

Water Safety Planning

Risk, Water Protection, and Community Health

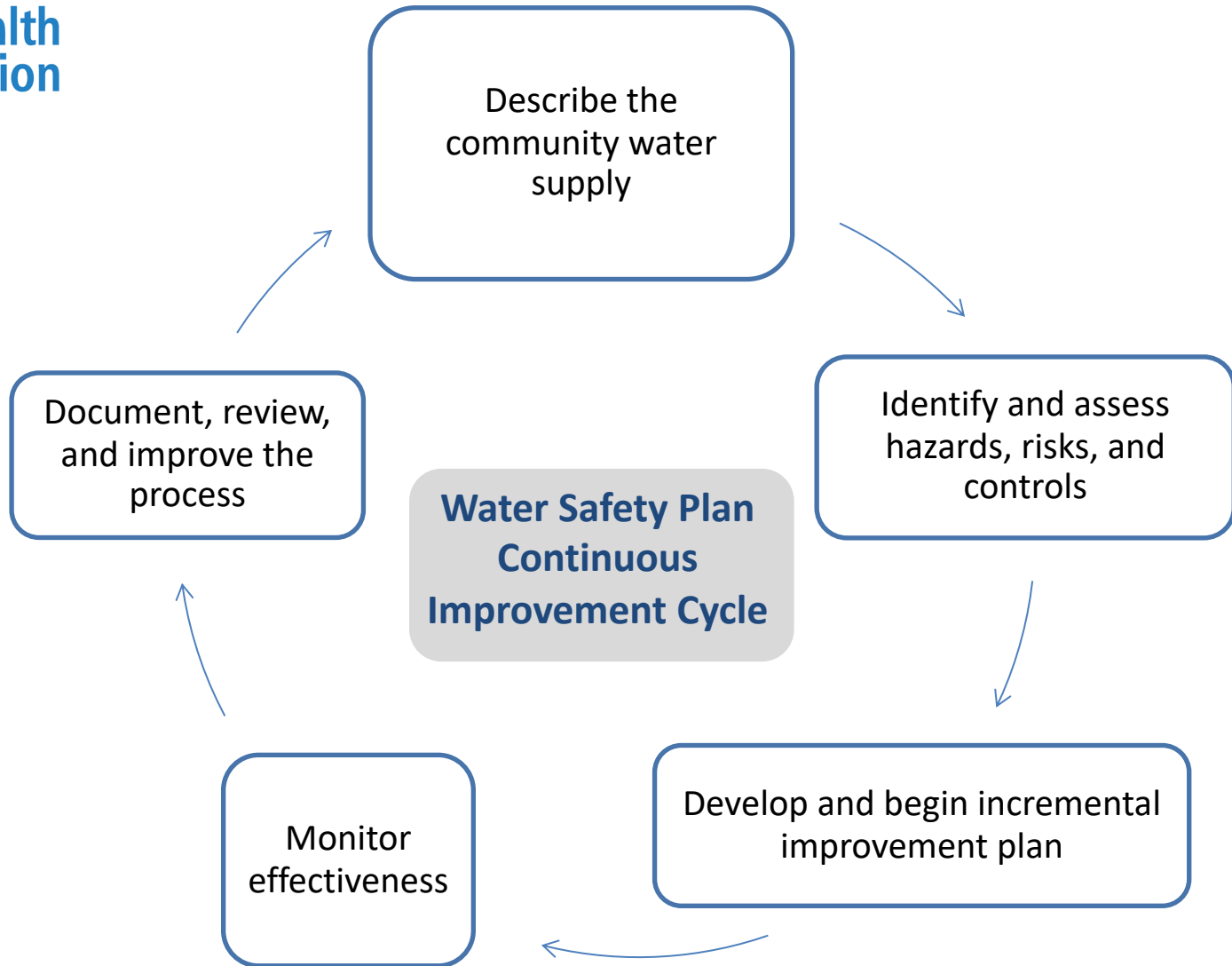
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December 16, 2020



World Health
Organization



Water Safety Planning



WSP allows each community to develop a plan to:

- assess risk
- plan improvements
- monitor operations
- monitor water quality
- track maintenance

WSPs help with:

- risk prioritization
- internal and external communications
- system sustainability
- planning growth
- ensuring water quality

WSP Tool: Assess Potential Risks

The screenshot displays the 'Your Water System' dashboard. It features a grid of six main functional areas: Monitoring (with a pencil icon), Maintenance (with a gear icon), Assessments (with a bar chart icon), Daily (with a calendar icon and a red notification badge showing '2'), Properties (with a grid icon), and Preferences (with a checkmark icon). A bottom navigation bar includes links for HOME, HELP, PROFILE, and LOGOUT. Three callout boxes highlight specific features: 'Routine Measurements' points to the Monitoring area, 'Record keeping and maintenance plans' points to the Maintenance area, and 'System Risk Assessments' points to the Assessments area.

Routine Measurements

Record keeping and maintenance plans

System Risk Assessments

Your Water System

Monitoring

Maintenance

Assessments

Daily 2

Properties

Preferences

HOME HELP PROFILE LOGOUT

WSP Tool: Streamline Maintenance, Operation, & Monitoring

Quick Launch

Assessments

Risks Detected: 3

Assessments

TREATMENT MUNICIPAL HOUSEHOLD

Address Risks

Assessment	Category	Issue	Solution	Dismiss Risk
Chlorine	Maintenance	View Issue	View Solution	Resolve
Chlorine	Operations	View Issue	View Solution	Resolve
Chlorine	Monitoring	View Issue	View Solution	Resolve

Surveys gather information about operations, monitoring, maintenance, etc.

Calculate risk based on identified hazards

Monitoring and Maintenance

Monitoring	Date	High Parameters	Report
UV	Dec 10/18	0	Full Report Link
Chlorine	Dec 3/18	3	Full Report Link
UV	Nov 20/18	0	Full Report Link
Routine Sampling	Oct 13/18	2	Full Report Link

Address Issues

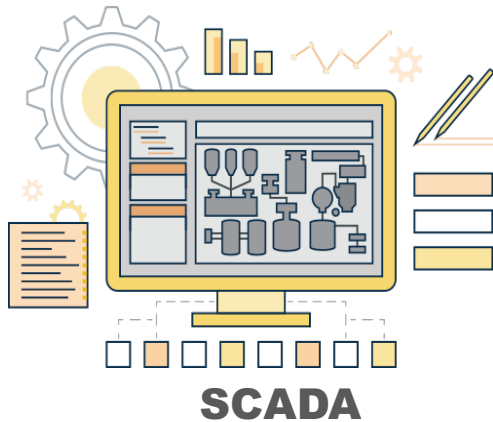
WSPs organize what we already know



Free Chlorine residuals
Turbidity
Flow



E. Coli
Total Coliforms
DBP



Pressure
Tank level
Filter runtime

Continuous cycle of improvement and risk reduction

Community Example – Disinfection

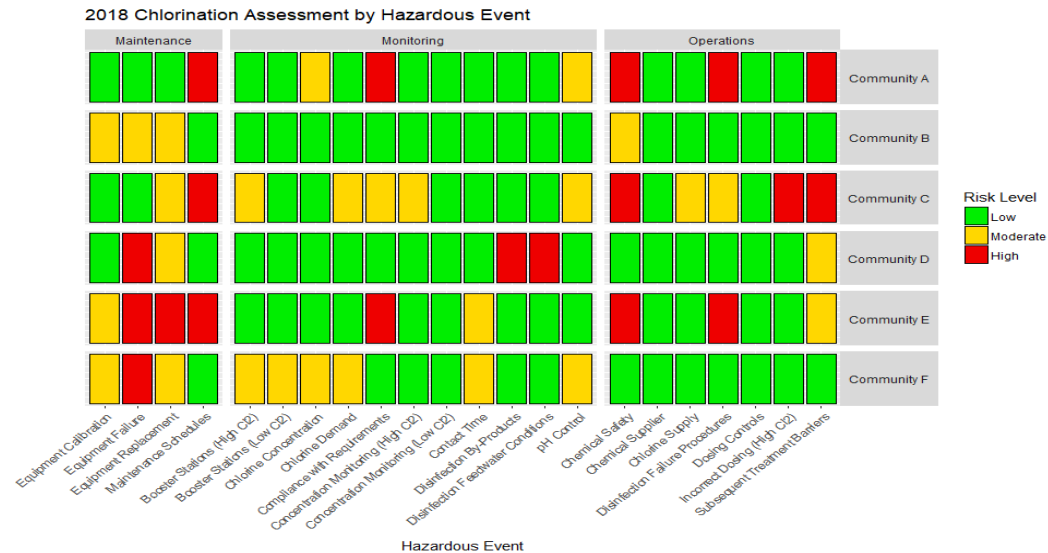
Question	Details in Watertrax	Answer	Comment
Have you experienced any issues with disinfection by-products (DBPs) formation since the last WSP was conducted?	All samples within parameters	No	
How often do you monitor for disinfection by-products (DBPs) in your finished water?	06 Nov 19	Annually	
Have DBPs ever exceeded provincial water quality guidelines?	All samples within parameters	No	
Which DBPs are other particular concern to your facility	All samples within parameters	None	
Does your source water contain high natural organic matter content?	19 Feb 20	No	Only 1 measurement of TOC from one well, not sufficient data *Community uses 3 wells
How often do you experience issues with incorrect dosing leading to incorrect target chlorine residual in your system?	(Well 1) 22 Jan 20 - Low (Well 2) 21 Apr 20 - Low (Well 2) 26 Jun 20 – Low	Possible answers: Frequently Occasionally Rarely Never	*data does not specify if incorrect dosing is the reason *survey does not define parameters for possible answers



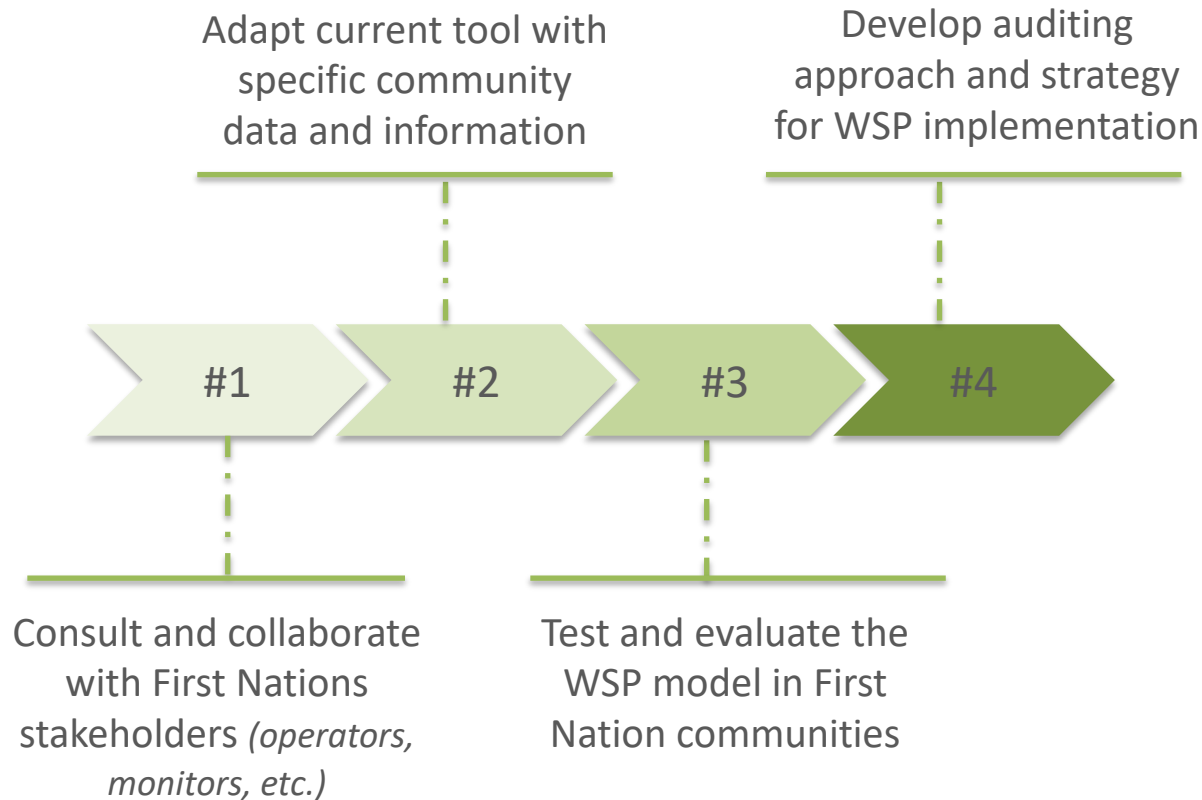


Key take-aways

- Water Safety Plans
 - Inform operators and AFNWA team
 - Strengths and gaps
- Non-regulatory approach
 - Built on local expertise
 - Communication tool



Building a process that works for the AFNWA



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Next steps ...

Information gathering and interviews with monitors and operators to understand their needs

Data integration into the risk tool and further development and testing of application

Working closely with the AFNWA to meet community needs





Research Opportunity

Measuring SARS-CoV-2 in wastewater
- Open for discussion



Acknowledgments

The research team would like to acknowledge the Atlantic First Nations Water Authority, Atlantic Policy Congress of First Nations Secretariat, First Nation Operators and LuminUltra.



Wela'lin



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