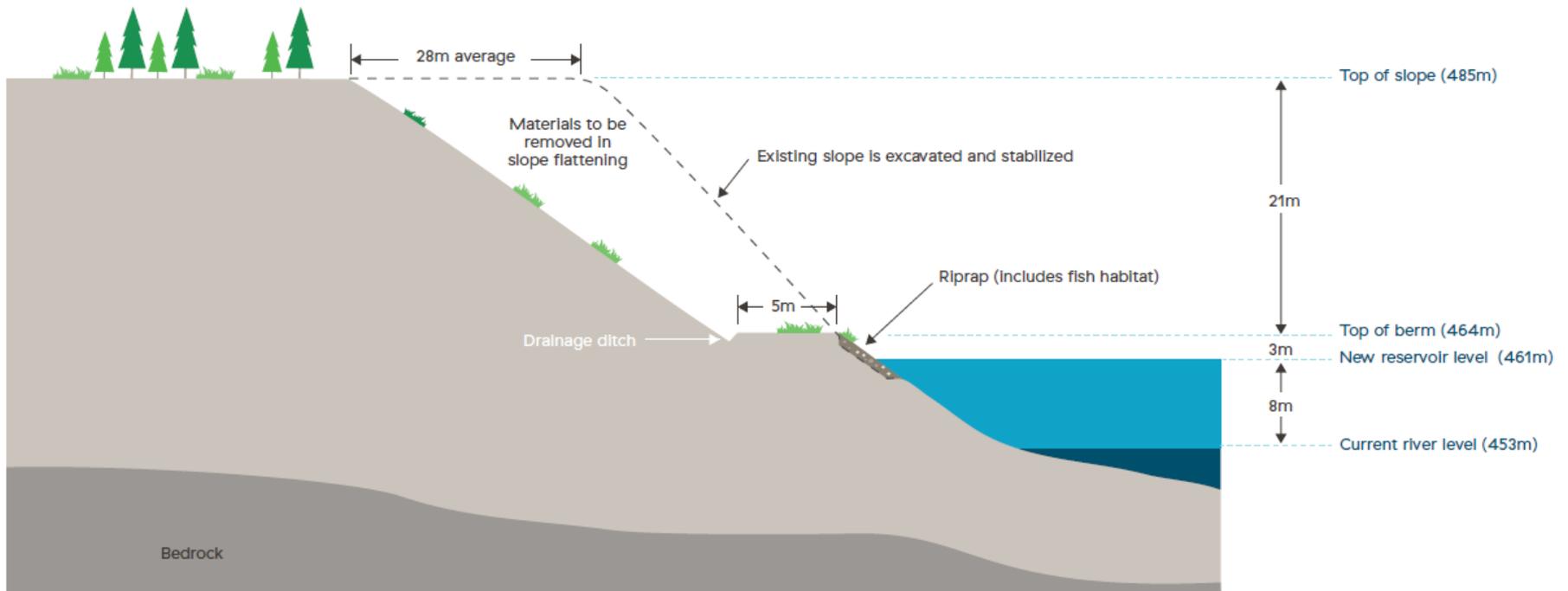
Cross-section for Zone A and Zone C



*Measurements are approximate

Hudson's Hope: Shoreline Protection

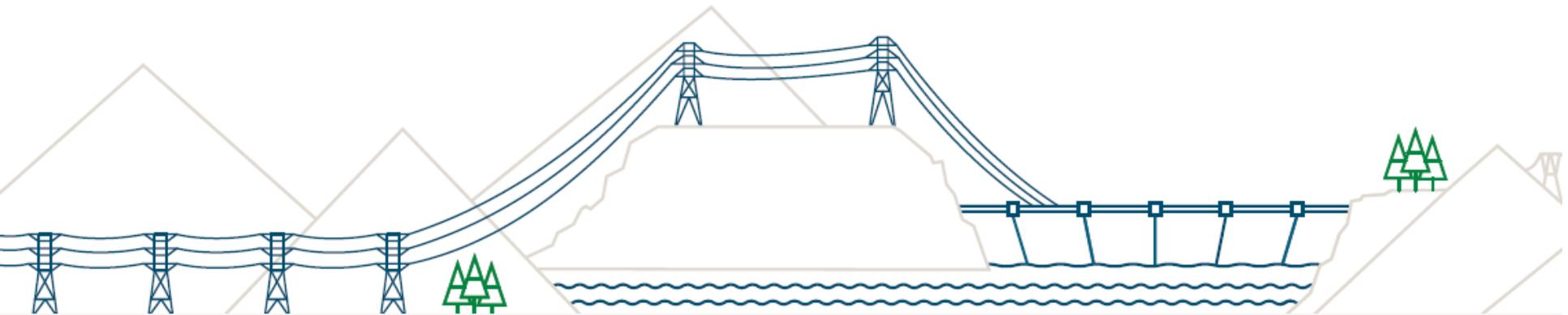
Cross-section for Zone B



*Measurements are approximate

EAC Amendments & Program Updates

Shanna Mason



EAC Amendments Update

EAC Amendment s Issued	EAC Amendments In Progress	Anticipated EAC Amendments
<ul style="list-style-type: none"> 1) Generating Station and Spillway design changes 2) Highway 29 – Halfway River Bridge design change 3) Use of West Pine Quarry as a materials source for Highway 29 realignment and Hudson’s Hope berm 4) Selective use of machinery to clear in riparian areas 	<ul style="list-style-type: none"> 1) Worker Accommodation Expansion 2) Highway 29 Cache Creek Revised Alignment 	<ul style="list-style-type: none"> 1) Additional borrow sources for access road construction for reservoir clearing and the transmission line construction 2) Highway 29 design changes <ul style="list-style-type: none"> a) Dry Creek Bridge b) Farrell Creek Bridge c) Lynx Creek Bridge d) Farrell Creek East

Community and Social Mitigation Update

Nancy Pepper



Lynx Creek Boat Launch



Lynx Creek Boat Launch



BC Hydro Peace Agricultural Compensation Fund

A red New Holland HT152 tractor with a yellow hay rake is parked in a grassy field. The tractor has "NEW HOLLAND" and "HT152" written on its side. In the background, there is a large red barn with a white metal roof. The scene is surrounded by trees and a cloudy sky.

**First Annual Public Meeting
Hosted by the Agricultural Fund Board
Friday, July 5, 2019
2:30 – 4:00pm
Northern Grand Hotel
Fort St. John**

Jobs and Business Opportunities

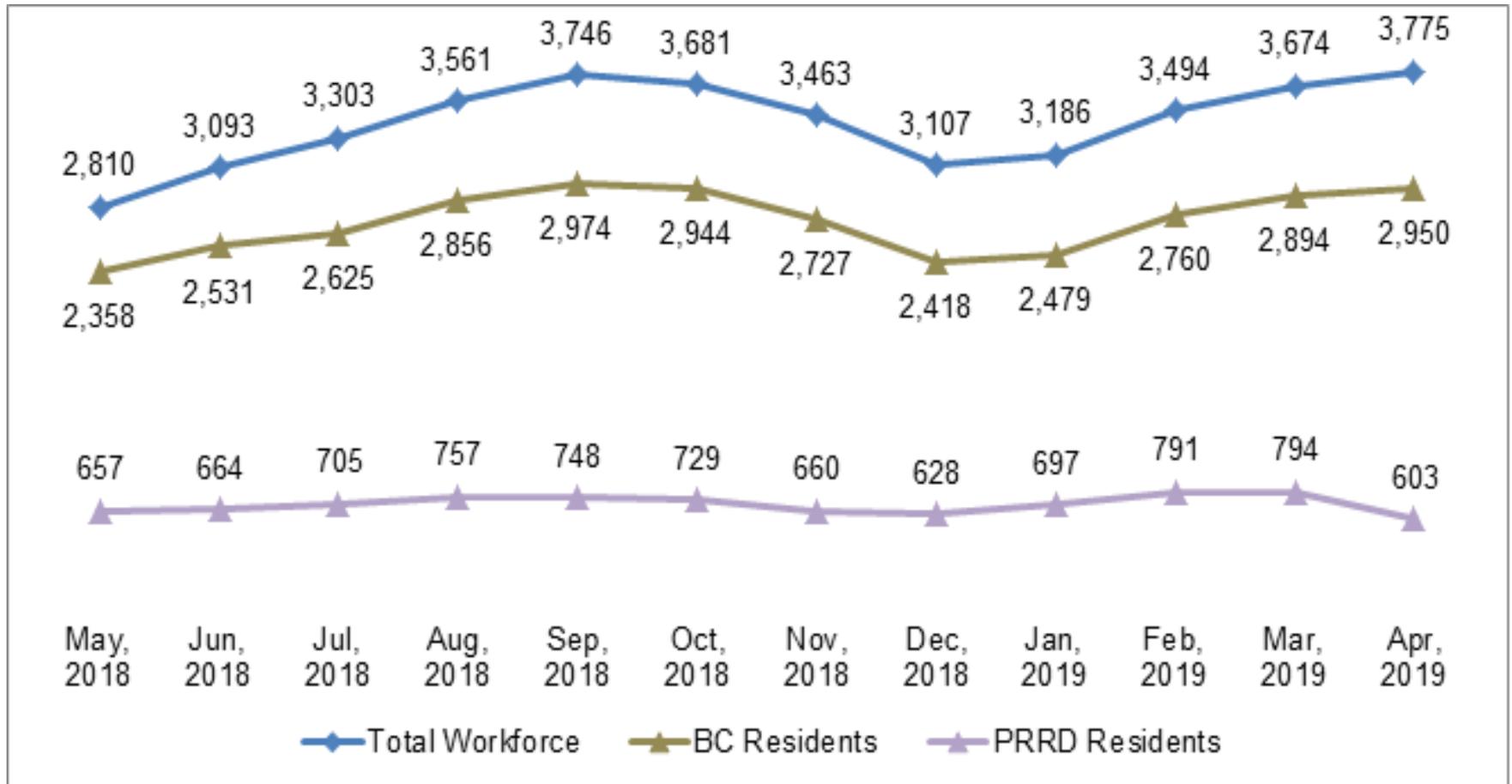


Employment Statistics

- Site C jobs posted to WorkBC / Employment Connections (Fort St. John) website; all contractors listed on Site C website.
- BC Hydro requires all major contractors to report employment information.
- Total of **3,775 workers** in April 2019; **2,950** from B.C (78%). Total of **603** workers from PRRD (20%).

Site C Employment Statistics – April 2019			
	# of Total Workers	# of BC Primary Residents	% of BC Workers
Construction and Environmental Contractors	3,066	2,305	75%
Engineers and Project Team	709	645	91%
Total Workforce	3,775	2,950	78%

Site C jobs snapshot (April 2019)



2019 Q1 Regional Business Participation

Companies engaged by BC Hydro and Site C contractors to provide goods & services in relation to Site C construction between January- March 2019

Community	Number of Businesses	Community	Number of Businesses
Cecil Lake	1	Montney	1
Charlie Lake	13	Pouce Coupe	2
Chetwynd	12	Prince George	31
Dawson Creek	26	Rose Prairie	1
Fort Nelson	1	Taylor	9
Fort St. John	210	Tumbler Ridge	2
Hudson's Hope	4	Wonowon	1
Total		314	



BC Hydro

Power smart