

Rural Drinking Water in Newfoundland and Labrador

Exploring Solutions for Sustainable Rural Drinking
Water Systems

RURAL FORUM

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Project Background



Objectives

- ◆ To determine the current conditions of drinking water in rural NL.
- ◆ To create a profile of the drinking water policies, players, practices, perspectives and infrastructure.
- ◆ To research strategies employed elsewhere that may be applicable in rural NL.
- ◆ To make recommendations based on the above research for research, policy and practice.

Research Team

Co-Investigators & Research Assistants

- Environmental Policy & Environmental Science, Grenfell Campus- MUN
- Faculty of Engineering, MUN
- Faculty of Medicine, MUN
- Department of Geography, MUN

Community Partners

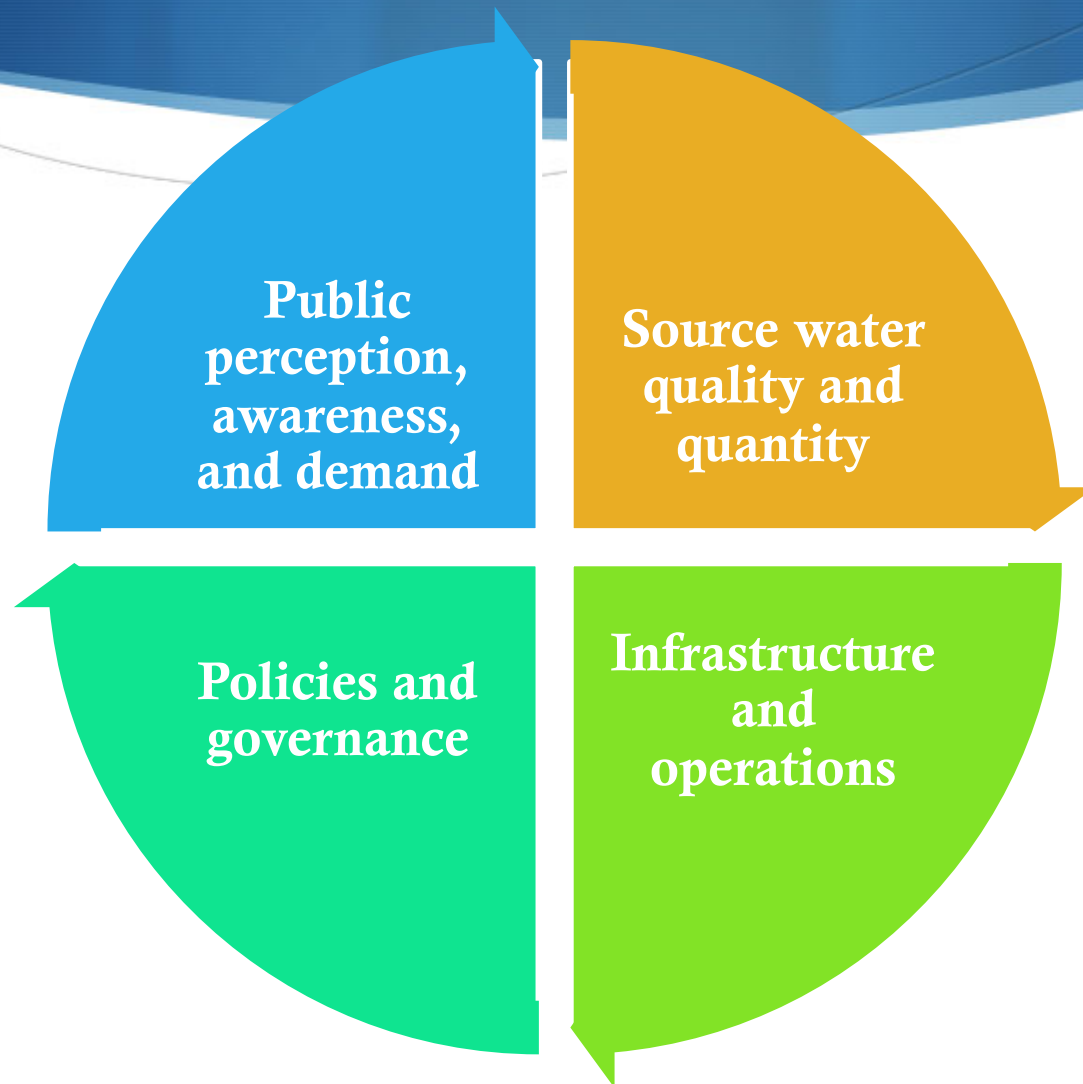
- Municipalities Newfoundland and Labrador
- Professional Municipal Administrators
- Corner Brook Pulp and Paper Limited; Ducks Unlimited; Compusult Limited; Townsuite Municipal Software- PROCOM Data Services Inc.

Advisory Committee

- Provincial, federal and industry representatives



Major Components of Research

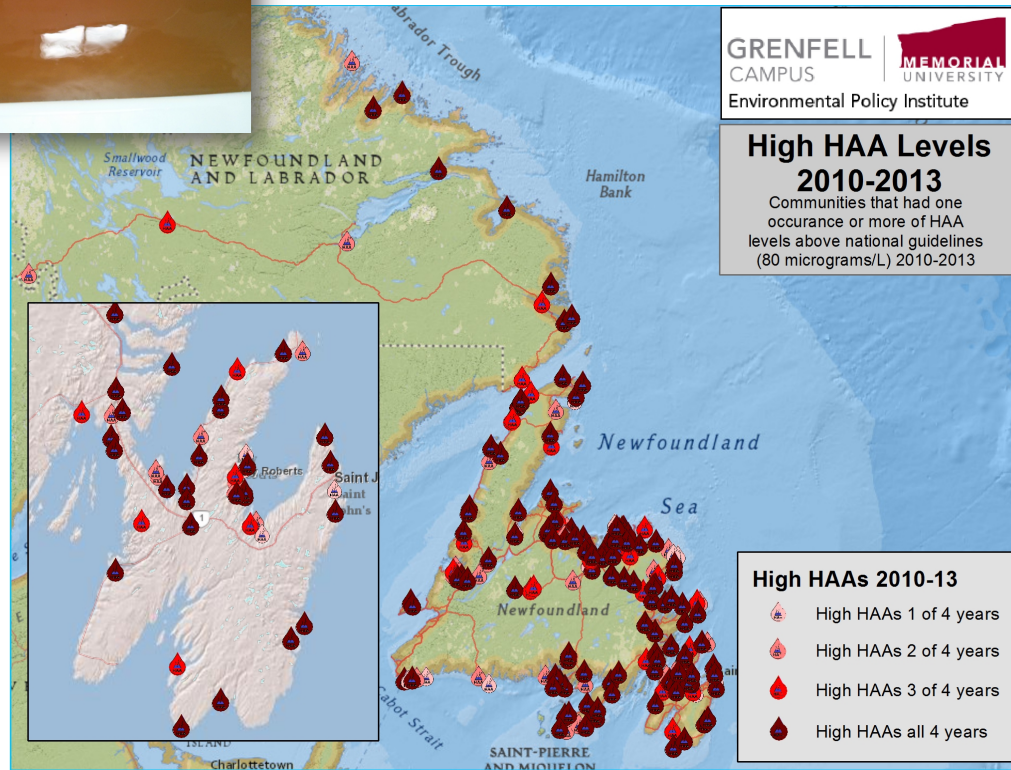


Final Report



Key Findings: Source Water

- DBPs a concern in many communities
- Aesthetics (including taste and colour)
- Issues with low water levels
- Monitoring of PPWSAs lacking
- Watershed management plans uncommon



Key Findings: Infrastructure and Operations

- ◆ Aging and degrading water infrastructure a major issue
- ◆ Mixed success with new technologies/systems (e.g. PWDUs)
- ◆ Lack of asset management
 - ◆ Lack of leak detection, maps, as-builts, and digitized mapping
- ◆ **35% of LSD operators and 21% of MOTOLs have water operators with no certification (Administrators Survey)**



Source: Paula Dawe

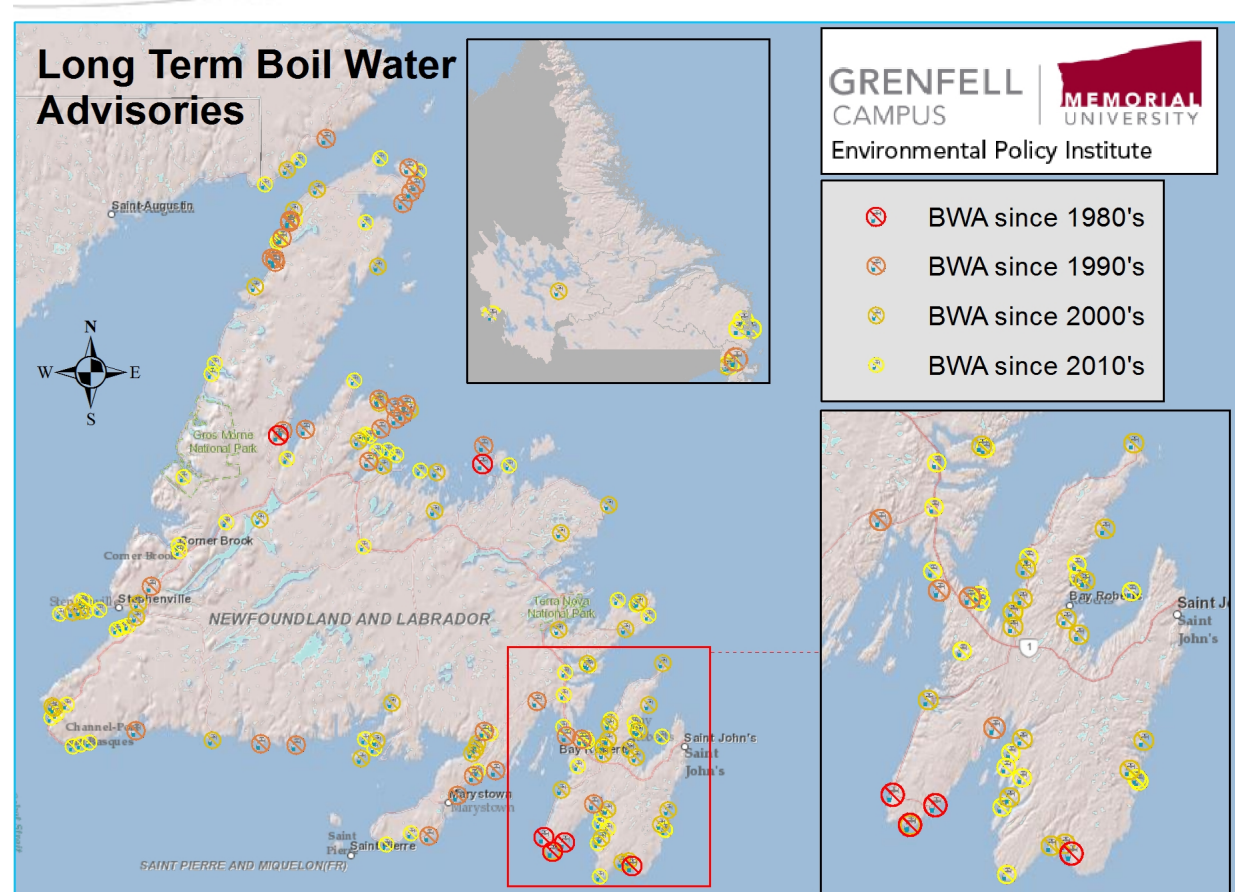
Key Findings: Public Perception, Awareness and Demand



- Both positive and negative perceptions of drinking water in rural NL (according to admin survey mostly positive)
 - Taste of chlorine disliked province wide
- Spring collection often a cultural norm
- Administrators levels of awareness often lacking
- Limited conservation practices

Key Findings: Policy & Governance

- Overall local satisfaction with provincial policies
- Lack of indicators and tools for evaluating drinking water system sustainability
- BWAs more prevalent in COTOLs, hard to differentiate, erode trust, issues with long term BWAs



Key Findings: Policy & Governance...

- ◆ Need for integrated data management and increased opportunities for multi-level dialogue related to drinking water challenges in rural communities
- ◆ Need to expand permit to operate inspection and risk rating program
- ◆ Implementation of PPWSA regulations lacking
- ◆ Need for regional approaches



Conclusions: Capacity Building Needed

- Mandatory certification for water operators
- Self reporting
- Education for administrators and decision makers
- Public outreach

Technical

- Sustained funding for regional approaches
- Multi-level governance
 - Inter-community agreements

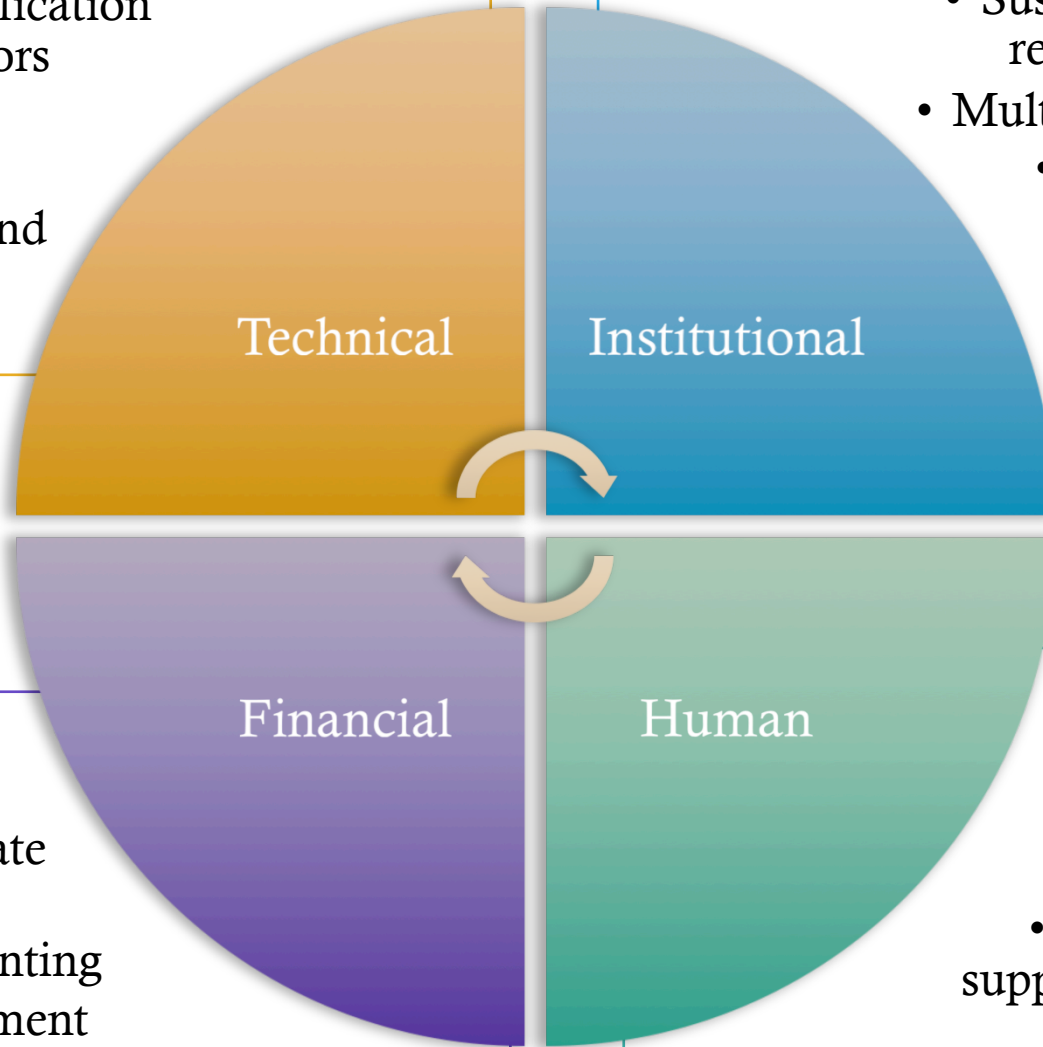
Institutional

Financial

- Place appropriate infrastructure
- Full cost accounting
- Asset management activities

Human

- Regional water operators
- Greater regional support by Provincial level



Recommendations



Recommendations: Policy, Regulations and Enforcement

1. Enhance stewardship of PPWSAs by local governments.
 1. Include PPWSA monitoring and protection efforts in self reporting.
 2. Encourage all towns to designate as a PPWSA.
 3. Provide outreach and education on the importance of and measures for protecting PPWSAs. Towns should explore potentials for partnerships with non-governmental groups to undertake these activities.
2. Improve water conservation programs and policies.
3. Develop more functional and user-friendly tools for assessing the state and vulnerability of drinking water systems.

Recommendations: Policy, Regulations and Enforcement

4. Create a more effective advisory system for managing and communicating risks than the current BWA approach.
 1. Develop more descriptive advisories (e.g. a ranking system to differentiate between different types of advisories).
 2. Develop strategies to remove BWAs in a more timely manner, including considering allowing communities to bring in at least one of two samples required themselves to a NL Services lab, and only requiring one clean sample for those communities on a BWA due to low risk preventative maintenance/mechanical reasons.
5. Develop and implement a strategy to address remaining long term and very long term boil water advisories.

Recommendations: Policy, Regulations and Enforcement

6. Foster enhanced compliance with provincial drinking water policies and regulations. For example:
 1. Expand the Permit to Operate Drinking Water Inspection Program and make Permits to Operate publicly available.
 2. Provide more capacity (financial, human and technical) and opportunities for capacity building at all levels specific to enhancing compliance with water policies and regulations.
 3. Make self-reporting mandatory for public water system operators, so requirements under policies and regulations are clear.

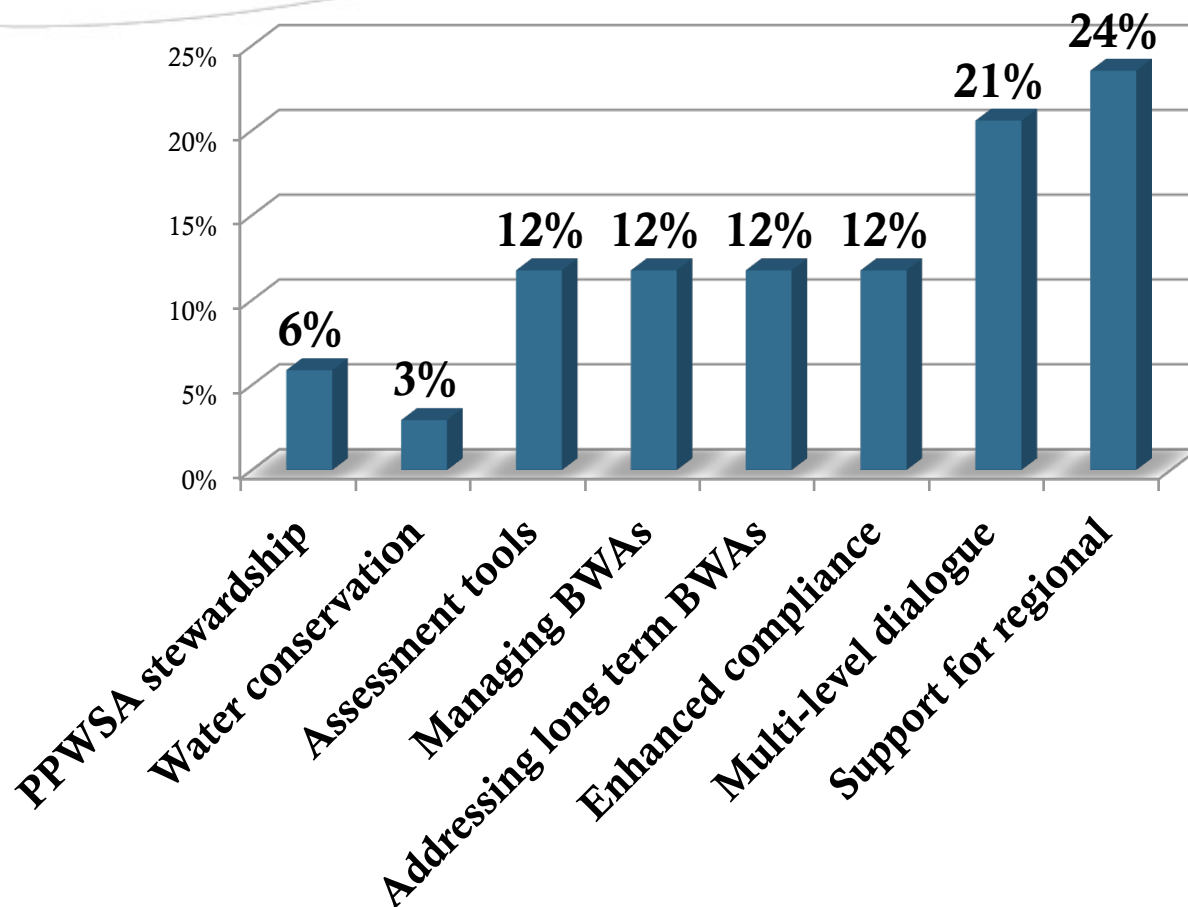
Recommendations: Policy, Regulations and Enforcement

7. Increase opportunities for multi-level governance and dialogue bringing together all levels of government and other stakeholders. This would involve creating venues for integration, coordination and sharing information concerning water related matters.
8. Provide further incentives and sustained support for regional operators and other regional service sharing and drinking water management initiatives.

Pick your top three areas for immediate action

Recommendations #1-8 in Handout

1. PPWSA stewardship
2. Water conservation
3. Assessment tools
4. Managing BWAs
5. Addressing long term BWAs
6. Enhanced compliance
7. Multi-level dialogue
8. Support for regional



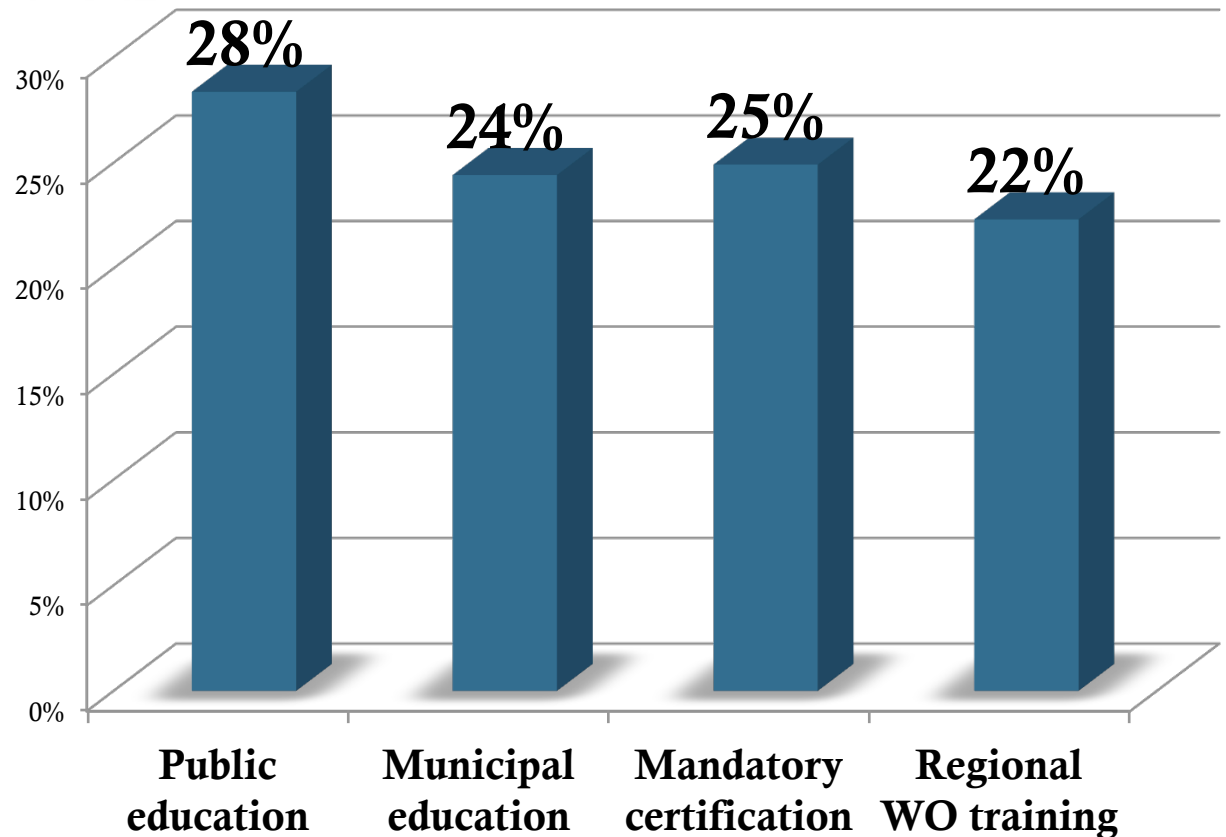
Recommendations: Education & Training

9. Offer more (and diverse) public outreach and education opportunities in various mediums concerning drinking water issues.
10. Provide greater education and capacity building opportunities concerning best practices on the management of drinking water systems for municipal decision makers.
11. Include mandatory certification for all water operators as part of the Water Resources Act legislation.
12. Offer more regional training opportunities for water operators.

Pick your top three areas for immediate action

Recommendations #9 – 12 in Handout

- A. Public education
- B. Municipal education
- C. Mandatory certification
- D. Regional WO training



Recommendations: Infrastructure & Operations

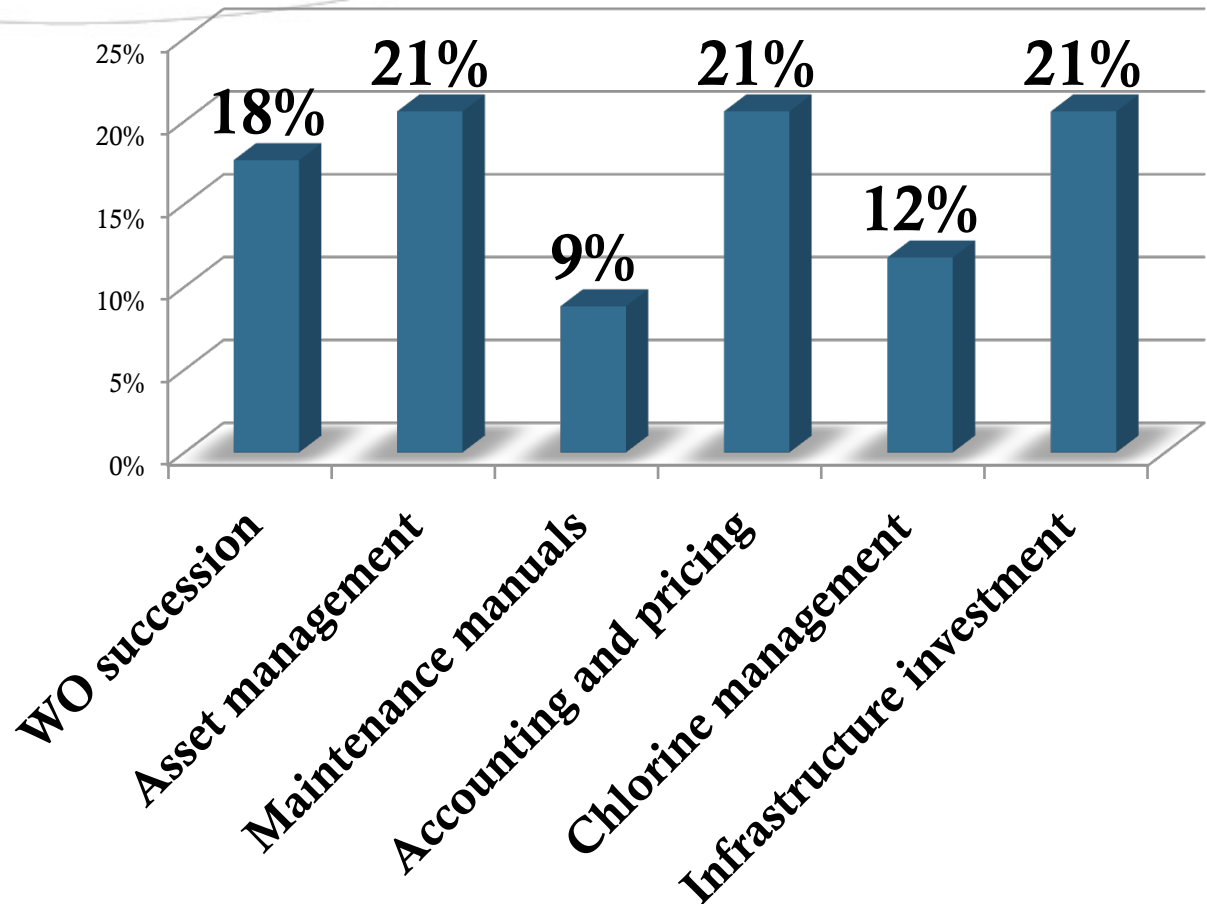
- 13. Enhance succession planning for water operators and designation of back up water operators.
- 14. Increase funding and support for asset management activities and management of drinking water systems data.
- 15. Implement Maintenance Assurance Manuals across the province with manuals that consider the particular challenges faced in small drinking water systems.

Recommendations: Infrastructure & Operations

16. Include full cost accounting and appropriate pricing for water services in fiscal framework discussions.
17. Improve chlorine management and create guidelines for maximum chlorine levels in drinking water treatment standards.
18. Continue to invest and plan for re-investment to address the infrastructure deficit in rural NL with particular attention to communities experiencing chronic problems (e.g. long term BWAs and high THMs/HAAAs).

Pick your top three areas for immediate action.
Recommendations #13 – 18 in Handout

- A. WO succession
- B. Asset management
- C. Maintenance manual
- D. Accounting and pricing
- E. Chlorine management
- F. Infrastructure investment



Priorities for Future Action



Thank you!

And stay in touch!

- Visit our website: <http://nlwater.ruralresilience.ca>
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