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## Performance Audit:

### Local Government's Role in Ensuring Clean Drinking Water

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Local Government Accounting and Auditing  
Conference, Vancouver, BC

# PRESENTATION OUTLINE



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## ➤ MANDATE AND PURPOSE OF AGLG

Vision and Commitment

## ➤ ADDING VALUE

## ➤ Audit Topic: Local Government's Role in Ensuring Clean Drinking Water

Overview of performance audit: Regional District of Okanagan-Similkameen  
(RDOS)

## ➤ Questions?

# MANDATE AND PURPOSE OF AGLG



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- Conduct performance audits of local government operations
- Provide objective information and relevant advice *to assist* local governments...



# VISION AND COMMITMENT



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## OUR VISION

**TO BE A VALUABLE  
RESOURCE FOR LOCAL  
GOVERNMENTS AND  
OTHER STAKEHOLDERS**

## OUR COMMITMENT

**TO WORK  
COLLABORATIVELY  
WITH LOCAL  
GOVERNMENTS**

# ADDING VALUE



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## ➤ Positive feedback from stakeholders on audits

Rating of 3.6 out of five on value in CAO survey fall 2016

2017 auditees rated average value of audit at 4.5 /5 and approach at 4.75/5

## ➤ 28 reports completed; 24 audits and 4 Perspectives Series booklets

Positive support from local government senior staff (and elected officials) about using our reports to improve the work that they do

## ➤ Each audit has several recommendations, almost all have been accepted

Positive response from almost all auditees

Local governments provide Actions Plans

Several 'informal' local government requests for an audit

## ➤ Positive feedback from stakeholders on Perspectives Series

Internal audit shared with Council and Staff

Municipal Auditor – shared with clients (government, *et al*)

LGMA and GFOA – “procurement” tools built off Perspectives Series booklets

# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER



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## WHY THIS TOPIC?

- ▶ The well-being of every British Columbian— and every BC community—depends on access to clean drinking water.
- ▶ For many of us, that water is provided by our local government and the job that it does in planning for, sourcing, where necessary treating and delivering that water to us is one of its most critical functions.
- ▶ 2016 Engagement/Audit Planning process also identified this as an area of risk and an audit topic of value

# WHY CLEAN DRINKING WATER IS IMPORTANT

## surface water

Drinking water can come from reservoirs, lakes, rivers & streams



## groundwater

Drinking water can also come from aquifers



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Local services, agriculture and other businesses and industry that employ British Columbians also need a dependable supply of clean water to operate.



AGRICULTURE



BUSINESS/INDUSTRY



LOCAL SERVICES



Estimated **900 million** people globally face serious health consequences due to polluted drinking water



**599** notices were in effect across the province as of March 31, 2012

Access to clean drinking water depends on water providers acting appropriately at each stage of the process.



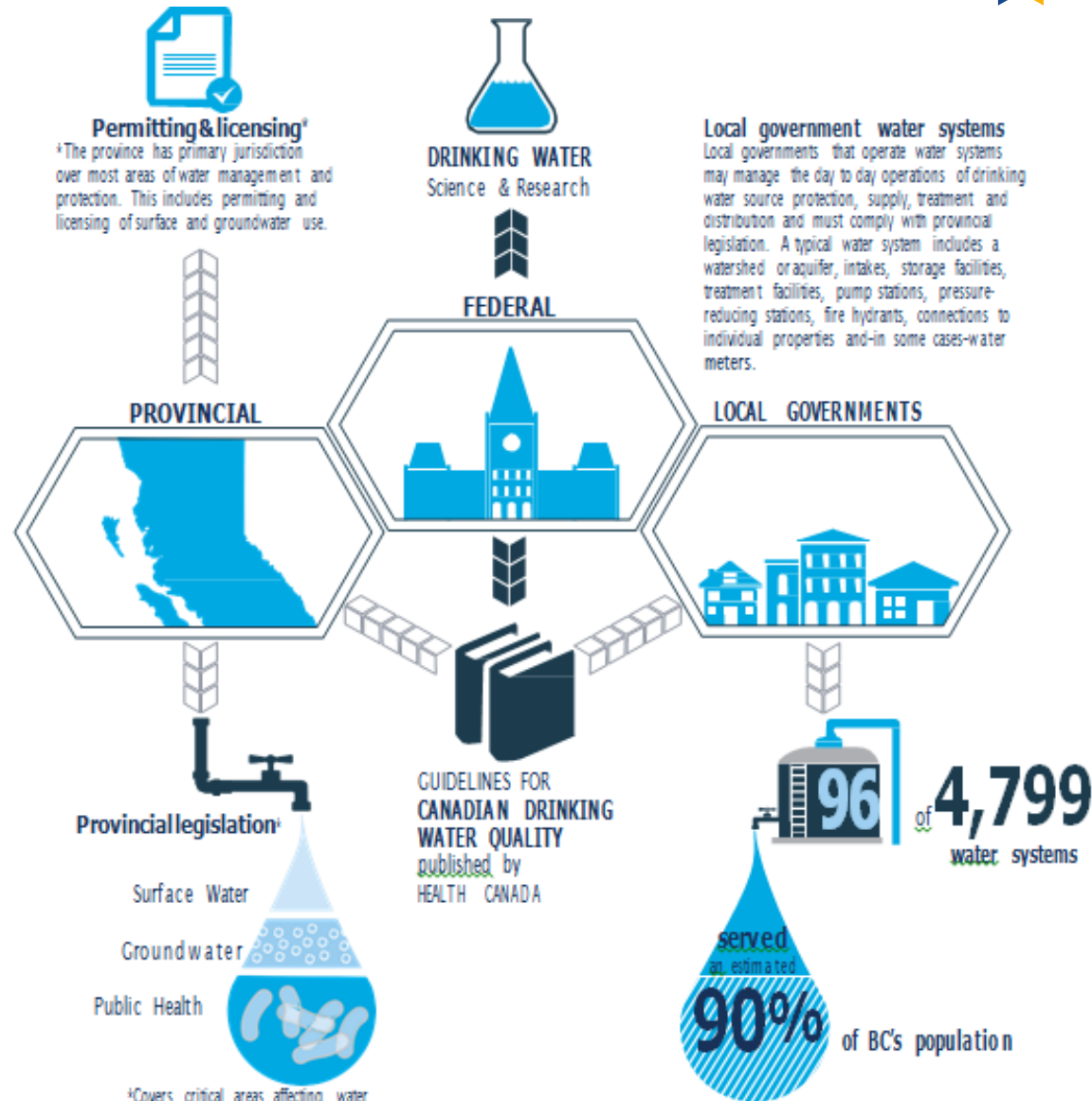
source water protection



drinking water systems



drinking water quality management

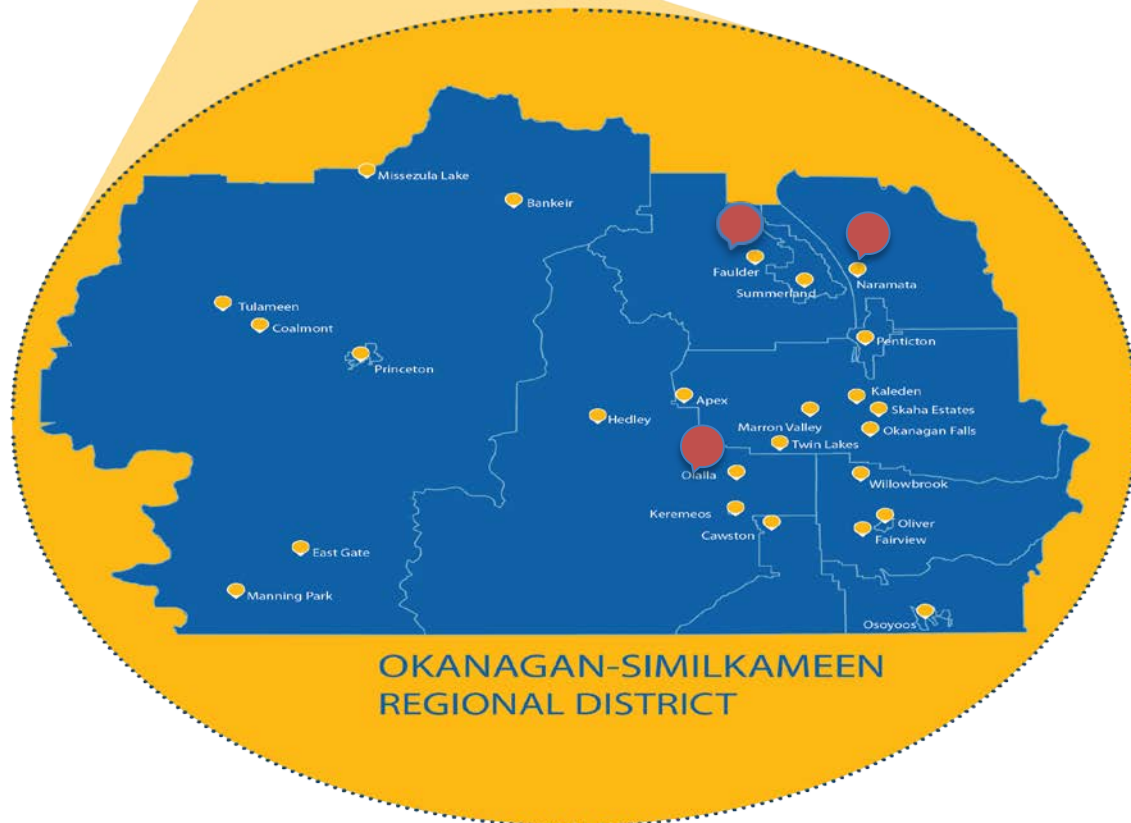




# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER



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# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER



## ADDITIONAL CONTEXT

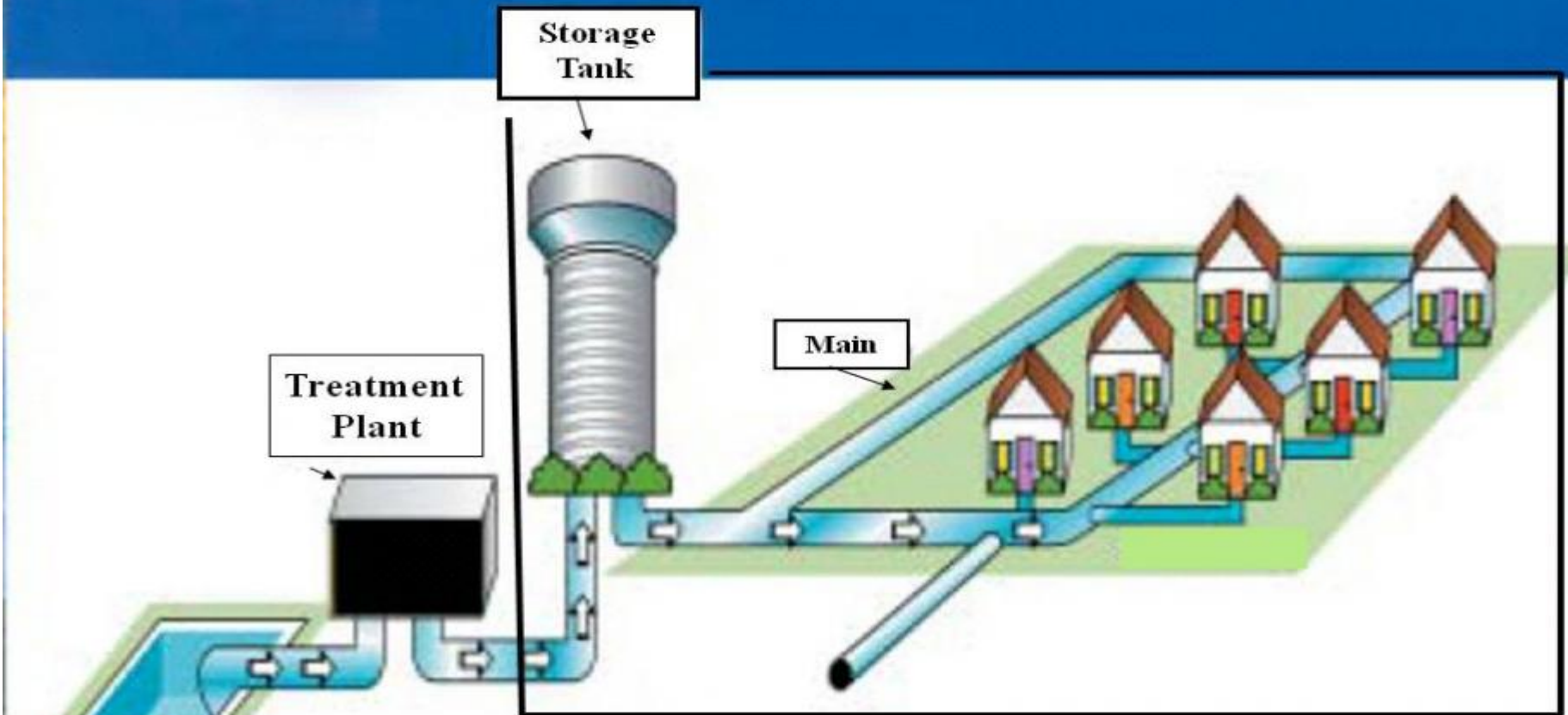
- RDOS managed seven of 27 systems in the region
- We reviewed three of the seven: Naramata, Faulder and Olalla
- Water Sources:
  - Naramata – surface water
  - Faulder and Olalla - ground water
- 2015 expenditures (approx.):
  - Naramata: \$1.3m
  - Faulder: \$110k
  - Olalla: \$130k

# A TYPICAL INTEGRATED WATER SYSTEM



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## Water Supply Distribution System



Note: Pumps and valves are located at a variety of locations throughout the distribution system.

# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER



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## OUR EXPECTATIONS

- An appropriate governance structure
- Manage supply to meet current and future demands
- Ensure safety and reliability of services

# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER



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## WHAT WE EXAMINED

### ▶ OBJECTIVE 1

The Regional District of Okanagan-Similkameen's governance structure and activities supported the provision of clean and safe drinking water where and when needed.

### ▶ OBJECTIVE 2

The Regional District of Okanagan-Similkameen managed its drinking water supplies to meet current and expected future demand.

### ▶ OBJECTIVE 3

The Regional District of Okanagan-Similkameen ensured the safety and reliability of drinking water provided through its treatment and distribution systems.

# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER



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## HOW WE EXAMINED IT

- Interviews
- Observations
- Documents
- On Line Access

# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER



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## WHAT WE FOUND – SUMMARY

- The Regional District had a range of good practices in place.
- The Regional District was already making progress in some areas where the audit found that improvements could be made.
- The Regional District had bylaws, plans, policies and practices to support the provision of drinking water; however we found that some key documents were outdated, some plans had not been implemented and practices were not sufficiently documented.
- The audit found areas of potential future risk to the provision of drinking water, some of which could be addressed by reviewing and updating relevant practices.

# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER



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## WHAT WE FOUND: **Objective 1 - Governance**

- ✓ The Regional District's governance structure supported the provision of clean and safe drinking water.

### The Regional District:

- Lacked a systematic, proactive approach to providing drinking water indicated by lack of an asset management framework, full cost recovery analysis, and performance measurement framework
- Was in the process of updating bylaws, plans and policies and was operating with outdated guidance in several key areas
- Lacked some general IT controls for the SCADA system



# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER



## WHAT WE FOUND: **Objective 2 - Management to Meet Demand**

### The Regional District:

- ✓ Collaborated with stakeholders in the southern Okanagan and Similkameen to assess its water supplies for the three water systems we focused on in this audit (Naramata, Olalla and Faulder)
- ✓ Implemented conservation and demand management initiatives and promoted public awareness
- ✓ Had begun work on drought and flood management and leak detection

### The Regional District was not fully prepared to meet future demand or respond to potential crisis situations:

- The choices of secondary or backup drinking water sources for the three audited systems were lacking or not practical
- There was limited focus on source water protection – including relevant bylaws
- Water conservation bylaws were outdated
- The lifecycle of infrastructure assets was not tracked
- There was no comprehensive preventative maintenance schedule in place



# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER

## WHAT WE FOUND - **Objective 3 - Ensuring Safety and Reliability**

- ✓ For two of the three audited systems, drinking water infrastructure was adequate to meet the Guidelines for Canadian Drinking Water Quality.
- ✓ The Regional District was committed to training staff and communicated with water users.

The Regional District lacked a systematic approach to managing the three systems' operations even though it followed the necessary steps to keep the three systems operating in the short term.

For example the Regional District lacked:

- Maintenance planning, tracking and reporting
- Business continuity planning
- Formal infrastructure risk management
- Emergency response plans were not tested, practiced or consistently implemented.

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## LOOKING AHEAD

- To more effectively manage its water services and be better prepared for the future, the Regional District needs to be more proactive, considering best practices and applying them, as appropriate, across the organization's water systems.

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## TWENTY-FOUR RECOMMENDATIONS IN FIVE GROUPS



1. Governance Structure & Activities Supporting Drinking Water Services
2. Source Water Protection
3. Drinking Water Treatment & Quality Management
4. Drinking Water Storage & Distribution
5. Communications & Public Awareness

# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER

## SOME OF OUR RECOMMENDATIONS



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### 1. GOVERNANCE AND ACTIVITIES SUPPORTING DRINKING WATER SERVICES

- ✓ Update water system governance transfer policy and procedures that follow an acquisition.
- ✓ Develop an asset management framework
- ✓ Consider a full cost recovery approach as part of its water service planning.
- ✓ Improve on data collection, analysis and monitoring; includes setting performance measures
- ✓ Enhance Emergency and contingency planning , ensuring response plans regularly tested and updated

# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER

## SOME OF OUR RECOMMENDATIONS



### 2. SOURCE WATER PROTECTION

- ✓ Develop a source water protection plan for Naramata, and consider enhancing for others.
- ✓ Consider addition of source water protection regulations to relevant bylaws where appropriate..
- ✓ Ensure that it has feasible plans for implementation of backup options in case of primary water disruptions.
- ✓ Develop a regional-district wide water conservation and demand strategy

# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER

## SOME OF OUR RECOMMENDATIONS



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### 3. DRINKING WATER QUALITY MANAGEMENT

- ✓ Consider improving quality controls processes over water quality reports
- ✓ Implement a formal routine maintenance and inspection program for all water treatment facilities
- ✓ Resolve issues that prevent it from operating the newly installed uranium treatment plant for the Faulder Water System.

# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER

## SOME OF OUR RECOMMENDATIONS



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### **4. DRINKING WATER STORAGE AND DISTRIBUTION**

- ✓ Ensure each of its water systems has a working backup power system to meet needs
- ✓ Implement a formal cross connection control program and evaluate it as necessary to prevent drinking water contamination
- ✓ Implement controls for automated monitoring systems to ensure security is maintained and communication of water systems errors or failure is noted as soon as possible



# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER



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## RESPONSE BY THE REGIONAL DISTRICT

- RDOS accepted each recommendation and included action plans to address
- Action Plan timelines ranged from;
  - The end of 2017 (e.g. Water Acquisition Policy used when taking over other water systems)
  - To 2019 (e.g. Business Continuity Planning)
- Some steps identified the potential need for additional funds for implementation

# LOCAL GOVERNMENT'S ROLE IN ENSURING CLEAN DRINKING WATER



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“On behalf of the Board of Directors for the Regional District, please accept this expression of our appreciation for the diligence and professionalism with which your staff carried out this audit, for the thought put into the recommendations on how we could make our systems more robust and the suggestions on how we could strive to bring our water systems to a higher standard in the future”

Karla Kozkevich,  
Chair of RDOS

“PENTICTON - The recommendations in a report from an audit of the Regional District’s drinking water systems was a “shot across the bow,” according to the Chief Administrative Officer.

CAO Bill Newell said the report from the Auditor General for Local Government of British Columbia applauds the District for the current monitoring of its three water systems well, but isn't doing as good a job of looking into the future and providing a forward direction”

June 22, 2017 Infotel.ca

# QUESTIONS?



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## CONNECT WITH US



The AGLG welcomes your feedback and comments.

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