



Big Eddy Water

Engineering & Development

Public Meeting Monday 14 December 2015

Introduction

City staff

Mike Thomas

- Director of Engineering and Development

Dawn Levesque

- Director of Corporate Administration

Allan Chabot

- Chief Administration Officer

Dean Strachan

- Manager of Development Services

Introduction

Big Eddy Water District

Board Members:

- George Buhler
- Don Hall
- Brian Dyck

Introduction

Other Agencies

Interior Health

- Rob Fleming. Drinking Water officer
- Ivor Norlin. Drinking Water Program Manager

MMM Group

- Jim Roe. Engineering Consultant

Introduction

Background

Project Triggers

- Water Quality
- System sustainability
- Fire protection

Current Situation

Big Eddy Water District

System Analysis

- Pump Capacity
- Storage Capacity
- Distribution System
- Fire Hydrants

Governance

- Big Eddy Water District
- Interior Health

Current Situation

City of Revelstoke

City Departments involved:

- Council
- Engineering and Development
- Administration
- Finance

The Project

The Goal

“Improve the water and sewer system to accommodate future growth and infill, and manage environmental and public safety (e.g. fire hydrant protection) impacts”.

Revelstoke Official Community Plan
Big Eddy Neighbourhood

The Project

Objectives

Water quality

Future domestic demand supply

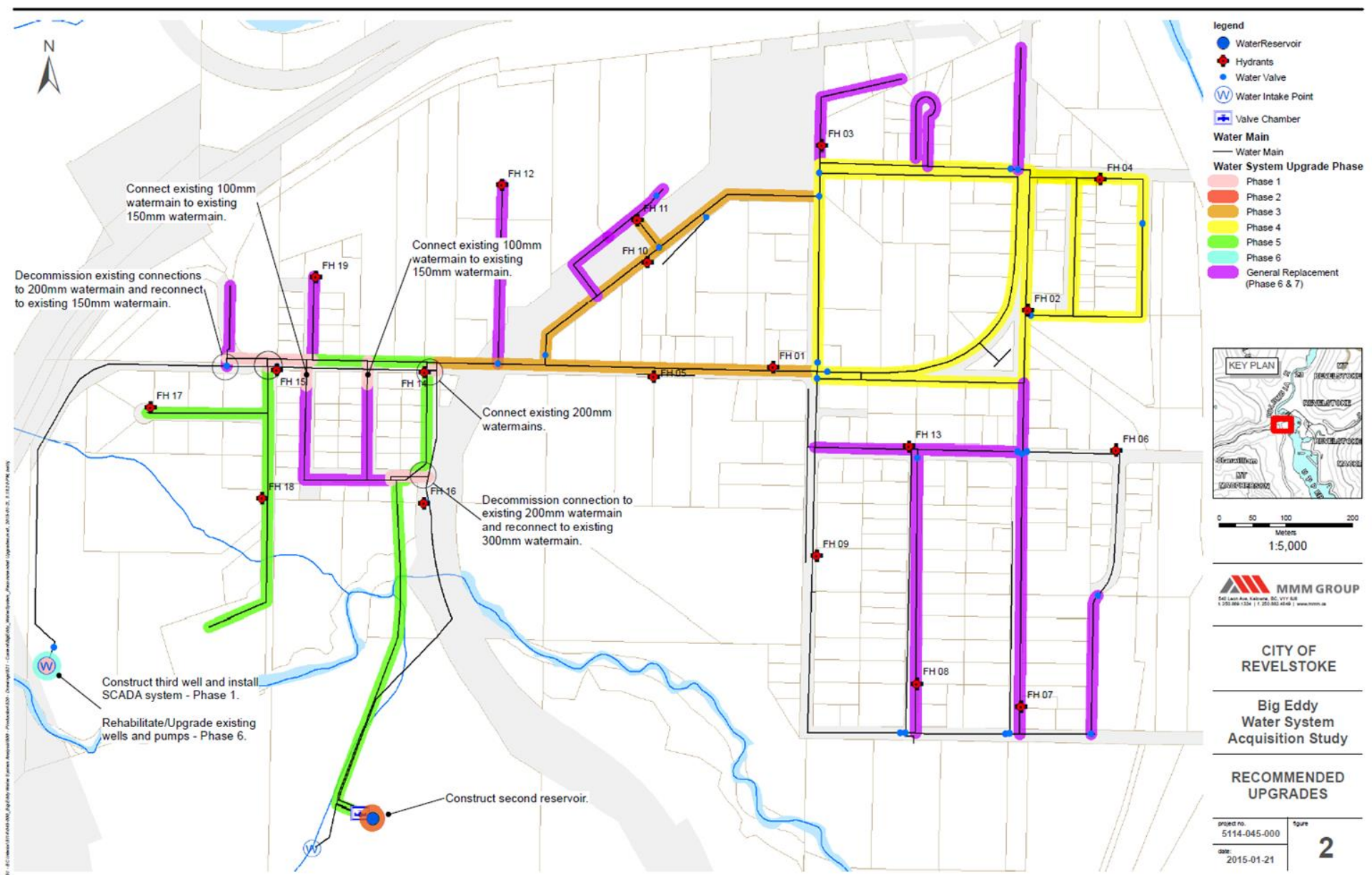
Fire flows and fire protection

Replacing aging/inadequate infrastructure

The Project

Works involved

1. Dedicated supply line to reservoir
2. Construct second reservoir
3. Improved controls
4. Construct third well
5. Upsize transmission watermains from reservoir to community
6. Upsize watermains for fire flows
7. General watermain upgrades



Big Eddy Water - Proposed System Upgrades

The Project

Costs Involved

Estimated cost:

\$5,690,000

Building Canada Fund maximum:

\$3,785,354

Total approximate cost to owners:

\$1,900,000

The Project

Cost Recovery

- Parcel tax based on “taxable frontage”
- Example 80' x 240' lot (e.g. Olhausen / Tum Tum) has a “taxable frontage” of ~23m or ~75'

$$TF = \frac{\frac{2F + R}{3} + \frac{4F + TP}{10}}{2}$$

The Project

Cost Recovery

Estimated Total Annual Cost:

\$130,750

Estimated total taxable frontage:

11,372m

Estimated annual cost per meter of Taxable Frontage:

\$11.50

Big Eddy Waterworks

December 14, 2015

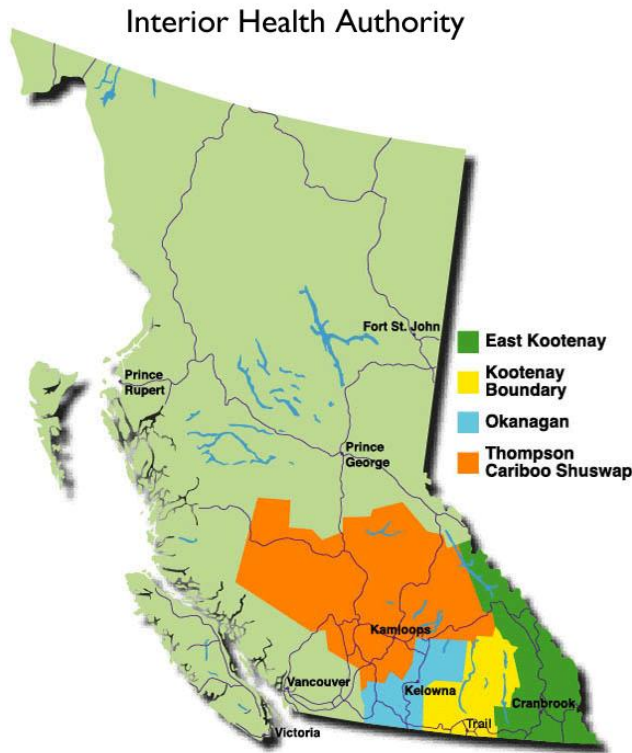
Rob Fleming

Health Protection



Interior Health
Every person matters

Interior Health Perspective



- * >1/2 systems in BC
- * 1,438 permitted in 2004, now 1,929
- * ~426 currently on advisory
- * need for consistent requirements

1 in 5
don't have access
to safe drinking water.



National Context

Walkerton, 2000; North Battleford, 2001

- * Provided a national impetus to refocus attention on drinking water safety.
- * Legal responsibility on provincial governments for ensuring public safety.
- * Provinces responded by addressing drinking water issues and making legislative changes

BC Legislative Mandate

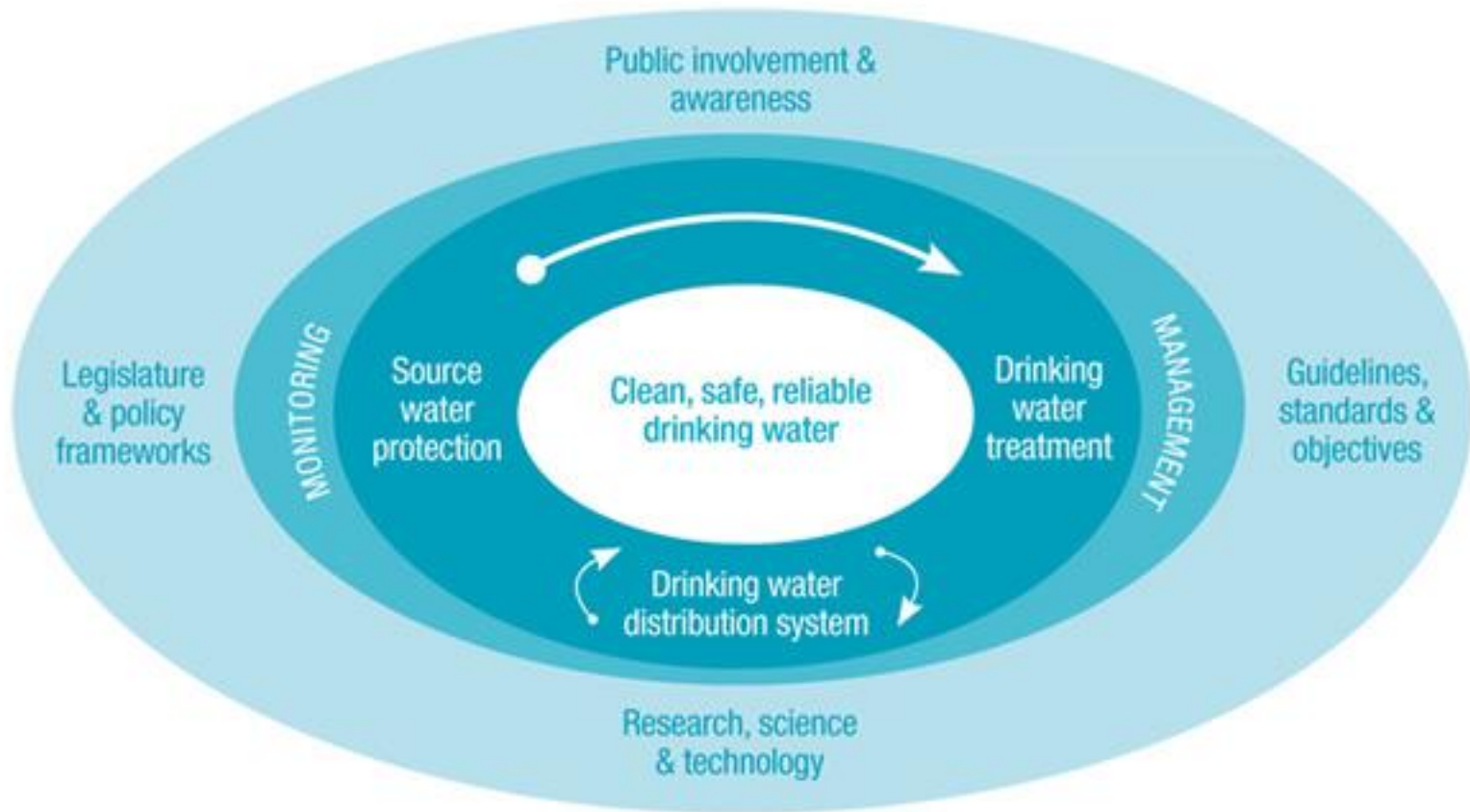
- * Public Health Act
- * Drinking Water Protection Act & Regulation
 - Delegated Drinking Water Officer
- * Water Sustainability Act & Regulations
 - Regulations under development



Other Influences

- * Action Plan for Safe Drinking Water in British Columbia
2002
- * BC Ombudsperson (Kim Carter) 2008 Report – Fit to Drink: Challenges to Provide Safe Drinking Water in British Columbia
- * BC Provincial Health Officer - Annual Reports: Progress on the Action Plan for Safe Drinking Water in British Columbia
- * Report on the Review of Drinking Water Resources
- * Guideline for Canadian Drinking Water Quality

Multi-Barrier Approach



Big Eddy Current Status

- * Water Quality
 - Deep vs shallow
 - Dolan Creek Intake

- * Operational Challenges
 - Current Water Quality Advisory
 - Communications

- * Compliance - Conditions of Permit

Conditions on Permit

1. Source Assessment & Protection Plan
2. Certified Operator for Systems Classification
3. Operate according to Water Quality Monitoring Program
4. Cross Connection Control Program
5. Long-term Asset Management Planning/Water Master Plan
 - BC Drinking Water Treatment Objectives & GCDWQ
6. Emergency Response Plan
7. Reporting - Annual & Monthly

Interior Health Expectations

- * Ensuring suppliers comply with Drinking Water Protection Act & Water Sustainability Act and all associated Regulations
- * Use a progressive compliance approach
 - Education & working in partnership to gain compliance
 - Administrative action (e.g. Compliance Letters, Orders)
 - Enforcement (Ticketing, Legal Prosecution)

Government Investment

- * During the period of 1990 – 2000, provincial funding for water infrastructure was about \$86M
- * During the period of 2001 – 2010, provincial funding for water infrastructure was about \$222M
- * Governmental shift in municipal infrastructure from distribution systems to supporting treatment and source protection

Funded Water Projects

NBCF-SCF Wastewater Category - 24 of 55 Projects 2015 Approval

| | Proponent | Project | Category | Funding |
|----|---|--|----------------|-------------|
| 1 | Kamloops, City of | North Thompson River Emergency Water Intake | Drinking Water | \$6,064,000 |
| 2 | Parksville, City of | Englishman River Water Service (ERWS) – Regional Water Intake, Treatment Plant, Aquifer Storage and Recovery and Transmission Supply Mains | Drinking Water | \$6,000,000 |
| 3 | Ashcroft, Village of | Ashcroft Community Water Treatment Plant | Drinking Water | \$5,725,356 |
| 4 | Summerland, District of | Jones Flat and Garnet Valley Water System Separation | Drinking Water | \$4,526,666 |
| 5 | Prince Rupert, City of | Prince Rupert Raw Water Supply Project | Drinking Water | \$4,386,056 |
| 6 | Revelstoke, City of | Big Eddy Water System | Drinking Water | \$3,785,354 |
| 7 | Sunshine Coast Regional District | Regional Water Cross Connection Control and Universal Metering Program - Phase 2 | Drinking Water | \$3,446,666 |
| 8 | Dawson Creek, City of | City of Dawson Creek - Zone 1 Potable Water Reservoir | Drinking Water | \$3,333,332 |
| 9 | Central Kootenay, Regional District of (Erickson) | Arrow Mainline and Erickson Open Reservoir Replacement - Phase 4 | Drinking Water | \$2,921,302 |
| 10 | Rossland, City of | Washington Water Main Replacement | Drinking Water | \$2,181,700 |
| 11 | Cariboo Regional District | 108 Mile Ranch Water System | Drinking Water | \$1,962,236 |
| 12 | Central Okanagan, Regional District of | Killiney Beach Water System Improvements | Drinking Water | \$1,900,666 |
| 13 | Fernie, City of | James White Well Project | Drinking Water | \$1,652,516 |
| 14 | Houston, District of | Construction of Water Reservoir and Transmission Line | Drinking Water | \$1,560,000 |
| 15 | Thompson-Nicola Regional District | Savona Community Water System Reservoir Project | Drinking Water | \$1,122,000 |
| 16 | Fraser Valley Regional District (Hatzic) | FVRD Electoral Area G - Hatzic East Water System | Drinking Water | \$939,082 |
| 17 | Thompson-Nicola Regional District | Black Pines Community Water System Intake Project | Drinking Water | \$896,666 |
| 18 | Lake Country, District of | Universal Metering 2016 Agricultural Meters and Backflow Preventers | Drinking Water | \$788,036 |
| 19 | Tofino, District of | Barrs Mountain Reservoir Upgrade | Drinking Water | \$776,860 |
| 20 | Logan Lake, District of | No. 3 Well Replacement | Drinking Water | \$450,000 |
| 21 | Nanaimo, Regional District of | Whiskey Creek Water System - Treatment | Drinking Water | \$290,532 |
| 22 | Nakusp, Village of | Pressure Reducing Station and Supply Mains for Sleepy Hollow | Drinking Water | \$173,332 |
| 23 | Cache Creek, Village of | Pressure Reduction System (PRV) Relocation and Safety Upgrade | Drinking Water | \$133,332 |
| 24 | Fraser Valley Regional District (Cultus Lake) | FVRD Electoral Area H - Parkview Water System Upgrades | Drinking Water | \$126,500 |

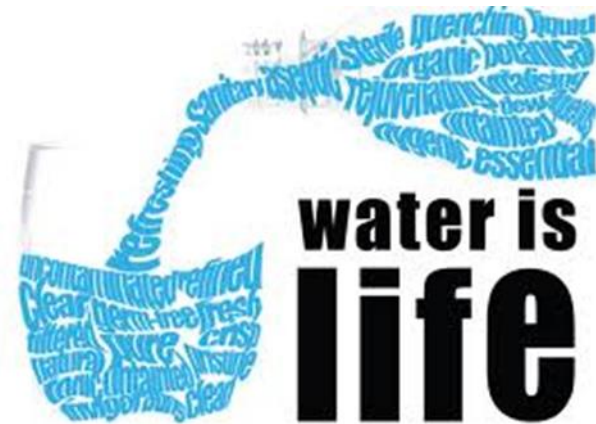
The Future...Key Messages

- * Big Eddy Waterworks needs corrections and upgrades to remove the existing health hazards/risks
- * All of the residents of Big Eddy deserve Clean, Safe and Reliable Tap Water
- * Clean, Safe Reliable Tap Water is Valuable

Questions

Clean, Safe and Reliable Tap Water for All

Rob Fleming, Dip. Tech, CPHI(C)
Specialist Environmental Health Officer
Large Water Systems Program
Rob.Fleming@interiorhealth.ca
250-851-7410





Big Eddy Water

Engineering & Development

Public Meeting Monday 14 December 2015

The Project

Petition

Must be signed by 50% of property owners and represent 50% of the assessed value of land.

- Multiple Owners

John Smith Residential Address _____

Signature

Mary Smith Residential address _____

Signature

****Both owners must sign for a majority**

- Trailer Parks
- Strata Land

The Project Process

Public Meeting

December 14, 2015

- Information session with Big Eddy Residents
- Introduction of petitions to Big Eddy Landowners



Petition Process

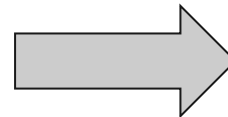
finishes on February 05, 2016

- Determine sufficiency of petition

The Project Process

Local Area Service and Loan Authorization Bylaws to Council

- Loan Authorization Bylaw to the Inspector of Municipalities for approval
- Bylaws back to Council for final approval
- 30 day quashing period
- Dissolution of the Big Eddy Improvement District (Province and Big Eddy Water Board)



Detailed Design
and begin
construction of
water service
utility

If the Process is Successful...

City of Revelstoke

Big Eddy Water District assets will become part of the City of Revelstoke's water utility.

The Big Eddy Water system would be managed and operated by the City of Revelstoke Utilities Department.

If the Process is Successful...

City of Revelstoke

Water rates for Big Eddy residents are proposed to be the same as other residents

Proposed 2016 water rate.

\$385 for residential use

Alternatives

Considerations must include

- Finances and ability to borrow
- Asset Management
- Interior Health Requirements
- Limitations on development

FAQ

City of Revelstoke

1. Will water meters be required?

- No, at this stage the City does not have a bylaw requiring the installation of water meters.

FAQ

City of Revelstoke

2. Will there be water restrictions?

- As the Big Eddy system is separate from the City's system, the water restriction requirements will likely be different. The existing Big Eddy restrictions appear to be working and would likely be adopted in Bylaw.

FAQ

City of Revelstoke

3. When can I subdivide/build?

- The project will focus on upsizing watermains on trunk lines and to higher demand areas.
- Some residential properties already have adequate fireflows and distance to nearby hydrants. These properties can still develop.
- For other properties requiring higher flows or closer hydrants, these will require system upgrades prior to development approval.

FAQ

City of Revelstoke

4. When will construction start/finish?

- Some construction may start in 2016, design and tendering would need to occur before this.
- The project will be phased, and likely completed in 3 years.
- The City will communicate with the Big Eddy community on the construction schedule as it is developed.

FAQ

City of Revelstoke

5. What if my parcel does not currently use water?

- A parcel tax applies whether water is used or not. However, the annual water rates would not apply unless the parcel has an active connection.

FAQ

City of Revelstoke

6. What about Dolan Creek?

- The City would maintain a water licence on Dolan Creek for the Big Eddy's use. This watershed would be able to provide an alternative emergency supply, or may be necessary to supply future growth with a small treatment plant.

FAQ

City of Revelstoke

6. What if I am a property owner in the Big Eddy and I disagree with the City taking over the water system for the Big Eddy Water District?

- You would not sign the petition and notify the City that you do not intend to sign.

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Engineering & Development

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