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Hagensborg Community Water System

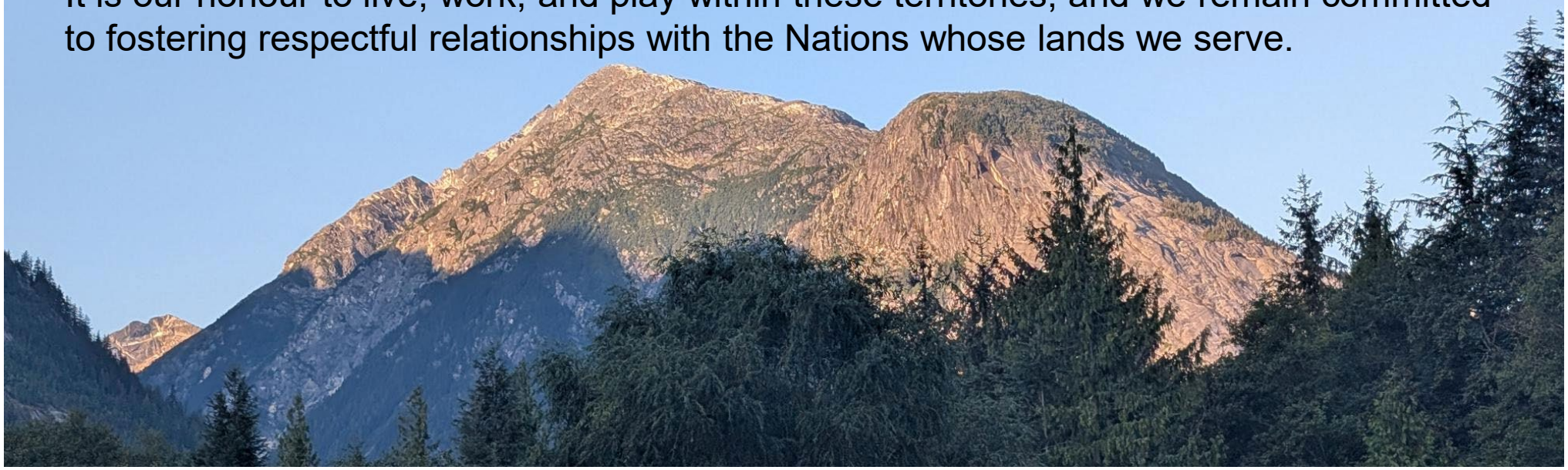
2024/2025 System Upgrade Project

Nov 25 2025

Land acknowledgement

We respectfully acknowledge that we are gathered today on the unceded ancestral territories of the Nuxalk people. The Central Coast Regional District is privileged to provide services within these lands, as well as within the territories of the Heiltsuk, Wuikinuxv, Kitasoo/Xai'Xais, and Ulkatcho Nations.

It is our honour to live, work, and play within these territories, and we remain committed to fostering respectful relationships with the Nations whose lands we serve.



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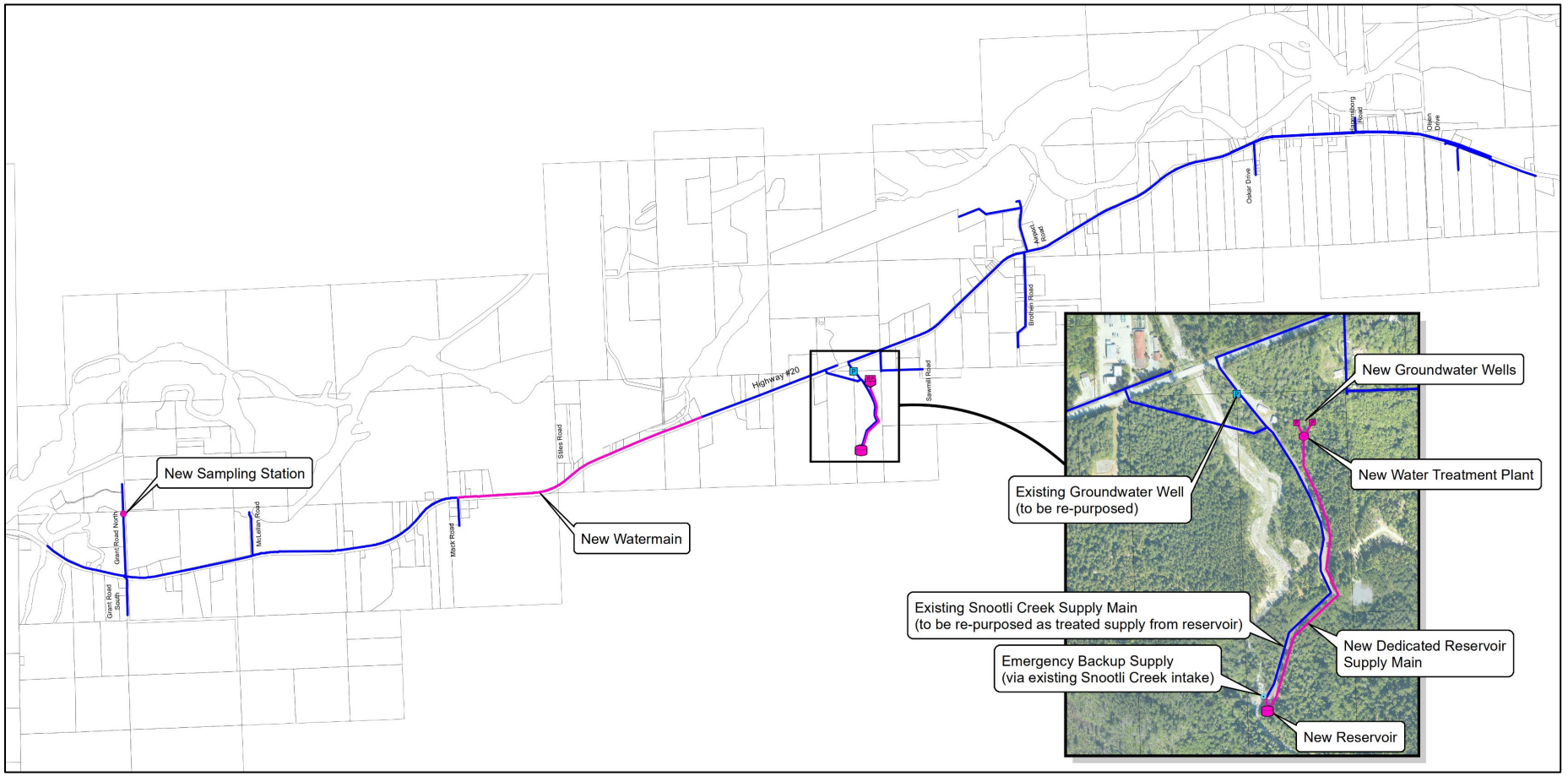
Scope of Project

- Groundwater Wells
- Water Treatment Plant
- Reservoir Supply Main
- Reservoir
- Flow Meters
- Distribution Main



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Project Budget

The project is funded from the following sources:

• Capital Reserves (Local Improvement District Funding, CCRD Additions)	$ 811,000
• Investing In Canada Grant Funding	$ 3,785,000
• Growing Communities Fund	$ 200,000
• Community Works Fund	$ 400,000
• Local Service Area – Previous Years Surplus	$ 200,000
• Local service Area – Asset Replacement Fund	$ 117,000

Total Funding: $ 5,513,000

Project Expenditures

• Engineering Design and Planning Costs	$ 388,000
• Well development Costs	$ 367,000
• Contract Costs (Construction tender)	$ 4,559,000
• Administration and Construction Reviews	$ 30,000
• Archeological	$ 48,000
• Utility Servicing Costs	$ 45,000
• Reservoir tariff (US Steel Import)	$ 53,000
Total Expenditures:	$ 5,490,000

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Water Distribution Main

Replacement of the existing 150mm (6”) AC watermain with a new 200mm (8”) HDPE watermain was completed along Highway #20 last spring.

The approximately 2km segment of 100mm AC watermain between Mack Road and Walker Park Road was also completed last spring.

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Water Distribution Main

4 New Fire Hydrants were installed along Highway 20.

New In-Live Valves were also installed to isolate sections of the distribution system.

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Flow Meters

The flow meters on the east and west branch of the water distribution system have been replaced, which will help identify leaks and otherwise observe water use.

Site Piping at Wells / WTP

New raw water piping between the groundwater wells and treatment plant is installed along with drains, electrical conduits, and similar buried works associated with the treatment plant building last spring.

Site Piping at Wells / WTP

Well Discharge Piping.

Site Piping at Wells / WTP

Finished site

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Site Piping at Wells / WTP

Completed Well Installation.

(Transducer awaiting installation).

Water Treatment Plant

Construction of the new treatment plant building started last spring, and was completed in September 2025.

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Water Treatment Plant

Completed Building.

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Water Treatment Plant

pH Adjustment tanks (3).

Uses Calcite Chips

(Calcium Carbonate).

Water Treatment Plant

UV Disinfection (3 systems).

2 units plus one spare.

Water Treatment Plant

Chlorine Injection.

Chlorine disinfection is being used as one of the two treatment options (the other is the UV), due to cost, and the requirement to maintain a residual chlorine level in the distribution system irrespective of primary treatment method (Vancouver).

We must maintain a minimum 0.2 ppm chlorine residual at the ends of the distribution system .

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Reservoir Supply Main

The new 100mm (4”) dedicated reservoir supply main has been completed along with the direct-buried communication cable that will establish controls between the wells / treatment plant and reservoir.

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Reservoir Site

The reservoir site is located near the existing creek intake area on CCRD property, reservoir construction was completed in September.

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Reservoir Site

Reservoir

erection.

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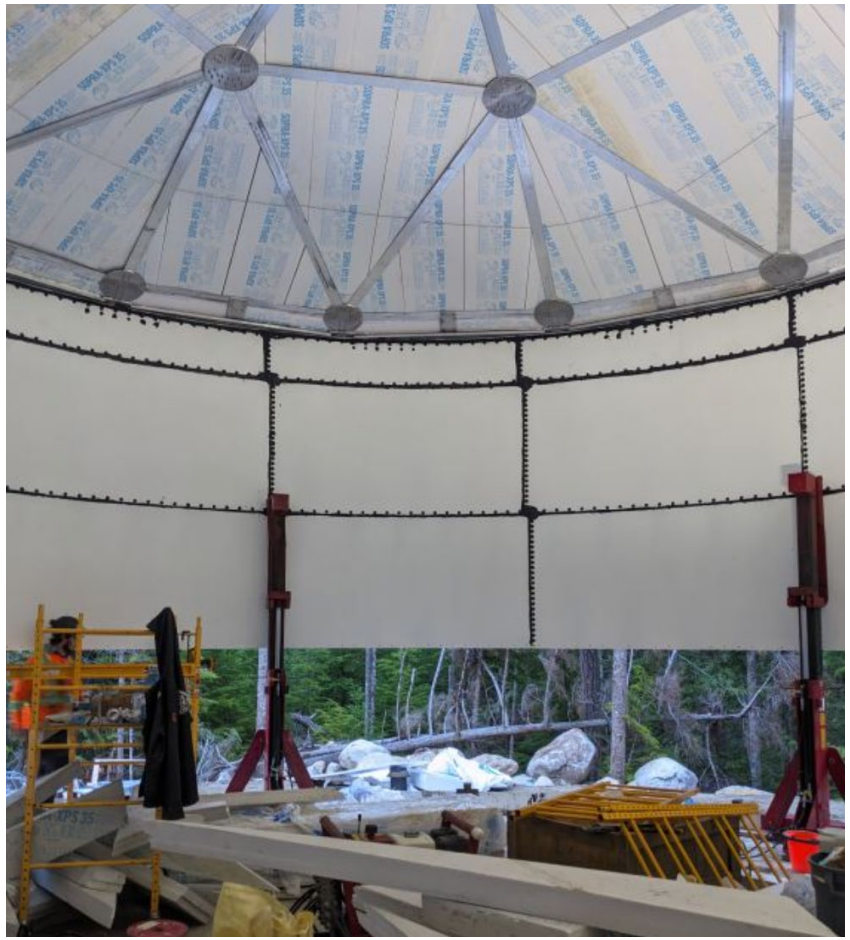

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Reservoir Site

The reservoir inside.

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Reservoir Site

Insulation completed.

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Reservoir Site

The reservoir nearing the completion of the outside cladding.

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Reservoir Site

The reservoir has been filled and disinfected, along with the associated piping between the wells and the tie in point to the existing system.

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Reservoir Site

The new Well Water Supply.

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Next Steps

- Upon completion of all reservoir and treatment commissioning (imminent), the chlorination system will be shut down temporarily to allow a flushing program to commence;
- The new well water source (with UV treatment) will be connected to the system and the creek supply disconnected;
- A slight (less than 10 psi) pressure increase is expected as the new reservoir is slightly higher than the creek supply elevation;
- The distribution system will be flushed of sediment over the next 1-2 week period, in both directions;
- A notice will be placed on the CCRD webpage and facebook page to advise residents of the flushing program;

Next Steps

- Residents may notice a change in water quality as the sediment makes it's way through the system;
- Residents will be encouraged to also flush their systems during this time;
- Residents currently using sediment traps or filters will be encouraged to clean and/or replace their filters upon completion of the flushing program;
- Upon completion of the flushing program, further notices will be placed to advise of the completion of the program, upon which time chlorination will be turned back on as required by our Operating Permit.

Ongoing maintenance

- The system currently is tested on a regular basis for coliform bacteria, following the completion of the system upgrades, additional testing will commence to monitor chlorine residuals in the distribution system;
- Annual comprehensive metals testing will continue as they have in the past.

What will change?

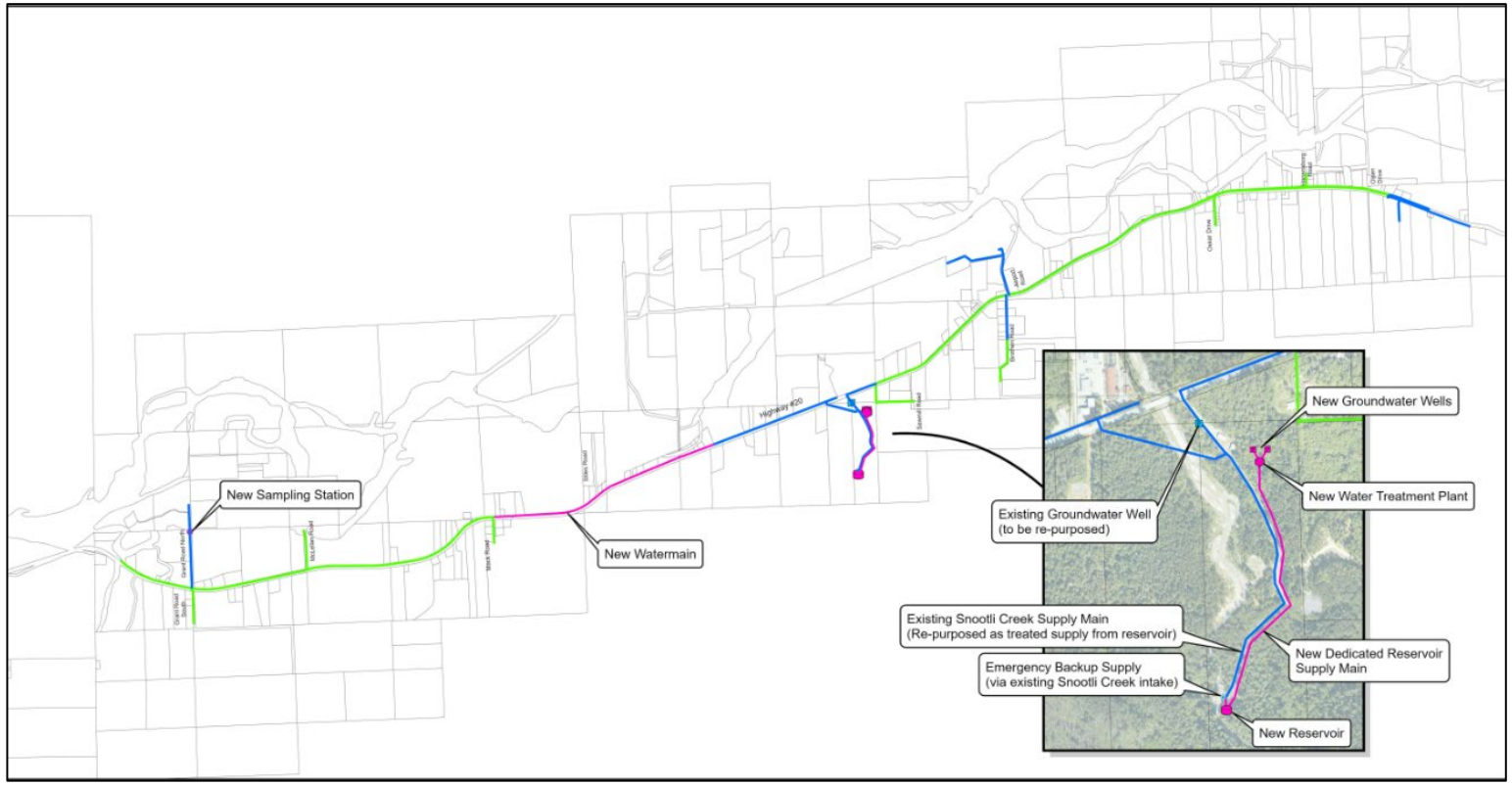
- A slight increase in static water pressure is expected within the system;
- Pressure fluctuations, particularly in the summer or periods of high rainfall events will be reduced or eliminated;
- Complete loss of the water system pressures will become a rare event;
- Pressure/water service loss during unplanned watermain breaks will be able to be isolated with the addition of new in-line water valves;
- Planned watermain work affecting service pressures will be able to be isolated using the inline valves.
- Water quality is expected to be consistent from winter to summer, with very little turbidity, and will be treated to protect users of the system from waterborne pathogens.

Fire Underwriters Survey

- Community water systems are weighted by Fire Underwrites Survey, as part of the fire department rating system.
- Insurance Company's use this information to assess risk and adjust premiums for fire insurance
- The fire service area covered by the Hagensborg water system has been rated without the community water system, primarily due to a lack of storage.
- The improvement project, provides significant benefits, such as the provision of fire flow storage to allow the future potential certification of the system for fire protection purposes
- The reservoir has been sized to provide adequate water storage for fire flows at a single-family dwelling rating.

New Grant – 2025 Strategic Priorities

- CCRD Board made an application for a grant of $7,000,000 to complete the replace the remaining distribution system.
- Includes the replacement of all AC watermains, inline valves, and hydrants.
- Expecting a reply to application, spring 2026



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Questions / Comments / Discussion