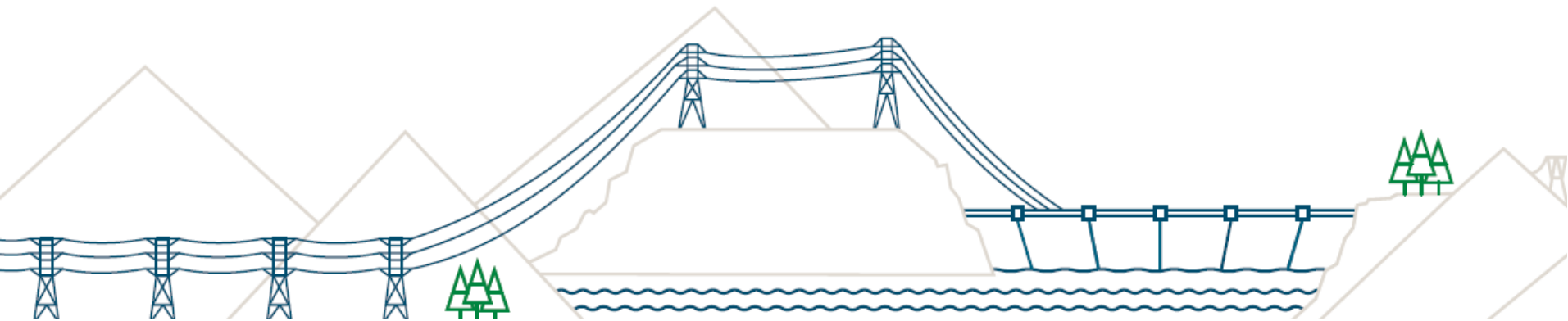


Kinbasket Reservoir Revegetation Program

Mark Sherrington

BC Hydro



May 30, 2022

Kinbasket Revegetation

2007 Order requirement

- “A reservoir planting program to enhance sustainable vegetation growth within the drawdown zone of Kinbasket Reservoir to benefit fish, wildlife, aesthetics, dust control and recreation.” (Schedule A, Clause 1a)

Kinbasket Revegetation Early Implementation



Low survivorship of planting trials

- 75 hectares treated from 2008 – 2013 with sedges and live stakes
- In 2009, 194,000 sedges were planted over 19 ha



Revegetation Program Challenges



July 2010



May 2015

- Less than 5% survival four years post treatment
- 2014 Revegetation Technical Forum recommended smaller scale targeted pilots of debris mounds and debris exclusion booms for key wetland areas

Kinbasket Revegetation Debris mounds

This technique was trialed at Bush Arm Causeway

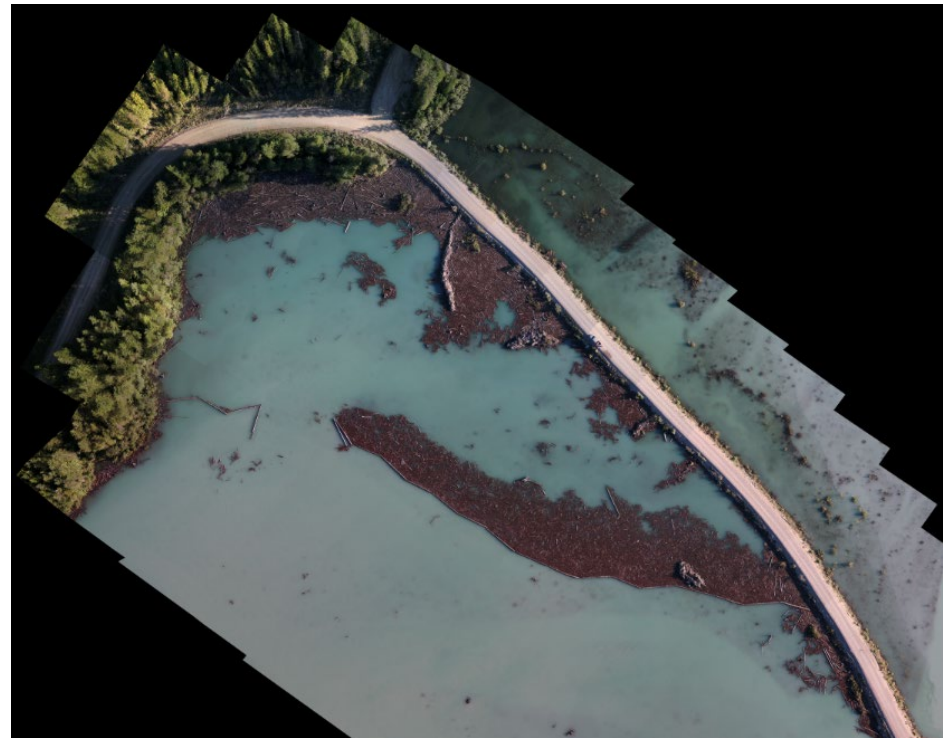


- Targeted wetland with significant debris accumulation
- Mounding in 2015 and planting in 2016
- Initial establishment was mixed success depending on micro-site
- 2020 surcharge provided test conditions for wind/wave action on structural integrity
- Some loss of function but still monitoring resilience over next few years

Aerial view of wetlands and mounds – Bush Arm



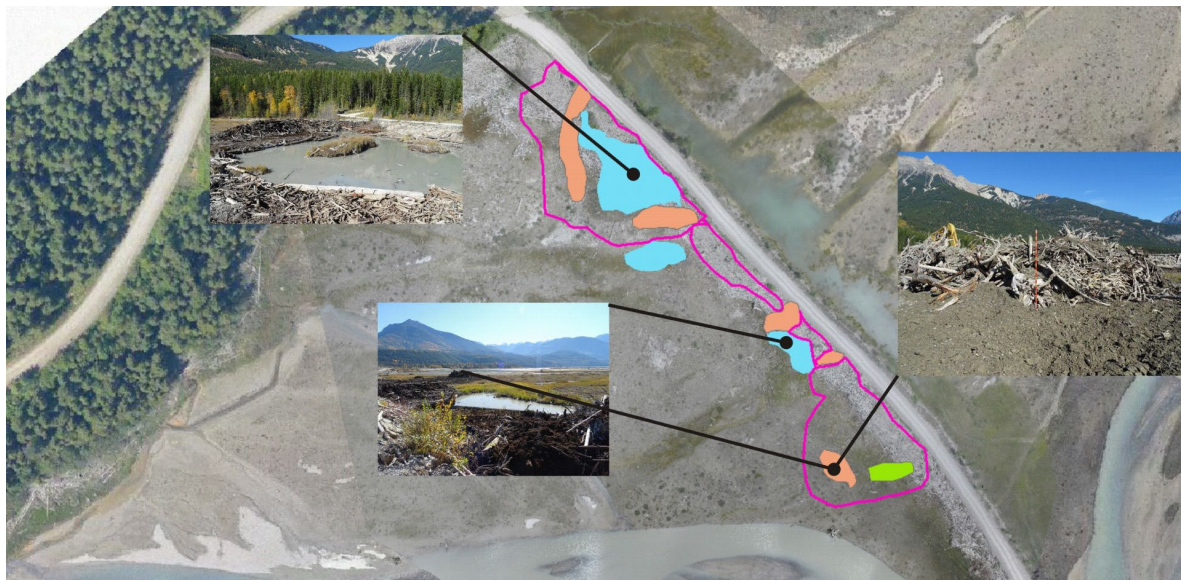
October 2015



Aug 2020

Bush Arm Mounds 2015

Mound construction utilized local wood debris cleared from area



Bush Arm Mound revegetation monitoring 2017-2021



Pre and post 2020 monitoring Kinbasket Revegetation Debris mounds

Structurally, mounds remained largely intact



2021 Post-surcharge debris mounds

Some revegetation has persisted on the mound tops

CLBMON-9 2021 Fieldwork Summary

EA4228



Figure 11. Condition in 2021 of some of the live stakes (black cottonwood) planted in 2015.



Examples of naturally established vegetation still persisting on the summits of the Bush Causeway

Kinbasket Revegetation Alternatives

Debris exclusion booms effective at natural regeneration

CLBMON-9 2021 Fieldwork Summary

EA4228



Figure 22. Log-boom enclosure area at Valemount Peatland, resurveyed 24 June 2021. A selection of CLBMON-9 transects were resampled here. Expanding clumps of *Typha latifolia* (common cattail) (bottom left) as well as open water areas (middle) are indicative of increasingly hygric conditions at this site.

- Vegetation cover has persisted post-surge with debris excluded
- Vegetation diversity has slowly declined due to increased water table post-surge



BC Hydro

Power smart