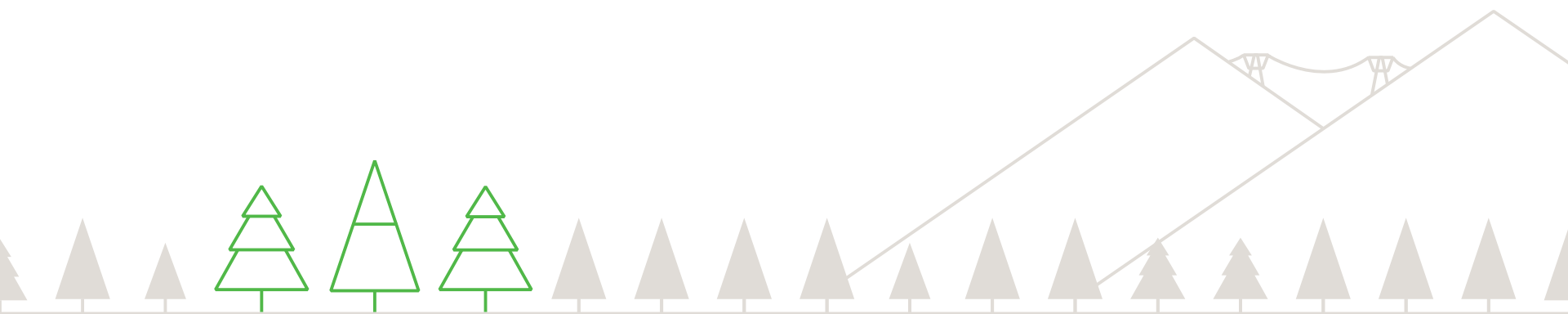


# BC Hydro – Goes Data Collection Network

Bruce Smiley  
Manager Hydroclimate Monitoring and Data Management  
BC Hydro



April 23, 2019

## BC Hydro Quick Facts

- Provincial crown corporation
- Serves 95% of population of BC (1.8 million customers)
- 3<sup>rd</sup> largest electric utility in Canada (by generating capacity): 11,300 MW capacity
- BC Hydro generation is 99% hydroelectric and 1% thermal
- Peace and Columbia regions contain 85% of BC Hydro generation



# Data Collection Network

BC Hydro operates 229 stations in BC

- 120 sites owned by BC Hydro:
- 104 sites funded by BC Hydro in Partnership agreements with Federal Government (Water Survey of Canada, Parks Canada)
- Majority of Sites uses Goes for Transmission method



# Goes Platforms

- 188 active Goes ID's managed by BC Hydro
- 26 – 10 minute assignments
- 1 -12 minute assignment
- 29 – 15 minute assignments

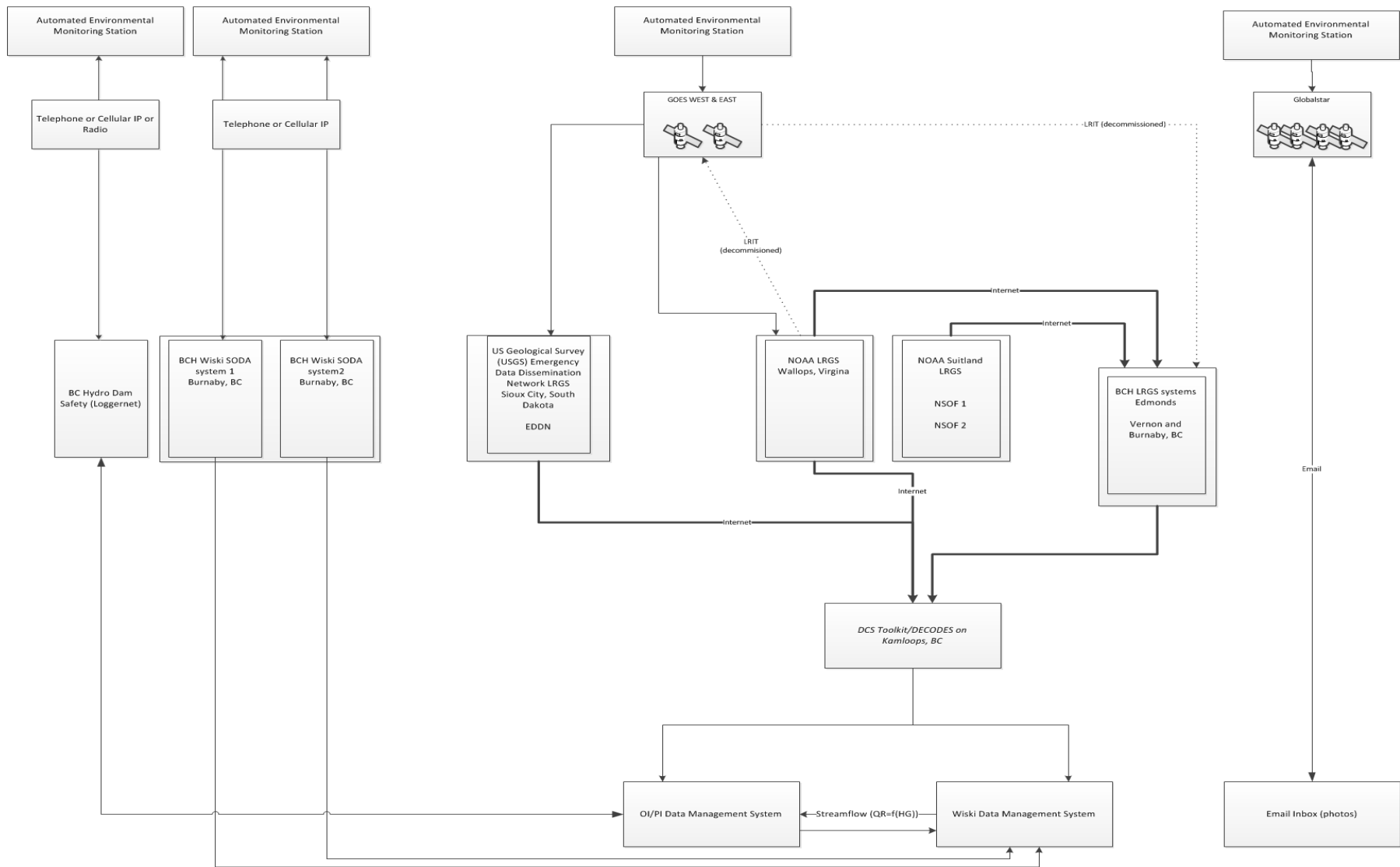
Data used for reservoir operations, water licence compliance, and water supply forecasting

Data also provided to US agencies (Bonneville Power and US Army Corps of Engineers) as part of the Columbia River Treaty

08ME023 2017-08-27 20:00:59 UTC  
50.85624, -123.45336 13.8V 23.0°C



# AUTOMATED REAL-TIME DATA FLOW



# Data Acquisition System

## Current Issues:

- Internet only method for acquiring GOES data
- Data Acquisition system components reaching end of life
- No geographic redundancy for DCS toolkit portion of the data acquisition
- Users expectations are limited interruptions in data
- Difficult to incorporate new telemetry methods into the data acquisition system

## The desired Future state:

- Resilient data acquisition system that can support future telemetry options
- Simpler architecture
- Satellite data acquisition as back up for GOES data
- Geographic redundancy