



LUND WATERWORKS DISTRICT CONVERSION PROCESS

What is service conversion?

- Changing a utility service owned and operated by an Improvement District to a local government service, otherwise known as a Utility Acquisition.
- All buildings, equipment, money, debts, and rules are transferred with the service.
- Conversion effectively ends the Improvement District, however, debts stays with the properties within the existing district boundaries (known after conversion as the “Local Service Area”).
- Users still receive services, although service delivery rules and costs (taxation & user fees) may look different and are subject to local government leadership approval. In the case of the Lund Waterworks District, this would be the qathet Regional District Board.
- Requires Elector Approval.
- Requires adoption of Loan Authorization Bylaw.

Why consider conversion?

- Hard to find volunteers to run the Improvement District as Directors.
- Sufficiently trained staff can be hard to find and keep.
- Drinking water services have strict regulations and high health standards; to maintain these is a challenge.
- The Improvement District cannot access government grants.
- Without grants, the costs are too expensive to achieve drinking water standards.

What do Regional Districts offer?

Per Improvement District Governance: Policy Statement,
Province of British Columbia, 2006

Regional districts provide rural communities with a more integrated and efficient form of local governance by combining planning, regulation, and service delivery under one system. This allows for better management of growth through coordinated land-use decisions, regulatory oversight, and infrastructure planning. Their larger scale supports access to skilled staff, stronger financial tools, such as lower-cost borrowing through the Municipal Finance Authority, and stable insurance coverage. Regional districts can also access provincial grants and streamline taxation through the provincial system, reducing administrative burden. Overall, they offer a more comprehensive, cost-effective, and sustainable approach compared to improvement districts.



LUND WATERWORKS DISTRICT CONVERSION PROCESS

How does the approval of electors process work?

When required:

- Decisions with long-term community impact (e.g., borrowing, utility disposal, parkland, municipal boundaries, property reservations).

Methods of approval:

- Petition
- Alternative Approval Process: Proposal blocked if $\geq 10\%$ of electors oppose; otherwise may proceed.
- Assent Voting (Referendum): Majority vote (property owners and property value totals) in favor needed.



Check out our
website to learn
more

What if the process fails? What are the alternative options?

- **Revive the Trustees:** Community takes back control, but lose access to grants.
- **System Shutdown:** Shut down water system; everyone gets private wells. Wells may not be possible for all properties (cost or geology limits).
- **Do Nothing:** Continue with current issues like water quality advisories, though the LWD is still obligated to update or decommission dams.



IMPORTANT LEGAL / LIABILITY CONSIDERATIONS THAT THE qRD MUST CONSIDER

Why must we maintain strict policy adherence?

Regional Districts are required to meet regulatory standards as set by provincial and federal agencies for the provision of water services. Regional districts do not have the same leeway as provided to other water purveyors.

There are currently 156 potable water systems in our region, with the following designated as Water Improvement Districts:

- Brew Bay *
- Gillies Bay *
- Lund Waterworks *
- Pinetree *
- Savary Shores *
- Stillwater *
- Van Anda *
- Woodlyn ID *

With 156 small water systems potentially needing funding support and requesting conversion, the qRD has a policy to protect the region's taxpayers from undue liability and legal risk.

The qRD is not financially well-resourced in the event of a lawsuit, contrary to common belief, so it is essential to take necessary precautions and ensure all utility systems are compliant before conversion.

A lawsuit could result in substantial taxation increases to cover legal costs.

Refer to the handout for policy considerations that the qRD is required to follow.

**Access all qRD's
presentation
materials here**



or visit: qathet.ca/current_project/lund-waterworks-district



IMPORTANT LEGAL / LIABILITY CONSIDERATIONS THAT THE qRD MUST CONSIDER

CASE LAW: Walkerton, ON and North Battleford, SK

In 2000, the Walkerton crisis became Canada's deadliest E. coli outbreak resulting in seven deaths and sickening over 2300 people.

Brothers Stan and Frank Koebel, after a lengthy investigation by the Ontario Provincial Police, were convicted in 2004 following a plea bargain.

In 2001, North Battleford experienced a major widespread Cryptosporidium parasite outbreak.

An estimated 7,000 people fell ill with symptoms like diarrhea and fever, resulting in a \$3.3 million compensation settlement for those under 18 at the time.

The Walkerton tragedy led to a complete overhaul of Ontario's water management system.

Likewise, the North Battleford incident led to scrutiny of water treatment protocols similar to the Walkerton crisis, although Cryptosporidium is distinct from E. coli.

Since Walkerton and North Battleford, local governments have been held to a higher standard when providing potable water to the public. These unfortunate events launched the development of new standards for water, health and safety, with each province introducing measures that they thought appropriate. Therefore, the qRD must be in a responsible and accountable position to comply by meeting construction standards as well as operational standards to avoid risk and protect public health.



LUND WATERWORKS DISTRICT POLICY CONSIDERATIONS

Policy Considerations: Master Municipal Construction Design Guideline Manual, 2022

General Design Considerations - Section 1.7 – Seismic Design Standards

Underground utilities have shown themselves to be prone to high damage rates in a seismic event whenever there are significant permanent ground deformations or excessively high levels of ground shaking and resulting permanent ground accelerations and velocities. Seismic design standards are necessary to be considered in seismically active zones with a potential for soil liquefaction. This is even more important when considering a shared fire flow and potable water distribution system, which, during a severe seismic event, is required to remain functional if it is to be relied upon to provide fire suppression throughout the community. Design of pressurized distribution systems (water distribution pipes and sanitary force mains) including small chambers shall be performed in general compliance with American Lifelines Alliance (ALA) Design Guidelines for Seismic Resistant Water Pipeline Installations and ISO 16134 Earthquake and Subsidence-Resistant Design of Ductile Iron Pipelines.

The Pipe Function Class should be established in consultation with the utility operator and be used in evaluating design needs to accommodate seismic events. In addition, use of redundant pipe and frequent isolation valves are recommended on critical infrastructure to increase post-earthquake reliability and help ensure critical pipes, if damaged, can be disconnected from the system without loss of service to other areas.

Water Distribution - Section 2.10 - Dead Ends

Watermains must be looped wherever possible. Where dead ends are unavoidable, and approved by local the authority, blow-offs or blow-downs should be provided.

Blow-off and blow-down sizes are:

- 50 mm dia. for 100 and 150 mm dia. watermains; and
- 100mm dia. for 200mm dia. and larger watermains.

Where practical, and approved by the local authority a hydrant may serve a secondary role as a blow-off.



LUND WATERWORKS DISTRICT POLICY CONSIDERATIONS

Policy Considerations: Ministry of Health Design Guidelines for Drinking Water Systems in B.C., 2023 (r. 2024),
s. 16.3: Design Criteria

Distribution system layouts are usually designed in one of three configurations: arterial-loop systems, grid systems and tree systems. Tree systems often have more dead ends and as such are generally not recommended.

Wherever possible, water distribution systems should be designed to eliminate dead ends by making appropriate tie-ins or looping whenever practical. Water quality problems associated with dead ends include taste and odour concerns, decay of disinfectant residual, bacterial growth, increased corrosion, changes in pH and collection of sediment. Where dead-ends mains cannot be avoided, the Designer should take steps to ensure the water quality issues have been addressed.

Isolation valves should be strategically installed to allow for the maintenance of service through alternate routing while repairing a section of watermain.

**View the full
design guidelines
here**





LUND WATERWORKS DISTRICT POLICY CONSIDERATIONS

Policy Considerations: McElhanney Assessment Reports , 2018 & 2022

November 2018 McElhanney study - pages 13 & 14:

In addition, the main along Finn Bay Road should be extended along Finn Bay Road to tie into the main fed by the underwater main.

The underwater main is undersized to provide fire flow to Finn Bay Road, but construction of new main along Finn Bay Road will resolve this issue.

October 2022 McElhanney study - pages 6 & 16:

It should be noted that the three tanks above the end of Alannah Road do not feed water back into the distribution system, but rather the outlet is connected to a single hydrant on Finn Bay Road opposite the Tidal Arts Centre. These tanks should be connected to the broader distribution system through a loop along Finn Bay Road connected back to the existing main adjacent to the sewage treatment plant.

Looping the existing water system from the sewage treatment plant to the north end of Finn Bay along Finn Bay Road provides redundancy and the opportunity to connect the north end storage tanks to the system as a whole. Reducing the need for additional storage and utilizing the water in the tank for more than just fire flow. The recommendation is to create this loop with a minimum 150mm diameter C900 PVC pipe complete with hydrants and valves over the 1150 lineal metres.

**View the full
McElhanney
reports here**



2019 Final Report



2022 Final Report





LUND WATERWORKS DISTRICT POLICY CONSIDERATIONS

Policy Considerations: qathet Regional District Water/Wastewater Utility Acquisition Policy No. 3.15, 2022

Section 6.1 - Acquisition Fee

As a local government, the qRD's mandate is to provide reliable, cost-effective services to the public that meet federal, provincial, qRD and industry standards.

The qRD is not in the business of Utility acquisition and will not pay more than one dollar (\$1) to acquire a Utility

Section 6.2 - Right of Refusal

The qRD reserves the right to refuse to acquire a Utility at any point in the process. Reasons to refuse include, but are not limited to:

- Excessive risk or legal liability to the qRD.
- qRD staff and/or budget capacity constraints.
- The Requesting Utility does not and/or cannot meet federal or provincial standards.
- The Requesting Utility does not have a valid licence or required permits and is unlikely to obtain them.
- Easements or rights-of-way are not in place to protect critical infrastructure and it is unlikely these can be obtained.
- System users do not give consent to the acquisition.

Section 6.9 - Rights-of-way, Easements and Ownership of Lands

The qRD, at its discretion, may not assume ownership of a Utility where major facilities, mains, and other capital works are not located within registered rights-of-way or easements held by the owners of the system or within a legal parcel owned or leased by the owner.

For a New Development Utility, all major infrastructure must be located on lands to be transferred to the qRD.

View the qRD's full Water/Wastewater Utility Acquisition Policy here:



LUND WATERWORKS DISTRICT BUDGET CONSIDERATIONS

The service must fund its proportionate share (26.67%) of the project costs, and any ineligible costs.

Current Debt Payment Estimates

DEBT PAYMENT ESTIMATE - ESTIMATED PROJECT COST & MAXIMUM ICIP GRANT						
PROJECT	ELEGIBLE COSTS	GRANT	LOCAL PORTION	INELIGIBLE COSTS	TOTAL LOCAL PORTION	ANNUAL PAYMENT
Lending Rates						5.50%
	100%	73.33%	26.67%			30-years
Estimated Project Cost	14,594,921	10,702,456	3,892,465	702,134	4,594,599	340,977
Maximum ICIP Grant	15,024,380	11,017,378	4,007,002	702,134	4,709,136	349,477

FLAT PARCEL TAX	
2,750	Estimated Project Cost
2,818	Maximum ICIP

Based on 2026 BC Assessment Completed Roll Values	Lot Size (Acre)
Small	0.1
Large	111.82
Median	1.02
Average	3.28
Total Acreage	409.35

Property Value Tax (Residential)

per \$100k	Average	Lowest	Highest
328	2,587	68	7,961
337	2,652	69	8,160

Estimated Project Cost
Maximum ICIP

Parcel Information	With Tla'amin
Estimated Converted NTV	10,384,697
Estimated Number of Parcels	124

Property Value Tax (Business)

per \$100k	Average	Lowest	Highest
804	3,492	245	12,903
824	3,579	251	13,225

Estimated Project Cost
Maximum ICIP

Assessment Statistics	
Average Residential	788,007
Lowest Residential	20,600
Highest Residential	2,424,700
Average Business	434,122
Lowest Business	30,400
Highest Business	1,604,000

The Estimated Project Cost represents the total amount of borrowing required to complete the project based on current assumptions. The Maximum ICIP Grant Project Cost reflects the borrowing required if the full amount of available funding is to be applied to the project.

Annual debt payments under each scenario have been estimated using an assumed borrowing rate of 5.5 per cent. Actual borrowing cost may vary and will be confirmed at the time the debt is issued.

As of April 13, 2026 the Municipal Finance Authority of B.C. was indicating the 20-year borrowing at an interest rate of approximately 4.91 per cent.



LUND WATERWORKS DISTRICT PROJECT FINANCING SCENARIOS

Approval is required for the maximum borrowing amount to proceed with the project to ensure that the qathet Regional District can access the full available grant funding.

Only the amount of borrowing necessary to complete the project will ultimately be drawn.

If additional grant funding is secured, it will reduce the total borrowing required to be drawn.

qathet Regional District staff constantly monitor eligible grant funding opportunities with the ultimate goal of reducing the tax burden.

SCENARIO 1 PROJECT FINANCING

(Conversion Unsuccessful - No Grant Funds Available)

ICIP Grant Scope Project Costs (est. 2027 Construction)	\$15,297,055
DRIF Grant Scope Project Costs (est. 2027 Construction)	\$2,970,638
Funding from ICIP Grant	\$ -
Funding from DRIF	\$ -
TOTAL Local Share - Borrowing	\$18,267,693

SCENARIO 2 PROJECT FINANCING

(Current Scope; ICIP Grant Only)

	\$15,297,055
Funding from ICIP Grant	\$10,702,456
% of ICIP grant used	97%
Ineligible Costs	\$702,134
Local Share - Borrowing for ICIP Grant	\$3,892,465
TOTAL Local Share - Borrowing	\$4,594,599

SCENARIO 3 PROJECT FINANCING

(SPF Grant Awarded; ICIP Scope Reduced)

TOTAL Project Scope	\$15,297,055
SPF Project Scope	\$7,142,400
Remaining ICIP Project Scope	\$8,154,655
Funding from ICIP Grant	\$5,979,809
% of ICIP grant used	54%
Ineligible Costs	\$702,134
Local Share - Borrowing for ICIP Grant	\$2,174,846
TOTAL Local Share - Borrowing	\$2,876,980



LUND WATERWORKS DISTRICT BUDGET CONSIDERATIONS

Grants Received for Conversion Feasibility

Year	Description	Amount
2018	Province of BC Grant Project P175372	6,507.00
2018	Province of BC Grant Project P175371	8,330.00
2019	Infrastructure Planning Grant	10,000.00
2022	EA Feasibility Study Grant LWS	20,000.00
2024	Use of grant for MSR Solutions Invoice	10,318.75
2025	Use of LW Conversion grant for 2025 costs	4,924.67
2025	Rec'd grant from Province of BC for LWD	50,000.00
2025	50% of grant paid out to LWD	(25,000.00)
2025	DRIF Grant	10,000.00
TOTAL GRANTS		95,080.42

These grants help us to explore establishing a service

These grants help us to reduce the cost of the preliminary and exploratory work required to establish the service.



LWD Costs to Date

Year 2018	Description	Cost
	Lund Water Caretaker Extra Work	350
	McElhanney Lund Water Assessment	3,518.00
	Lund Water Caretaker Extra Work	203.75
	Staff surveyor distance allowance	33.16
Year 2019	Description	Cost
	Lund Water Caretaker Extra Work	227.5
	McElhanney Lund Water Assessment	9,779.50
	McElhanney Lund Water Assessment	695.5
	Powell River Peak - Public Engagement	345.78
	Powell River Peak - Public Engagement	345.78
	Powell River Peak - Public Engagement	295
Year	Description	Cost
2022	Tai Uhlmann - Lund Water Grant application	1,812.50
2022	Persephone Consulting	3,480.00
2022	NAC Constructors Ltd. LWD project assessment	32,985.00
2024	MSR Solutions - Professional Fees Aug 2024	10,318.75
Year 2025	Description	Cost
	qRD staff wages DRIF proposal	2,968.35
	qRD staff benefits and overhead DRIF proposal	513.06
	qRD staff wages LWD conversion	10,686.04
	qRD staff benefits and overhead LWD conversion	1,847.01
	Young Anderson legal fees	17,215.90
	Expense Claim	53.49
	Professional Fees through Dec 31, 2025	8,000.00

To 2025, the qRD has spent \$105,674.07 on the Lund Water System Conversion. \$95,080.42 of this cost was covered by grants for a net cost of \$10,593.65 from the E.A. Feasibilities budget. In 2026 additional costs, including \$30,000 for well testing, will be billed to the Electoral Area Feasibility Studies budget. The total costs are funded by taxpayers in all Electoral Areas. The net cost of the feasibility work needs to be recovered from taxpayers of the new service area once it is established.



LUND WATERWORKS DISTRICT BUDGET CONSIDERATIONS

Lund Sewer System Comparison

The qRD is performing due diligence with the Lund Waterworks District conversion to mitigate any latent costs and events as experienced with the acquisition of the Lund Sewer Service for the following reasons:

- To ensure all compliance paperwork and licences are signed off, requisites submitted and final approvals are in place.
- To ensure all underwater infrastructure is registered with NAV Canada.
- To avoid having to replace underwater infrastructure compromised by boat anchors.
- To ensure all as-built infrastructure is known where it exists.
- To avoid experiencing line ruptures on private property and costly repairs to remediate and move lines into rights-of-way.
- To ensure that all Rights-of-Way and easements are in place.

Lund Sewer System Community Works Funds Allocation and Other Grants

Year	Amount	Grant Description	Grant Parameters	Grant Purpose
2017	\$464,800.00	Clean Water & Wastewater Fund	83% of project costs	Upgrades to the three pump stations and the wastewater treatment plant
2020	\$10,000.00	Infrastructure Planning Grant	\$15,000 project	To develop a Lund Sewer Master Plan
			Total	\$474,800.00

2007-2025 Community Works Grants	
Amount	Grant Purpose
\$96,897.00	Treatment system upgrades
\$6,005.00	Pump replacement
\$68,004.00	Purchase and install two generators
\$149,694.00	Emil Lake sewer extension
\$81,004.00	New treatment plant
\$16,175.00	Renew outfall
\$49,648.00	Waste water master plan

Total	\$467,427.00
Grand Total	\$942,227.00



LUND WATERWORKS DISTRICT CONVERSION PROCESS

WHERE WE ARE

This is the reality of what a potable water system costs to provide safe, secure, treated, clean, quality, healthy, and reliable potable drinking water to the residents in today's environment.

This water system was granted Letters Patent in 1973. That is 53 years, and counting, of gradual depletion of capital assets.

That is 53 years of salvaged, donated or free infrastructure and parts from the Mill that have met their life expectancy.

That is 35 or more years of not addressing long-term plans for source, treatment, and distribution system improvements identified by the local health authority.

That is 11 years of ignoring a scheduled Dam Safety Review and identified deficiencies and non-conformances by a qualified professional.

Since the Walkerton E.coli and Campylobacter bacteria tragedy in 2000 and the North Battleford Cryptosporidium event in 2001, drinking water standards have continually increased.

Walkerton resulted in a one-year jail sentence for one water operator and nine months of house arrest for another.

The North Battleford outcome was \$3.2 million paid out to 700 people who became ill after drinking tap water contaminated with the parasite, which was split 50/50 by the Province of Saskatchewan and the City.

Water quality advisories and boil water advisories are not to be taken lightly.

Potable water systems must be constructed and prepared to meet the bar being continually raised as the standard of healthy and safe drinking water.

Should the qathet Regional District acquire the Lund Waterworks District system, it must ensure that all risks are mitigated to the maximum extent currently achievable.

There are 156 small water systems in the region, eight of them being Improvement Districts. The qathet Regional District must distance itself from not strategically acquiring water or sewer utilities due to the costs and financial risks involved.



LUND WATERWORKS DISTRICT SYSTEM DESIGN BEST PRACTICES

Tie-Ins and Looped Systems

Wherever possible, water distribution systems should be designed to eliminate dead ends by making appropriate tie-ins or looping whenever practical.

Water quality problems associated with dead ends include taste and odour concerns, decay of disinfectant residual, bacterial growth, increased corrosion, changes in pH and collection of sediment.

WHAT ARE THMS?

Trihalomethanes, also called THMs, are chemicals that can form in drinking water during the disinfection process. They are created when chlorine, which is used to kill harmful germs, reacts with natural organic matter such as leaves and vegetation in the water. THMs are considered a type of disinfection by-product.

Trihalomethanes (THMs) do not form instantly at the treatment plant, they increase over time and distance.

The highest concentrations are typically found:

- At the far ends of the distribution system (dead ends)
- In areas with long water age / residence time
- In storage reservoirs or tanks with low turnover
- In warm zones of the system (temperature accelerates reactions)

A looped water distribution system is a highly effective structural strategy for reducing Trihalomethanes (THMs) in drinking water. Its primary benefit is the minimization of water age, which directly limits the time available for chemical reactions that create THMs.



LUND WATERWORKS DISTRICT SYSTEM POLICY CONSIDERATIONS

Policy 3.15 - Water/Wastewater Utility Acquisition is a governance commitment.

The policy creates a mandatory process, not optional steps

It is a formal document that binds:

- the Board;
- staff acting under delegated authority; and
- and the Regional District as a whole.

Policy 3.15 was explicitly designed to ensure a consistent and transparent approach to utility acquisition.

If the Board entertains a utility acquisition request, it must follow the process it established and explain its decisions in policy-based terms.

This matters because...

Similar proposals must be treated consistently, or differences must be explained. Decisions to refuse an acquisition must be anchored in policy criteria (e.g., risk, standards, consent, capacity), not preference or convenience. Silence, indefinite deferral, or unexplained refusal is effectively a departure from the policy, which undermines procedural fairness and public trust.

It protects Directors from accusations of arbitrariness, staff from political inconsistency, and the public's confidence that requests are assessed on merit, not influence.

The appropriate time to amend or change policy to mitigate legal risk is before the Board is required to apply discretion to an active or reasonably foreseeable decision, not during or after the fact.

Policy should be amended only when the Board is acting in a legislative / governance mode, not when it is facing a quasi-administrative decision.

Why this mitigates legal risk

The Board is clearly acting in a policy-setting capacity, not targeting outcomes. No applicant or community can claim they had a settled expectation under the old policy.

The Board is not seen as altering the “rules of the game” mid-process.