

Sunshine Coast Regional District

Water Supply Plan Feasibility Study Long-Term Ground Water Supply Sources

Summary of the Selection of Test Well Drilling Locations

Prepared for the SCRD Board of Directors Meeting on January 25, 2024



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Water Supply Plan Feasibility Study Long-Term Ground Water Supply Sources - *Groundwater Investigation Phase 5*

- This study has been initiated to assess the feasibility of supplying water to a larger population of the regional water service area, especially during the peak summer use periods when system demand is at its highest use and the available storage from Chapman Lake is at its lowest level.

Water Supply Plan Feasibility Study Long-Term Ground Water Supply Sources - *Groundwater Investigation Phase 5*

- To explore the possibility of securing additional groundwater supply to address the current water supply deficit and create regional water system resiliency.

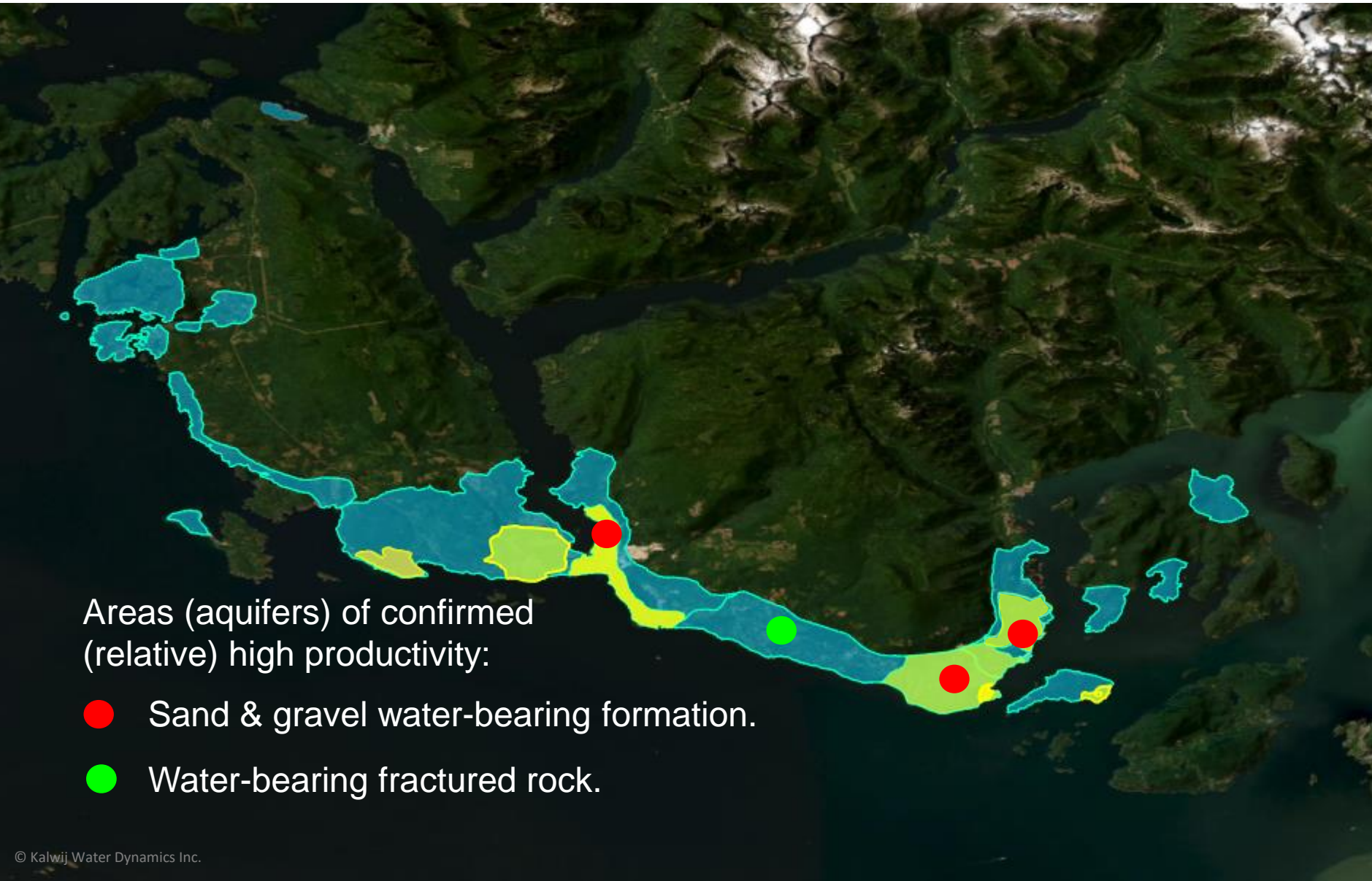
Project Scope

- Desktop review in support of identifying five (5) test well drilling locations on the Sunshine Coast.
- Drilling and construction of up to 5 test wells.
- Completion of 72-hour duration constant rate pumping tests and water quality analysis.

Project Scope

- Determine the long-term yield for each test well and its suitability for a long-term municipal water supply source.
- To identify and prioritize the most suitable location for further investigation and/or groundwater development.

Desktop-based Inventory of Areas with Potentially Productive Water-Bearing Formation (Sand & Gravel, Fractured Rock)



■ Sand and gravel aquifers

■ Fractured rock aquifers

✓ Reviewed Aquifer Productivity (*based on well records & aquifer information*).

✓ KWD's team experience with well drilling projects on the Sunshine Coast.

Areas (aquifers) of confirmed (relative) high productivity:

● Sand & gravel water-bearing formation.

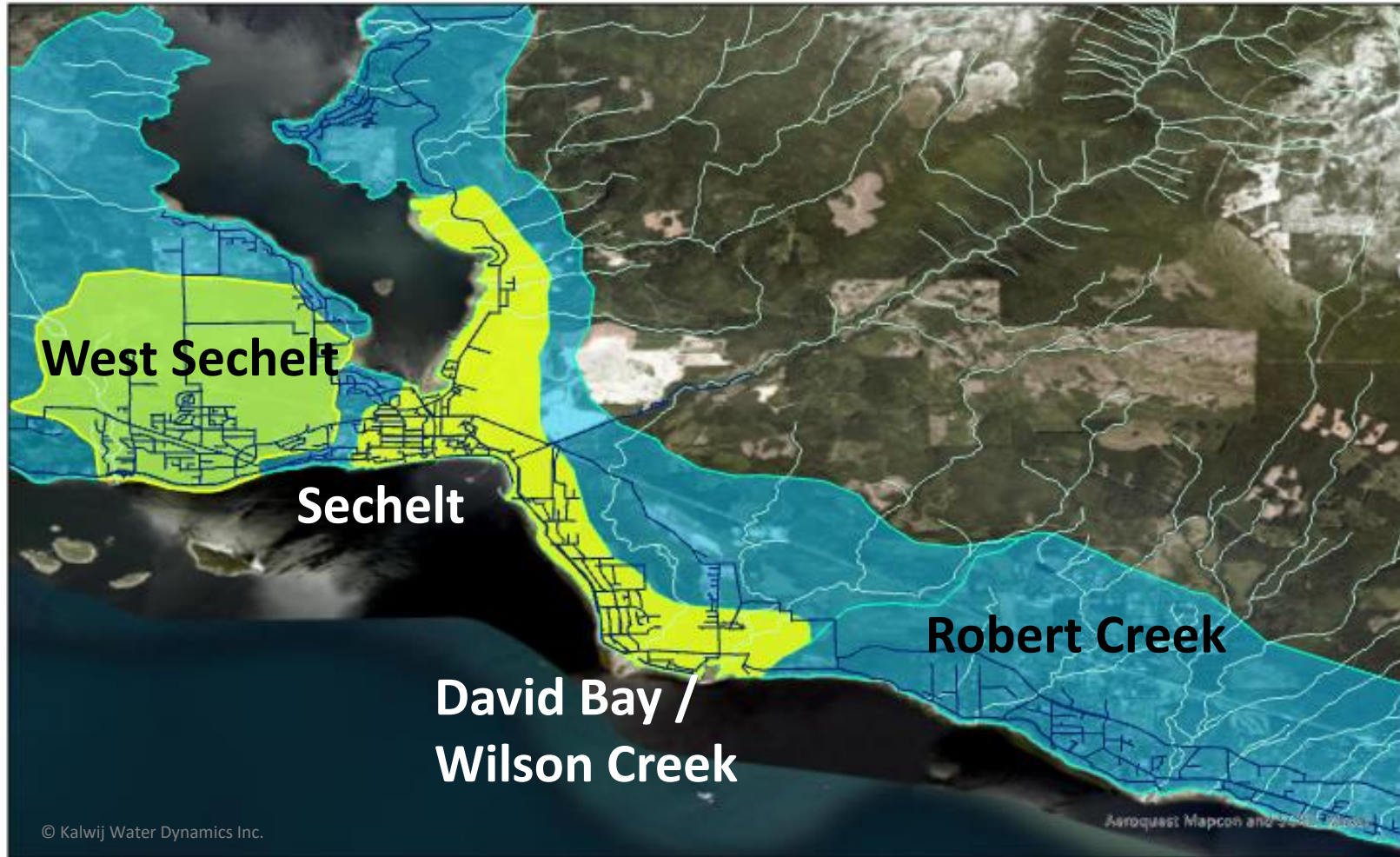
● Water-bearing fractured rock.



Some key factors that were considered for further refining of the test well drilling site selections:

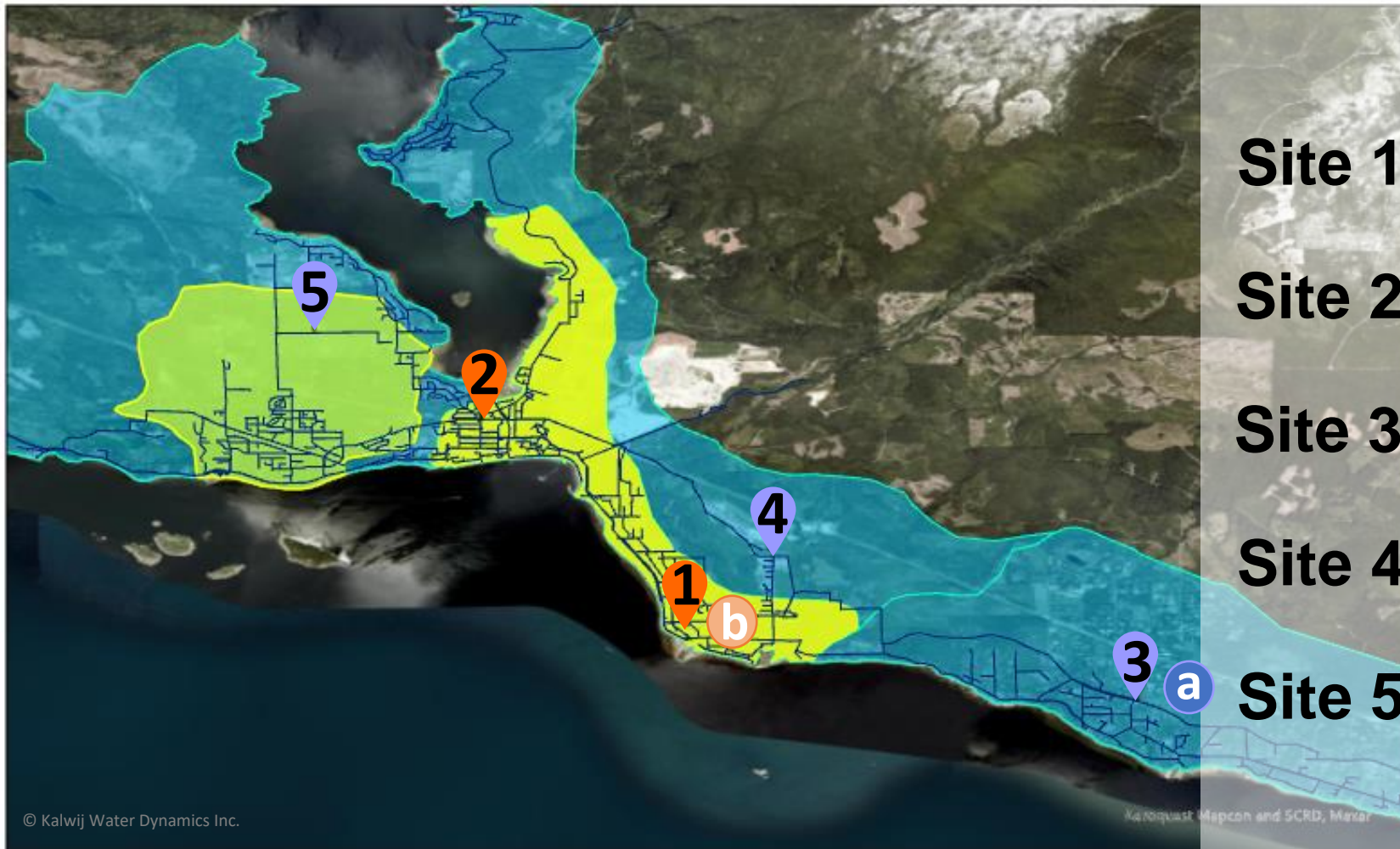
- Land ownership.
- Proximity to existing water system infrastructure.
- Ground elevation.
- SCR D expressed preference to explore in the Sechelt area.

Test Well Drilling in Certain Potentially Productive Areas Were Ruled Out based on Competing Water Demand & Future Land Use Plans.



- ✓ Multiple iterations were completed for identifying test well drilling sites.
- ✓ Resulted in short listing 4 areas, targeting:
 - **Sand & Gravel Aquifer(s)**
 - **Fractured Rock Aquifer(s)**

Proposed Test Well Drilling Sites



Site 1 Whitaker Park.

Site 2 Proctor Bike Park.

Site 3 Robert Creek Firehall.

Site 4 Airport.

Site 5 Kinnikinnick Park.

Backup Sites: (a) Gliff Gilker Park; (b) DL1356 (East of Chapman Creek).

Proposed Test Well Drilling Sites

	Site 1	Site 2	Site 3	Site 4	Site 5
Description	Whitaker Park	Proctor Bike Park	Roberts Creek Fire Hall	Airport Site	Kinnikinnick Park
Address	5123 Davis Bay Rd., Sechelt	5638 Trail Avenue, Sechelt	1302 Roberts Creek Road, Roberts Creek	4484 Hilltop Road, Sechelt	6082 Ripple Way, Sechelt
Land ownership	District of Sechelt	District of Sechelt	SCRD	District of Sechelt	District of Sechelt
Approx. elevation (m-geod.)	15	5	82	82	106
Aquifer Type (targetted)	Sand & Gravel	Sand & Gravel	Fractured Rock	Sand & Gravel / Fractured Rock	Fractured Rock
Near water main / infrastructure	yes	yes	yes	yes	yes
Proposed Test Well Drilling Depth	107 m (350 ft)	50 m (164 ft)	198 m (650 ft)	244 m (800 ft)	244 m (800 ft)

Whitaker Park

Key Next Steps

- **Approval from the District of Sechelt** to undertake Test Well Drilling at Whitaker Park, Proctor Bike Park, Airport Site, and Kinnikinnick Park.
- **Approval from shíshálh Nation** to undertake test well drilling at the 5 sites – application was submitted to *In Situ Archaeology* in December.
- **Refine actual drilling site** based on logistics such as drill rig and equipment & casing placing.

WHITAKER

Proctor Bike Park



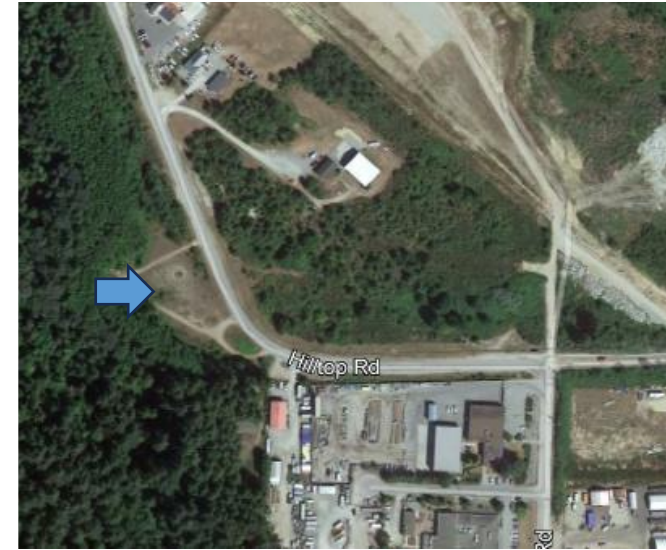
Kinnikinnick Park



Proposed Schedule

- **Field Program Implementation:**
February – May 2024
 - ❖ *Test Well Drilling.*
 - ❖ *Pumping Tests.*
- **Data Analysis:** June – July 2024
- **Multi-Criteria Assessment -**
Workshop: August 2024
- **Final Report:** September 2024
- **Presentation:** October 2024

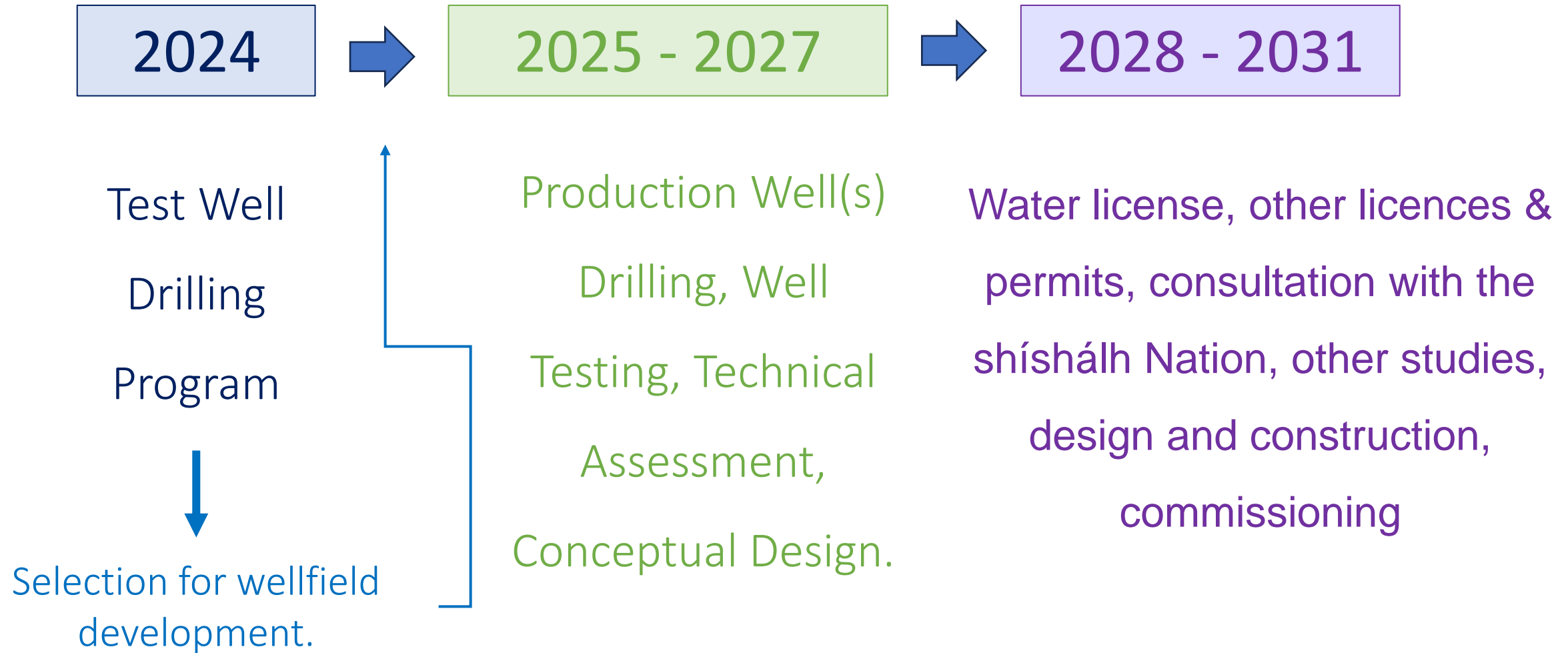
Airport Site



Roberts Creek Fire Fall



Overall Timeline – Bringing a New Groundwater Source Online.





Thank you for your Attention.

Any Questions?