# ONLINE HELP CENTRE FOR BC SMALL WATER SYSTEMS

AKBLG – CONVENTION
FERNIE, BC, APRIL 17TH & 20TH, 2018

THOMPSON RIVERS UNIVERSITY

# PROJECT BACKGROUND

- Approximately 4,800 small water systems, of which some 600 are on some form of public notification.
- 334 First Nations water systems of which 36 are on some form of public advisory.
- Many small water systems in British Columbia pose a significant risk to their communities.
- Few have the necessary barriers in place to prevent events that can lead to contracting enteric disease and/or chronic illnesses.
- As well, many small systems are at continuous high risk of process failure and infrastructure breakdown due to operational and maintenance constraints, which, together with a lack of financial resources to renew and maintain infrastructure , significantly affects their ability to provide safe, potable drinking water to their communities.

# SMALL WATER SYSTEMS NEEDS

- The BC Ministry of Health and the Regional Health Authorities have recognized that small water systems have hit a crux.
- Water suppliers struggle to understand how to reduce risks to their water supplies.
- Many systems lack the technical expertise, financial resources, knowledge of government regulations, asset and financial management skills, or other skills necessary to operate and maintain their systems, and to achieve the outcomes specified by the Drinking Water Protection Act, Regulation and Drinking Water Treatment Objectives.
- Additionally, most small systems remain isolated in that they rarely have contact with, share information with, or cooperate with other nearby small or large systems.

# WHAT IS THE GOAL?

To provide online Technical Expertise and self help tools to all Small Water Systems in British Columbia - leading to:

- Risk reduction,
- Safe drinking water &
- System sustainability.

# CONSULTATION

- Ministry of Health
- IHA
- WSA
- BCWWA
- Small Water Users Association
- CWSA
- First Nations (AFN)
- INAC
- Drinking Water Leadership Council

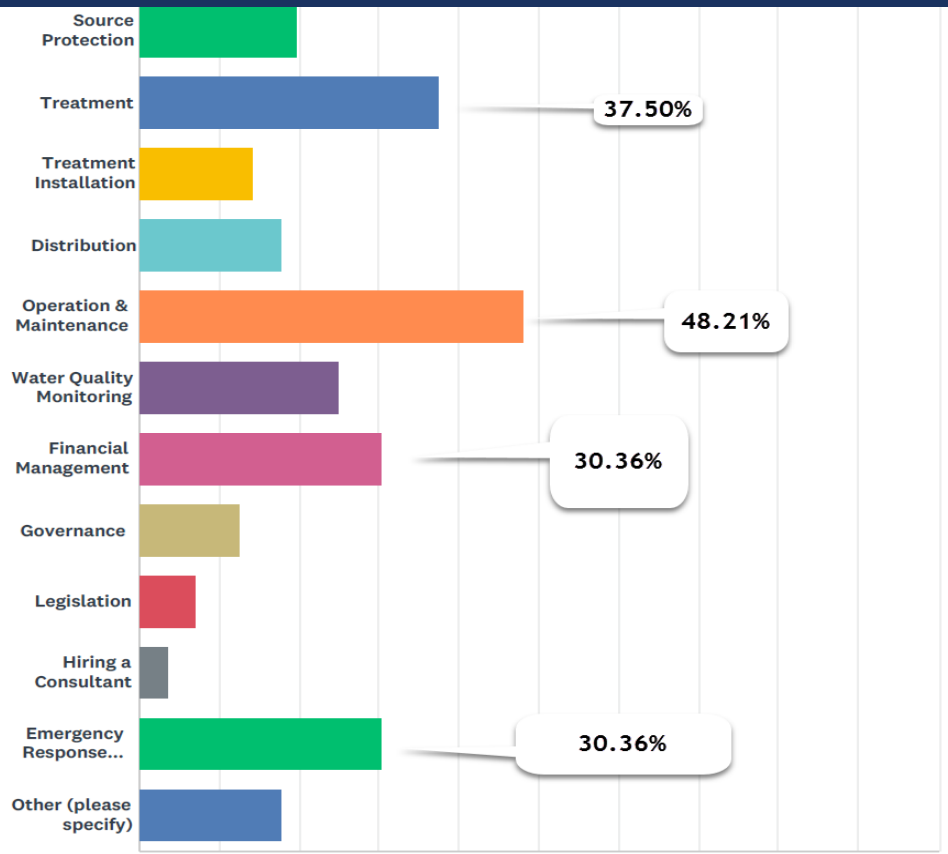
# FUNDING

- Interior Health Authority
- BCWWA
- Indigenous and Northern Affairs Canada

# SMALL WATER SYSTEMS NEEDS

- With the help of the Environmental Operators Certification Program (EOCP) we surveyed their Small Water System membership.
- We believed that by using a short survey we'd get a higher number of responses.
- The survey was just 6 questions.

# SMALL WATER SYSTEMS NEEDS

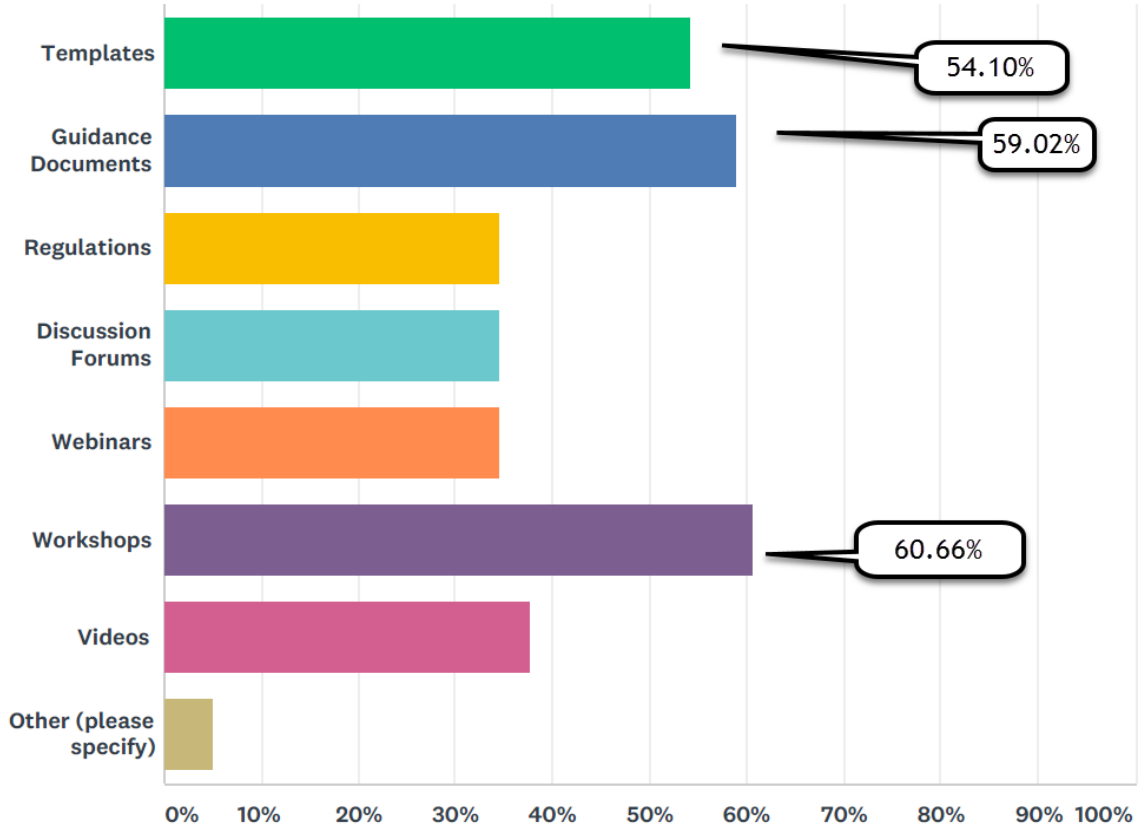



- Strong Response for O/M and Treatment.
- Financial management and ERP's are tied

# SMALL WATER SYSTEMS NEEDS

- We asked water respondents what types of resources would be most useful to them.

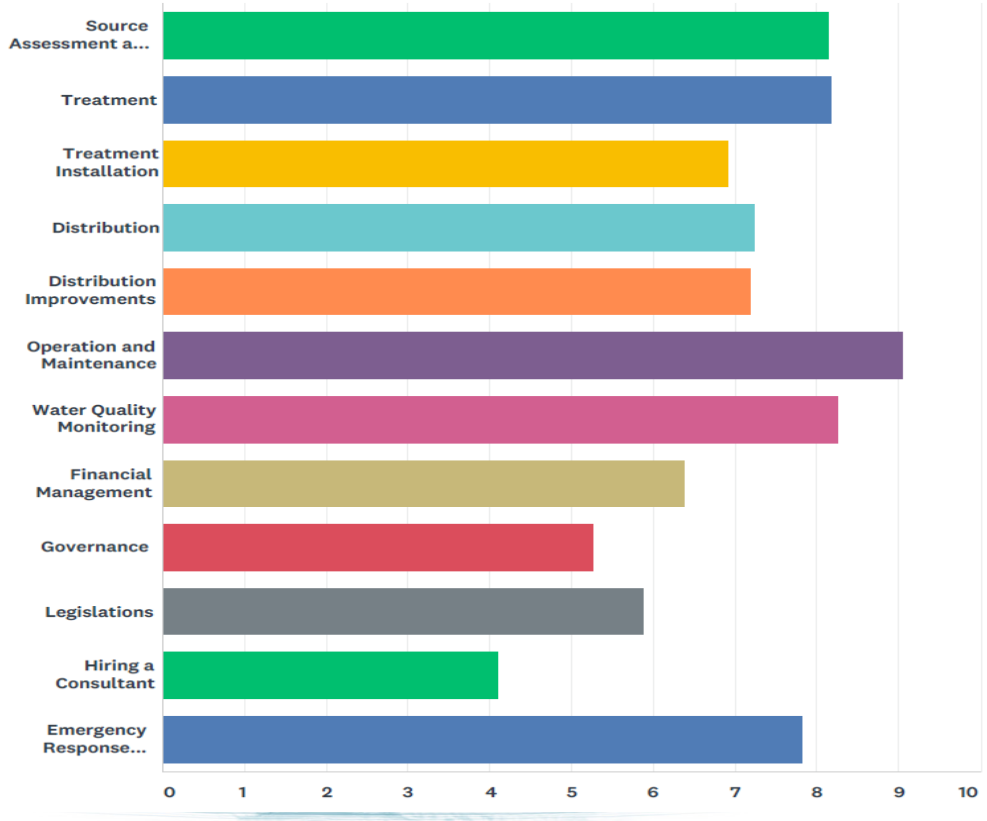
# SMALL WATER SYSTEMS NEEDS



# SMALL WATER SYSTEMS NEEDS

- The respondents were asked to rank the type of information they need.

# SMALL WATER SYSTEMS NEEDS



# OUR OBJECTIVE

- Technician Expertise provided on the Website
- Knowledge directory based on the Multi Barrier Approach
- Topic based moderated forums (Phase 2)

# SOURCE PROTECTION
# SOURCE TYPE

- **Ground**
  - Well
  - GARP
  - How to Protect Your well
  - Common issues & hazards
  - Operations and Maintenance
  - How and When to Hire Consultant
  - Templates

- **Surface: Filter & Disinfect**
  - Spring, River, Stream, Lake
  - How to protect your intake
  - Common issues & hazards
  - Operations and Maintenance
  - Drought and Flood
  - How and When to Hire Consultant
  - Templates

# TREATMENT

- Centralized or Decentralized
  - Define centralized
  - Define POE:  Why would use POE
  - NSF standards

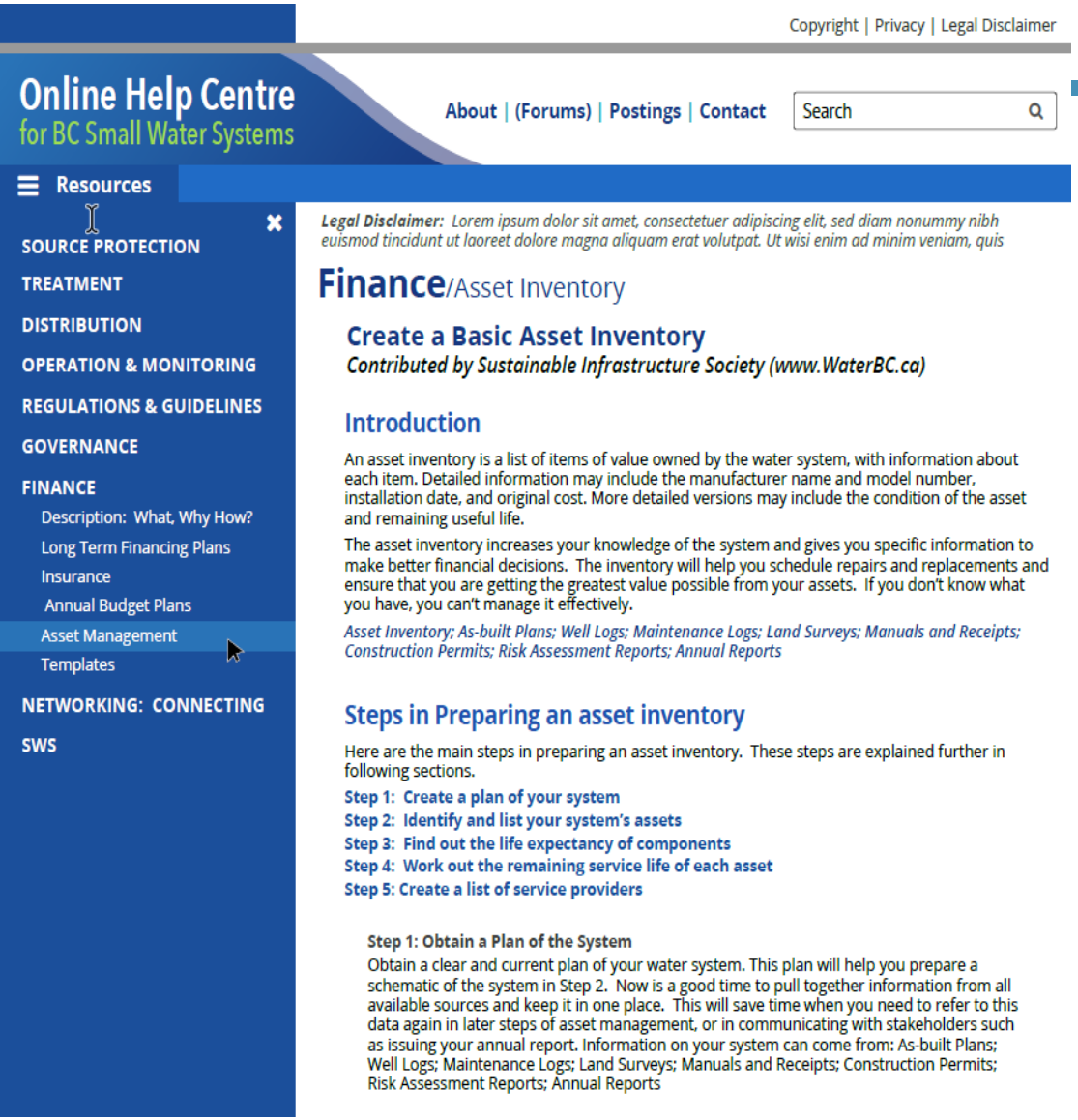
- Minimum treatment standards
- Common Issues & Hazards
- Sampling & Monitoring
- Finances
- Operations and Maintenance
- How and When to Hire Consultant
- Templates

# OPERATIONS & MONITORING

- Descriptor:  What, Why, How?
- Common Issues & Hazards
- Sampling & Monitoring
- Maintaining a Residual
- Emergency Response Planning
- Annual Report
- Operations and Maintenance Plans
- Information on Accredited Labs – Water Analysis Labs
- How and When to Hire Consultant
- Templates


Website Design:

Home Page Mock Up




## Website Design: Sample Page

- Tools developed by the development team are not shown here.

# OTHER INITIATIVES FOR SMALL WATER SUPPLIERS

- **Emergency Response and Contingency Planning**
  - 3 hour course.
  - 0.3 CEU's via EOCP for certified operators
  - **Free!!!**
  - **2017**
    - **27 courses**
    - **202 SWS**
    - **266 operators (45 certified)**
- **Water Quality Monitoring**
  - Develop sampling plans,
  - Samples techniques
  - Water system monitoring
  - EOCP will review the course for applicability of credits.
  - **Free!!!**
  - **Coming Late Spring in 2018**

## Water Safe BC

- The course was first developed by Thompson Rivers University in 2006 with a minor revision in 2008 and a major revision in 2017 (with grant from Interior Health);

- Course length is 6 hrs. and is delivered online;

# WATER SAFE - CONTENT

- Module 1: Introduction to Water Safety
- Module 2: Water Sources
- Module 3: Water Treatment
- Module 4: Water Distribution Systems
- Module 5: Small Water Systems- Operational Considerations
- Module 6: Water Hauling

There is also a WaterSafe website that is a companion for the course at http://www.watersafebc.ca.

# Thank you

Rob Birtles - Interior Health Authority. Email: rob.birtles@interiorhealth.ca