



Regional Board Report

Information

To: Regional Board
From: Associate Director of Development and Engineering Services
Date: November 28, 2024
Subject: North Westside Regional Water System: Project Plan Update

Voting Entitlement: *All Directors - Unweighted Corporate Vote - Simple Majority (LGA s.208)*

Purpose: To provide the Regional Board the Project Plan for the North Westside Regional Water System in advance of work beginning in 2025.

Executive Summary:

For the last decade, the RDCO has pursued options to economically improve drinking water systems to meet current drinking water objectives in the Killiney and Westshore systems. In the fall of 2022, the Regional Board provided direction to staff to proceed with the implementation of a regional water system, and to return to the Board with a Project Plan before undertaking work in 2025.

The Electoral Area Services Committee (EASC) received the information contained within this report on June 13, 2024 for information.

Killiney Beach and Westshore Estates are serviced by separate water distribution systems. Each system sources water from Okanagan Lake, chlorine is added for disinfection with no other treatment provided. Neither system currently meets British Columbia Water Quality objectives.

The Regional District also owns and operates the Fintry/Valley of the Sun water distribution system which draws water from two groundwater wells located in the Fintry delta area. This system meets drinking water objectives without additional treatment, due to its groundwater source.

The project plan includes obtaining advanced regulatory approvals, securing land interests, completing field investigations, and then proceeding to detailed design. Once the project plan items are complete, this project will remain 'construction ready' in anticipation of future grant opportunities. Grants will be strategically applied for, with the goal to source two-thirds or more of construction costs via grants to limit financial impacts on North Westside water users.

Recommendation(s):

THAT the Regional Board receive the North Westside Regional Water System Project Plan Update report from the Associate Director of Development and Engineering Services dated November 28, 2024, for information.

Respectfully submitted by: Mike Wyman, Manager of Engineering Services

Report Approved by: Travis Kendel, Associate Director of Development and Engineering Services

Approved for Agenda: Sally Ginter, Chief Administrative Officer

Strategic Plan Alignment:

- | | |
|--|---|
| <input type="checkbox"/> Emergency preparedness | <input type="checkbox"/> Truth and reconciliation |
| <input type="checkbox"/> Health and wellness | <input type="checkbox"/> Environment and climate – Regional priority only |
| <input type="checkbox"/> Regional transportation | <input checked="" type="checkbox"/> Growth and development – Electoral Area priority only |
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Background:

The Killiney Beach (Killiney) and Westshore Estates (Westshore) water systems are two water systems owned and operated by the Regional District of Central Okanagan (RDCO). Killiney has 427 parcels and Westshore has 526 parcels in their respective service areas. Both systems use Okanagan Lake as source water and require upgrades to comply to the Drinking Water Treatment Objectives for Surface Water Supplies in British Columbia.

Urban Systems was retained in 2022 to review past studies and refine options for achieving long-term compliance, and completed the following tasks:

- Summary and evaluation of supply and treatment options;
- Concept refinement; and
- Asset management considerations.

The following options to meet drinking water objectives were considered, evaluated, and presented to the Board on September 26, 2022 for direction:

- 1A – Fintry Groundwater Supply with Submarine Transmission Main (2022 Capital: \$16M)
- 1B - Fintry Groundwater Supply with Overland Transmission Main (2022 Capital: \$13M)
- 2A – Independent Intakes and Water Treatment Plants (2022 Capital: \$19M)
- 2B – Independent Intakes and Disinfection for Near Term and Common Intake and Water Treatment Plant for Long Term (2022 Capital: \$21M)
- 3 – Common Intake and Water Treatment Plant (2022 Capital: \$16M)

The options were evaluated based on technical, financial, environmental & regulatory considerations with Option 1B as the highest ranked option. Following a report to the Board on September 26, 2022, the Board resolved that: “... *the Regional Board support staff preparing a Killiney and Westshore Water System Upgrade project plan for Board consideration at a future meeting based on the recommended Option 1 (A or B) as outlined in the Killiney Beach and Westshore Estates Water Systems Study.*”

This option was then further considered and refined including water supply and treatment, conceptual layout, risks, updated cost estimates, and identifying next steps. The latest report from Urban Systems includes updated 2023 capital cost estimates for the required drinking water improvements of \$23M, an increase from the previously reported value of approximately \$13M in 2022. Costs for all options are expected to have increased by approximately the same factor, and Option 1B is still expected to be the most cost-effective pathway to regulatory compliance.

Urban Systems’ final task as part of the current project phase was to update the previously prepared Asset Management Investment Plan (2018) with current costing data, inventory, and required improvements to move forward with the preferred approach.

The asset renewal fees charged to all parcels in a water service area have historically been set at 50% of the required value to fund the renewal of assets, with the intention that the remaining portion be funded with a combination of grants and debt.

When accounting for the preferred option and the new costs associated with it, a funding shortfall below 50% occurs. The table below compares the 2023 asset renewal revenue, reserve balance, projected 20-year average annual investment including the planned improvements, and annual shortfall without accounting for grants or debt.

SYSTEM	ASSET RENEWAL REVENUE (2023)	RESERVE BALANCE (2022)	20 YEAR AVERAGE ANNUAL ASSET INVESTMENT (AAI)*	ANNUAL SHORTFALL
Killiney	\$309,856	\$1,629,837	\$863,652	\$553,796
Westshore	\$405,600	\$2,413,622	\$1,444,076	\$1,038,476

**The 20 Year AAI is shown as current fees are based on the higher of the 20-year AAI and the AACLI.*

An increase to asset renewal fees will be required to fund 50% of asset renewal expenses, once costs relating to a North Westside Regional Water system are included. The increase in annual fees per water connection equates to approximately \$304 in Killiney Beach, and \$608 in Westshore Estates. All RDCO water rates are scheduled for an update in 2027, at which time asset renewal fees will be reviewed and recommended for adjustment accordingly.

Next Steps:

It is important to note that design, engineering, and right-of-way interests must be completed in advance of construction. This advantageously positions the RDCO to seek grant funding for the construction of the regional NWS water system while these other activities are underway.

Project Plan

Described below are the list of tasks that will be carried out by staff over the next two years. Grants will be pursued as they become available to help fund the development of a ‘shovel ready’ project, however the funding strategy in the Financial Plan will be solely based on the use of Financial Reserves until such grant(s) are successfully secured.

2025 - (Included in Proposed 2025-2029 Financial Plan: \$200,000)

1. Advance regulatory approvals
 - a. Engage the BC Environmental Assessment Office to provide commentary on Environmental Assessment or Certificate of Exemption Process
 - b. Apply for a water licence amendment to accommodate the planned expansion

- c. Apply for Crown Tenure for portions of the pipeline alignment on crown land
 - d. Initiate WFN consultation
2. Secure pipeline alignment
 - a. Engage land agent to negotiate with private landowners to secure pipeline right of way.
 - b. Adjust alignment as required
 - c. Apply for Crown tenure

2026 – (Included in Proposed 2025-2029 Financial Plan: \$250,000)

1. Complete field investigations
 - a. Confirm current and future build out demand data
 - b. Complete lidar survey of entire pipeline area
 - c. Complete topographical survey of areas within Westshore and Killiney
 - d. Complete Geotechnical investigation
 - e. Confirm preferred area for future well
 - f. Confirm max pumping rates for existing wells and the Fintry booster station

2. Advance Design
 - a. Confirm estimated timeline to reach build-out demands
 - b. Prepare preliminary plan/profile drawings
 - c. Prepare community connection details
 - d. Prepare floor plan for chlorine boosting station at Firwood reservoir
 - e. Prepare Class C cost estimate

This summarized project plan supports the continued delivery of safe, reliable, and sustainable water services to the communities of Killiney Beach and Westshore Estates. The ongoing efforts to provide a long-term, regional, and cost-effective water system reflects the RDCO's dedication to meeting regulatory standards and addressing the long-term needs of its residents.

Considerations:

Organizational/External:

Future provision of a Regional Water System may create opportunities for un-serviced or privately serviced areas to be connected to a high-quality, government run water system.

Financial:

The development of the North Westside Regional Water System shovel-ready project is planned to be fully funded through Financial Reserves, with future construction works to be funded up to two-thirds through grants.

Legal/Statutory Authority:

Establishing Bylaw 695 and 434 include works to Operate and Maintain the water systems servicing Killiney Beach and Westshore Estates.

Attachment(s): 1. PowerPoint Presentation
