Alberni Valley Sort’nGo Centre (Alberni Valley Landfill) 2022 Annual Report

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ALBERNI-CLAYOQUOT REGIONAL DISTRICT

Overview

- Mission and Targets
- Solid Waste Disposal
- Waste Diversion
- Landfill Capacity
- Finances
- Environmental Monitoring
- Operations
- Summary of 2022 Projects
- Upcoming Initiatives
- Acknowledgements

Mission and Targets

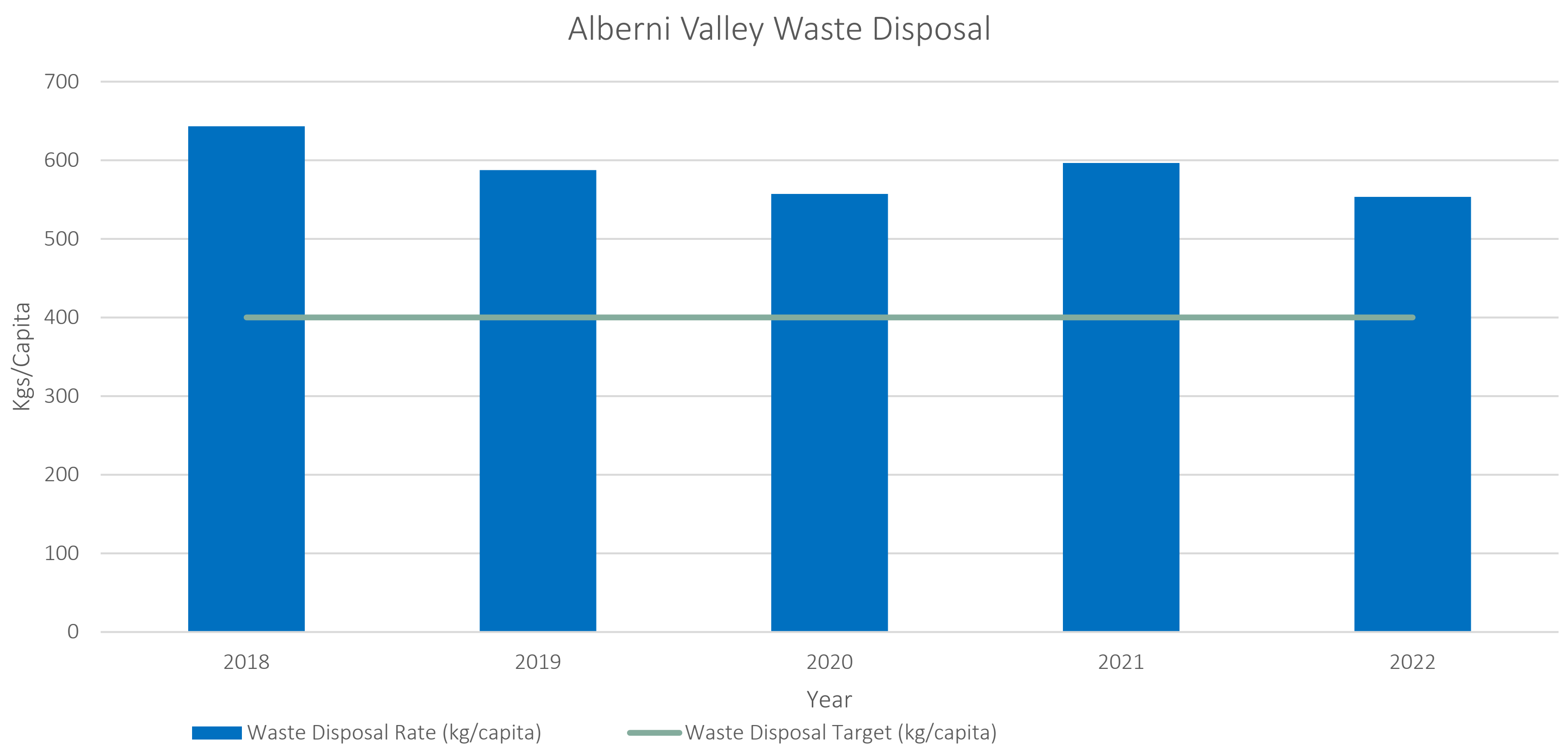
"To protect human health and the environment and maximize value of service by effectively managing the region's solid waste in an environmentally, socially and economically responsible manner."

- Reduce landfill disposal to less than 400 kg/capita
- Increase Diversion of Waste to 50%
- Minimum Airspace Consumption Ratio of 660 kg/m3
- Annual Capital Contributions meet funding requirements
- Confirm all leachate is treated to meet the FWAL criteria
- Landfill Gas Generation less than 1,000 tonnes/year of methane

Solid Waste Disposal

Reduce landfill disposal to less than 400 kg/capita

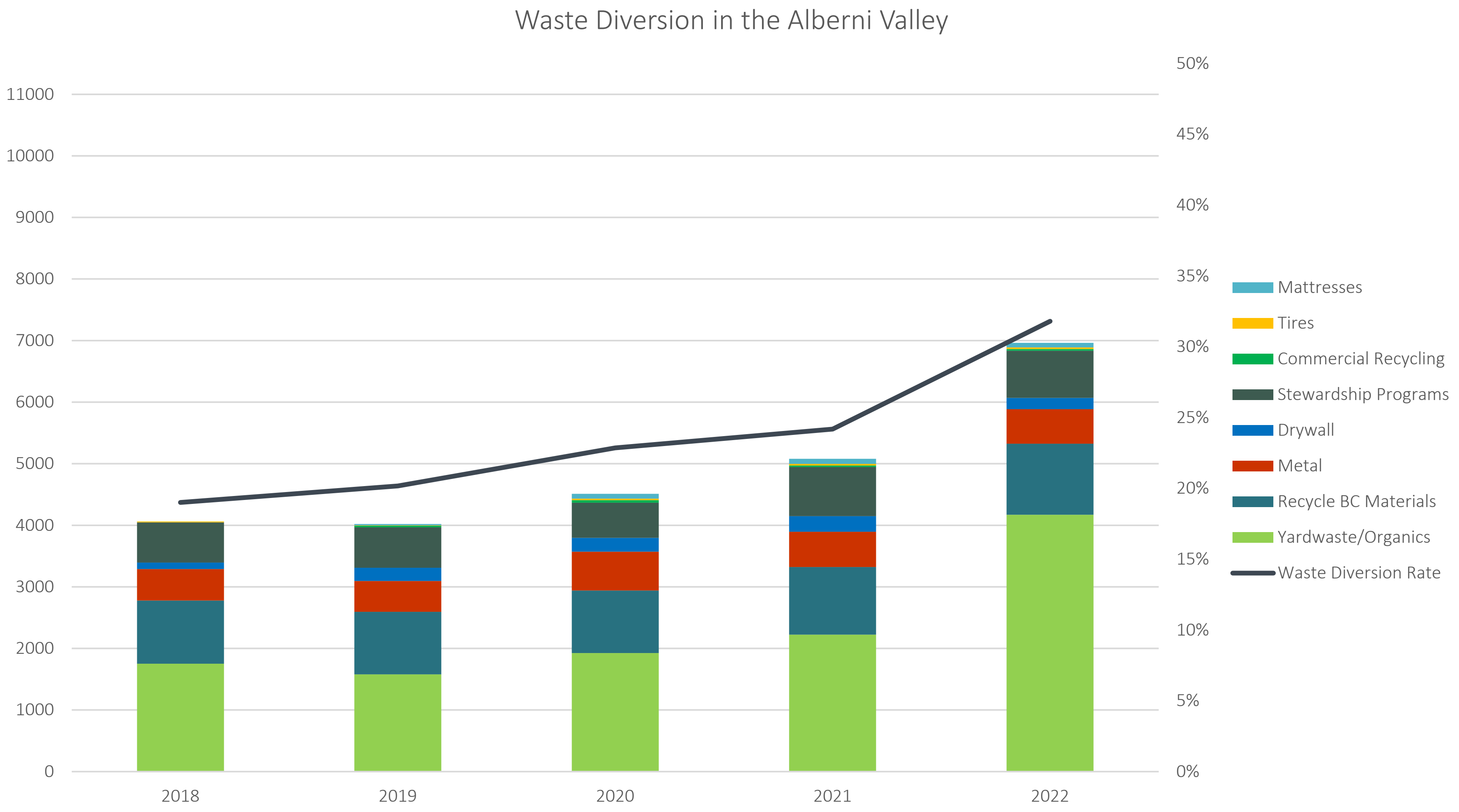
Target 1



Waste Diversion

Target 2

Increase Diversion of Waste to 50%

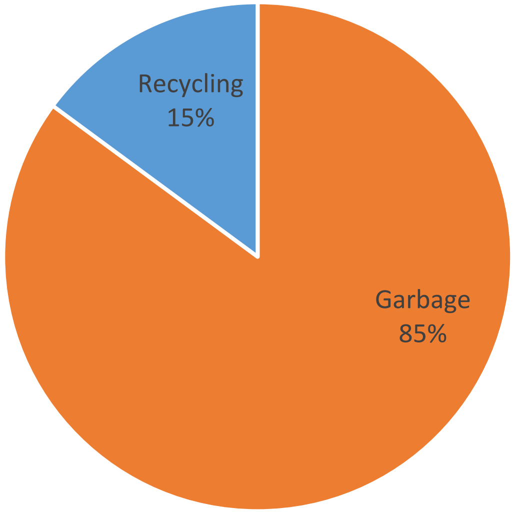


Waste Diversion

Target 2

Increase Diversion of Waste to 50%

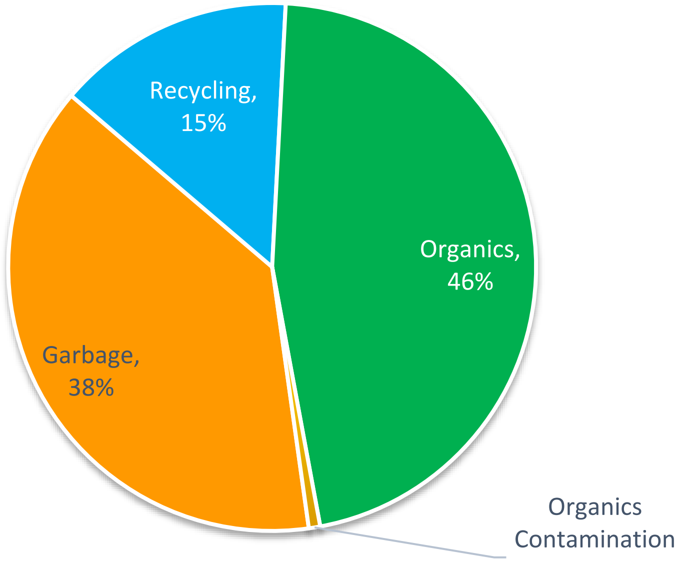
City of Port Alberni Curbside Waste Collection 2021



2-Stream [15% Diverted vs. 85% Disposed]

3-Stream Collection

City of Port Alberni Curbside Waste Collection 2022



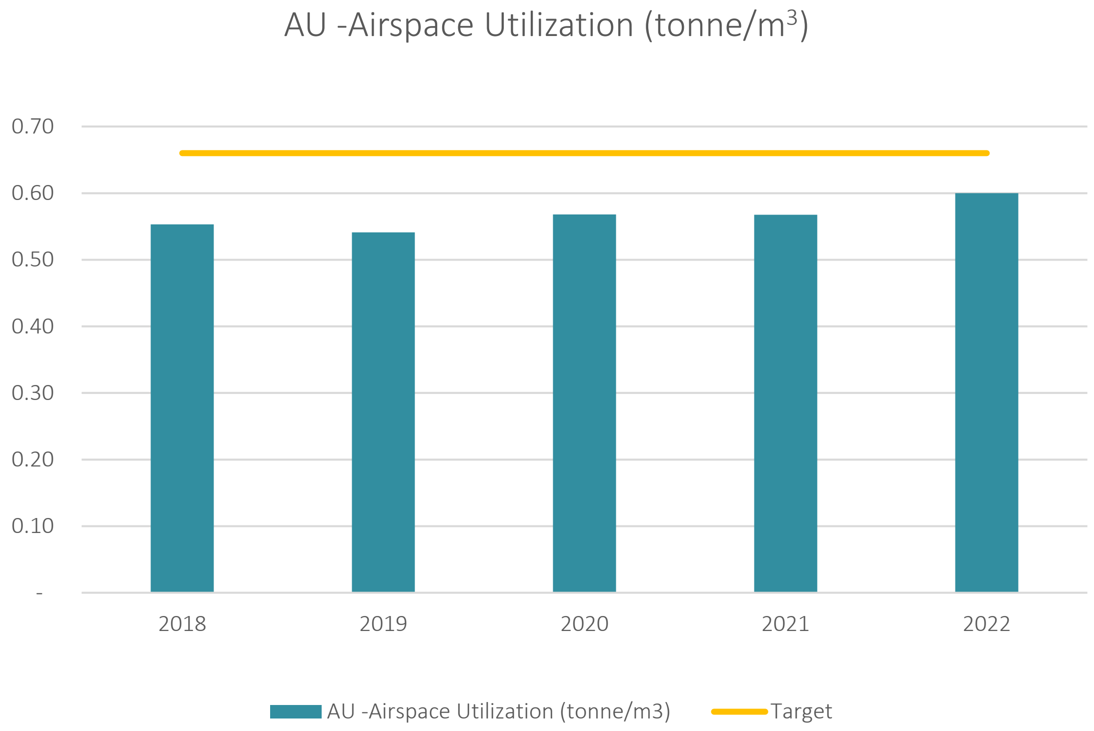
3-Stream [61% Diverted vs. 39% Disposed]

Landfill Capacity

Target 3

Minimum Airspace Consumption Ratio of 660 kg/m3

- Landfill Model– how we plan
- 2,277,400 m3 available (DOCP model)
- Remaining Life 65+ years
- Estimated Closure in 2088(minimum)
- Potential to extend to 2114
- AU increased 11% to 600 kg/m^3



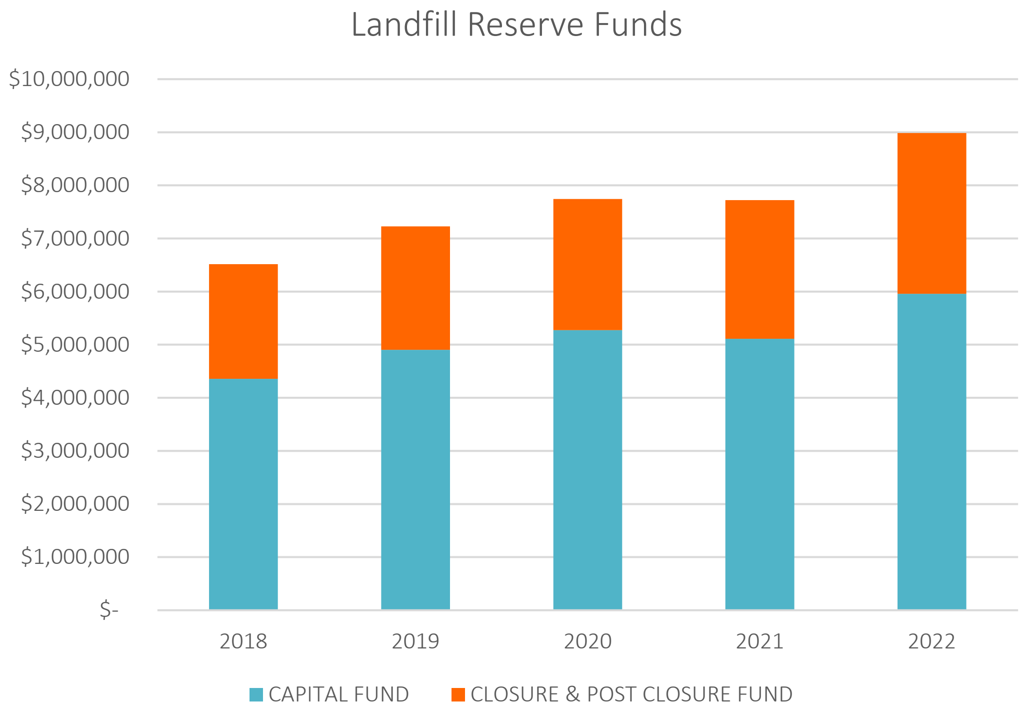
Finances

Target 4

Annual Capital Contributions meet funding requirements

- 2022 contributions
- *$167,000 for closure/post-closure*
- *$450,000 for capital contributions*
- $3,025,000 in reserves

	2022
Landfill Operating Costs	$ 1,516,905
Admin & Education Costs	$ 490,897
Recycling	$ 551,362
Total Costs	$ 2,559,163
Recoveries	$ 470,329
Net Cost	$ 2,088,834
Reserve Funds Allocation	$ 682,210



Environmental Monitoring

Target 5

Confirm all leachate is treated to meet the FWAL criteria

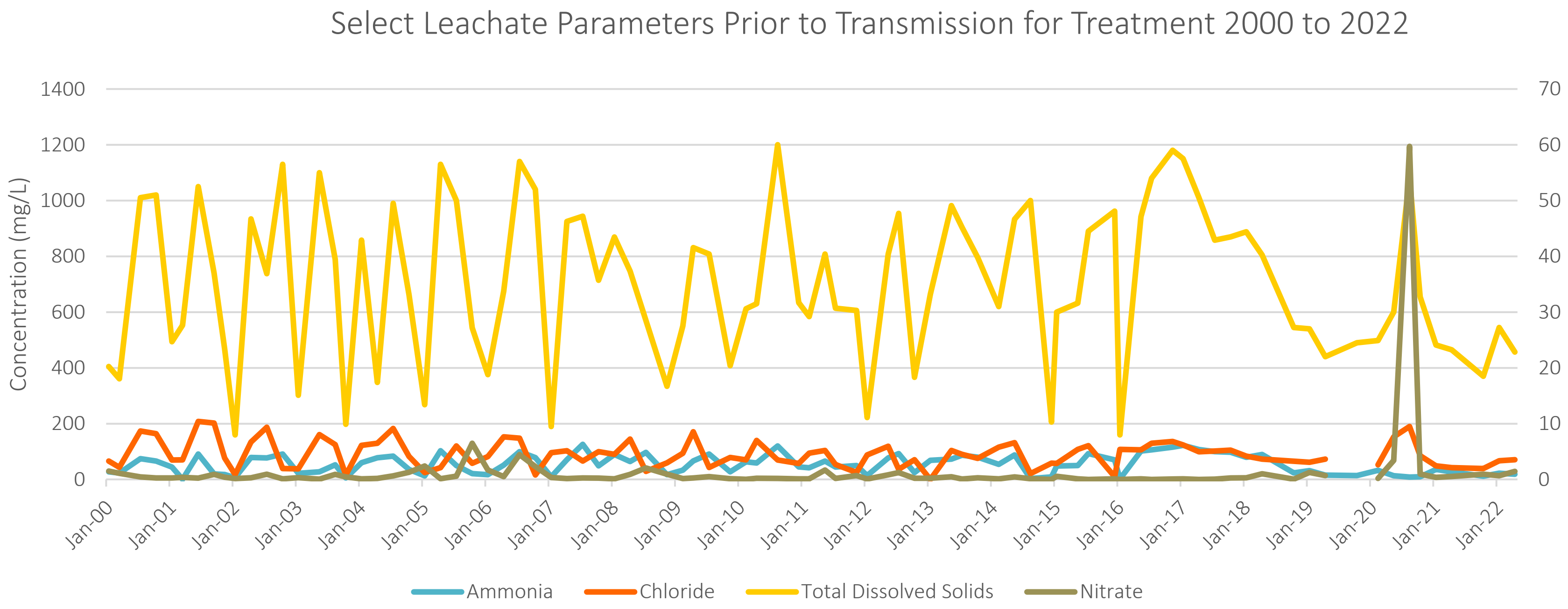
- AVSG (AVLF) is founded on natural bedrock basin
- Engineered berms and leachate collection system are in place
- Leachate is collected in the equalization pond and aeration pond
- Leachate is pumped to the city wastewater lagoon for treatment
- Approximately 440,585 m3 of leachate was discharged to the city in 2022.
- Water Quality monitoring is conducted quarterly
    - *Field samples collected by ACRD staff*
    - *Analyzed at accredited lab*
    - *Results reviewed and reported on by Piteau and Associates*

Environmental Monitoring

Target 5

Confirm all leachate is treated to meet the FWAL criteria

- 2019 showed intermittent operation of main leachate interception wells
- 2020 wells rehabilitated and pumps replaced
- 2021 additional pumps installed and control system added to SCADA
- 2021 results still indicate that the flow gradient has been restored, continued sampling recommended.
- 2022 no additional spikes detected at lagoon inlet.



Landfill Gas

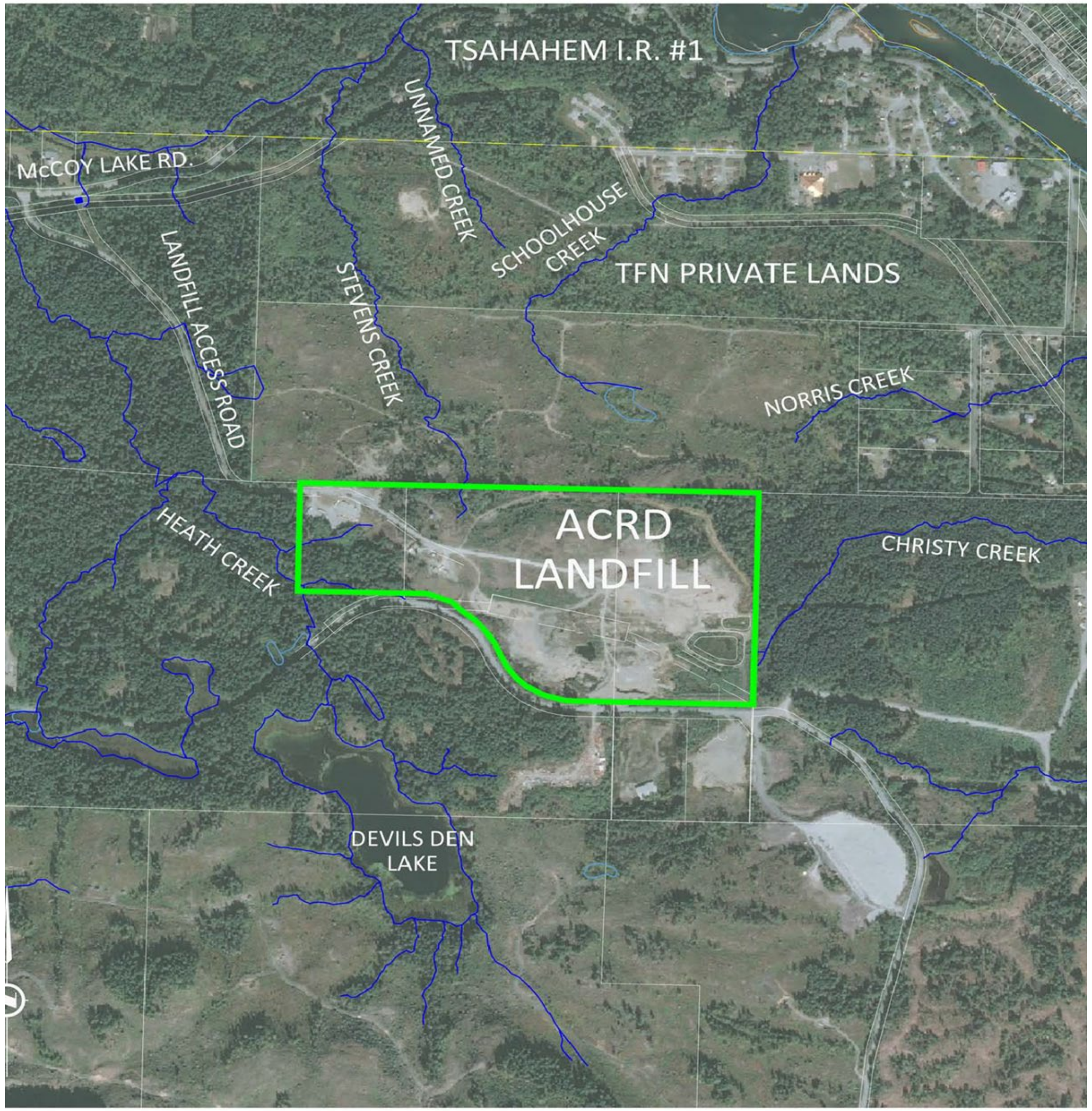
Landfill Gas Generation less than 1,000 tonnes/year of methane

Target 6

- 881 tonnes of methane were generated in 2022 (at 1,000 tonnes per year, a gas collection system is required)
- Diversion of organics will reduce gas generation
- VIU gas modelling – localized concentrations

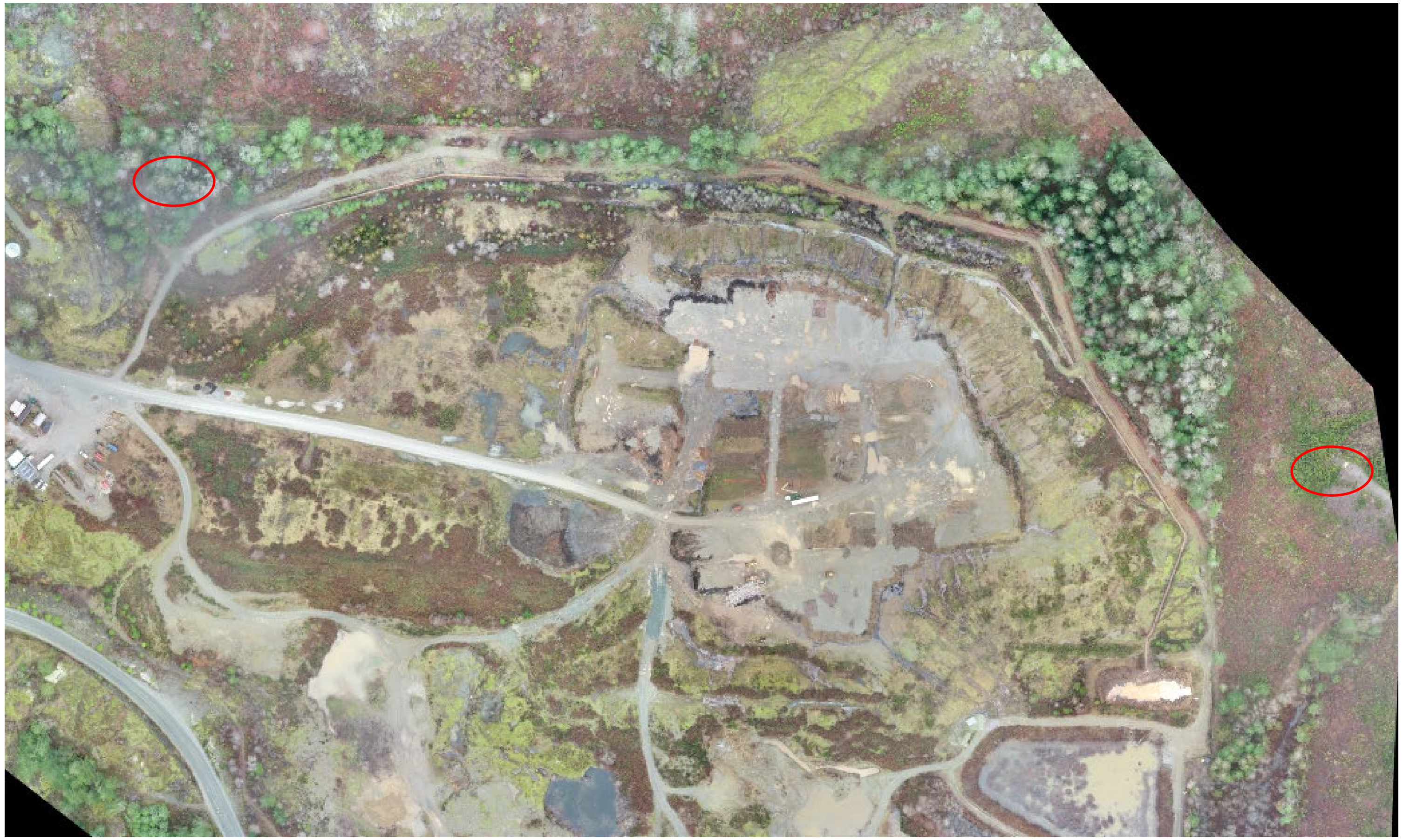
Operations – Site Location

- 5-yr License of Occupation vs 30 yr lease
- Independent review by Hupačasath First Nation: no issues
- Independent review by Tseshaht First Nation – several concerns raised:
- LF siting on traditional lands- lack of provincial consultation;
- Sufficiency of LF groundwater monitoring system;
- Lack of notification for Ministry-issued non-compliance advisories (2021 below):
  - *DOCP update required*
  - *Leachate interception improvements*
  - *On-time submission of annual reports*



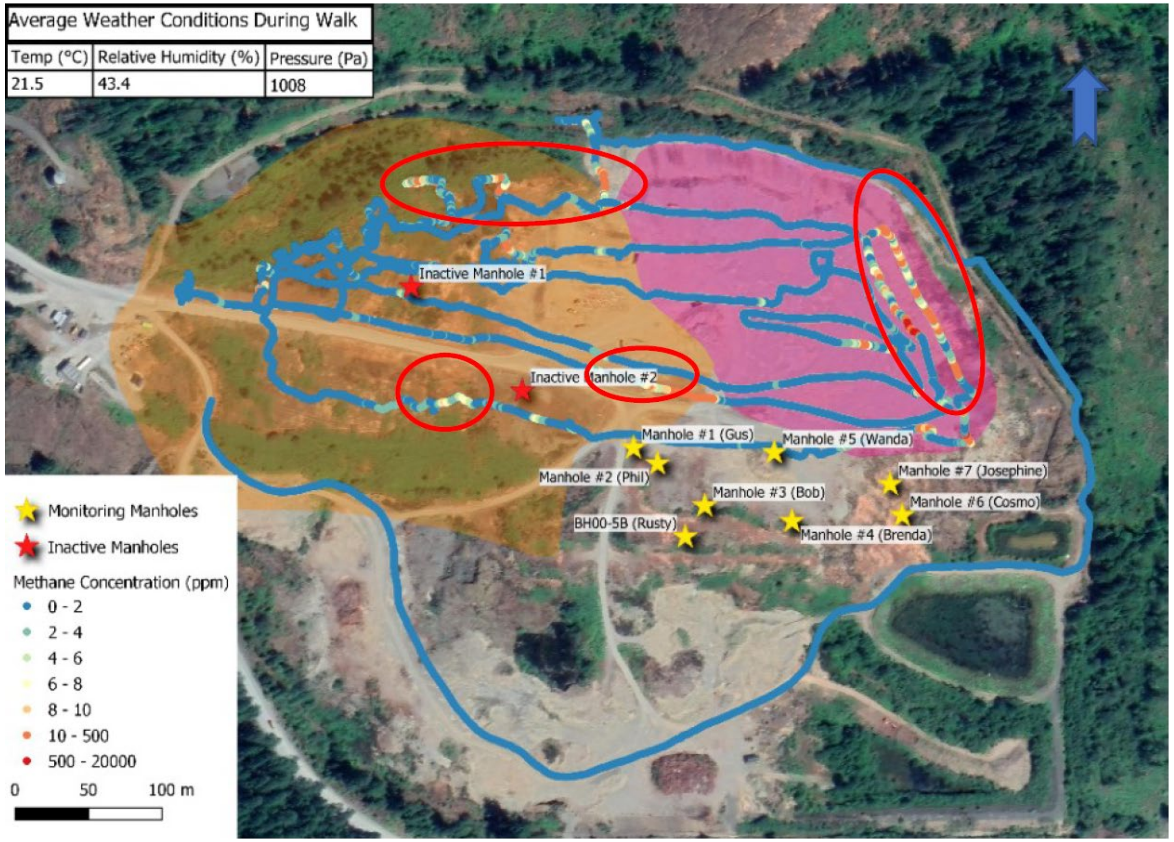
Operations – Site Location

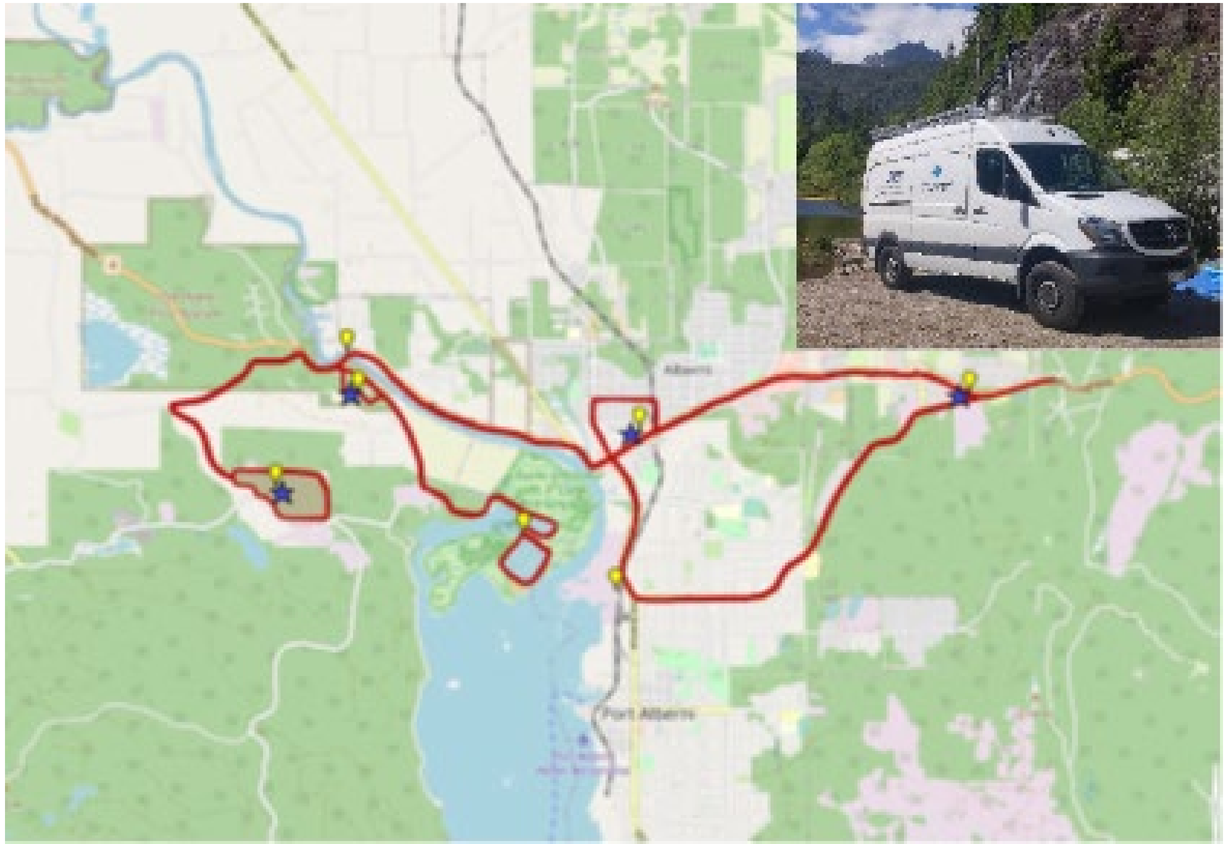
- Addressing concerns and engagement in 2022
- Working Group;
- Establish additional monitoring wells;
- Tipping Fee Waivers for Tseshaht members;
- Additional operating improvements



Operations – Public Feedback

- No issues with dust, noise, traffic, litter, odour or wildlife attractants.
- Many questions on divertible items, highlights including:
  - Glass bottles;
  - Asbestos disposal;
  - Batteries;
  - Cardboard
- Received 4 requests on commercial Styrofoam





Projects Completed 2022

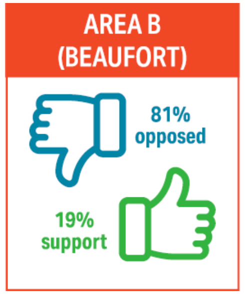
- Vancouver Island University Landfill Gas Sampling

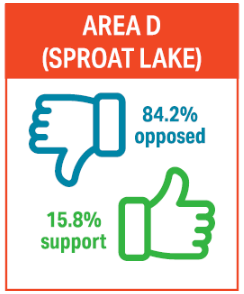
Projects Completed 2022

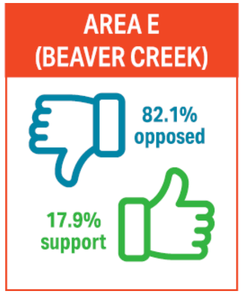
- Phase 3 Organics

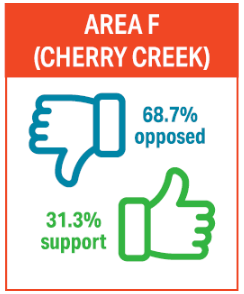
Sort'nGo
RECYCLING

- Alberni Valley Collections Contract









Projects Completed 2022

- Bylaw Updates

- Environmental System Procedures

Additional Initiatives

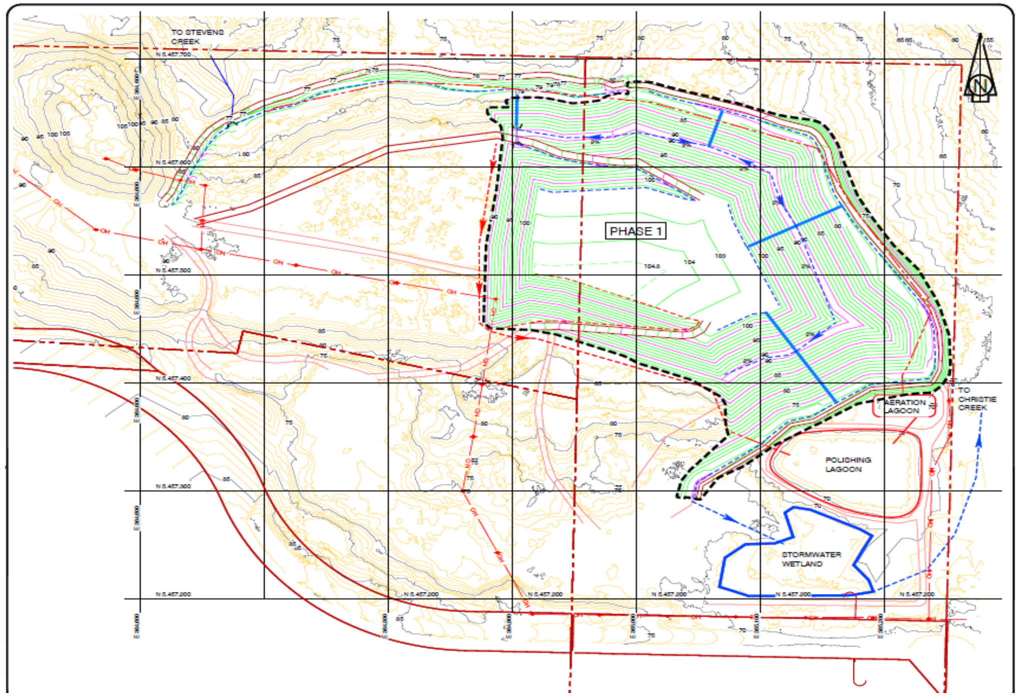
Landfill Working Group

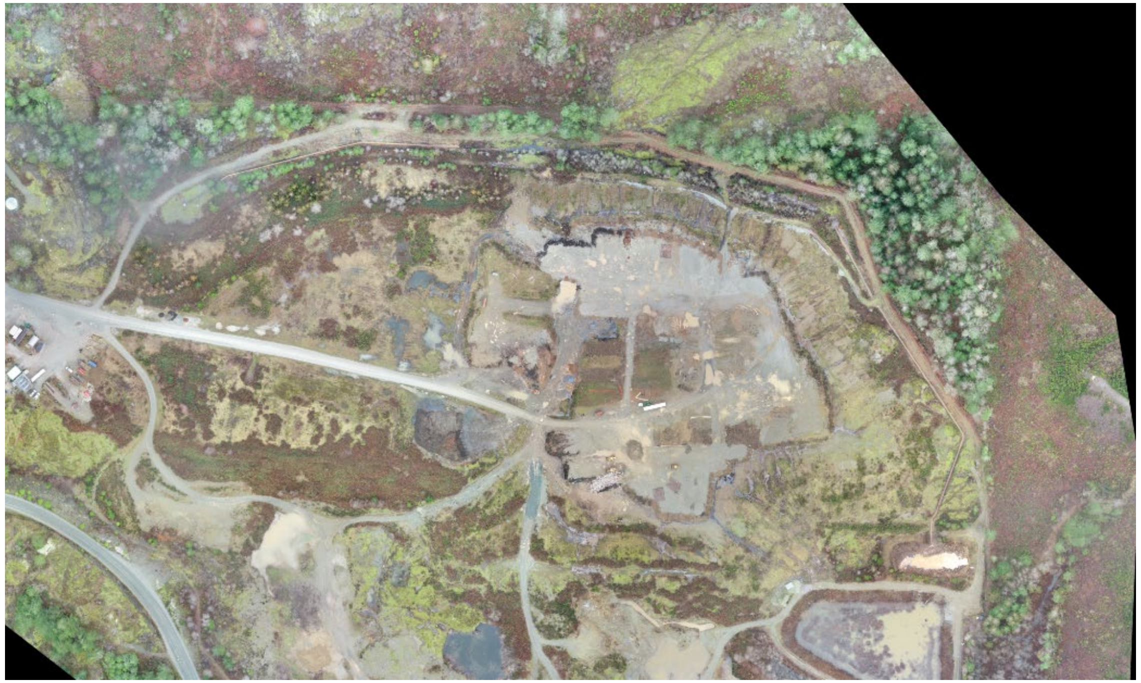
Added Lighting and Cameras

Bear Aware

Projects Completed 2022

- DOCP updated 2022
- Updated lifespan (organics)
- Present day costs
- Detailed filling/revised footprint





Projects/Improvement Plans 2023

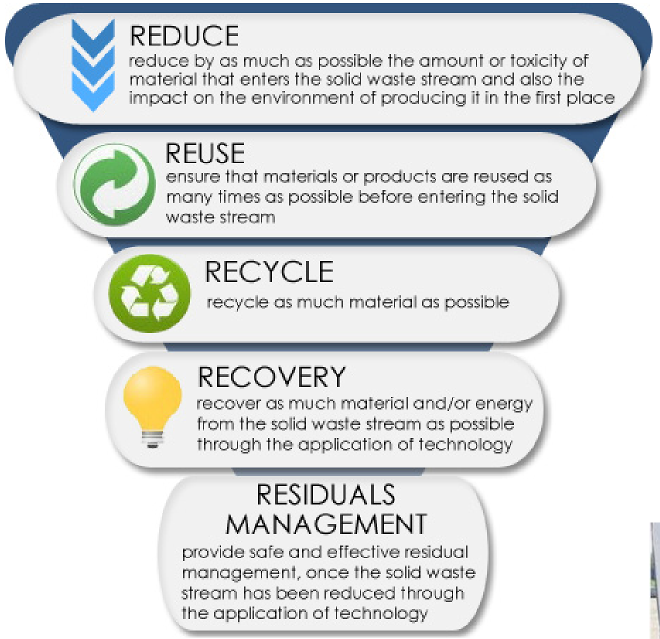
VIU Landfill Gas Monitoring Partnership

Solid Waste Management Plan Update

Landfill Working Group

Well Install and Clay Dam Inspection

Waste Composition Study





Projects/Improvement Plans 2023

Waste Education & Outreach

Reduce Airspace Consumption

Ban Organics

Tipping Fee Review

Household Hazardous Waste


Thank you