

Water North Coalition Meeting

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Overview of Water Issues

- **Recreational Water**
- **Lead in Drinking Water**
- **Reclaimed Water**
- **Response to Drinking Water Quality Issues**

Proposed Recreational Water Management Protocol (RWMP)

2016 Pilot Study

RWMP History

- Part 3, Public Beaches of the *Nuisance and General Sanitation Regulation* was outdated and did not reflect current practice.
- Rescinded Part 3 with recommendation to introduce a new protocol.
- Cross-ministry team was organized to develop a draft protocol:
 - Environment and Parks
 - Municipal Affairs
 - AHS/Prov Lab
 - University of Alberta
 - Agriculture and Forestry



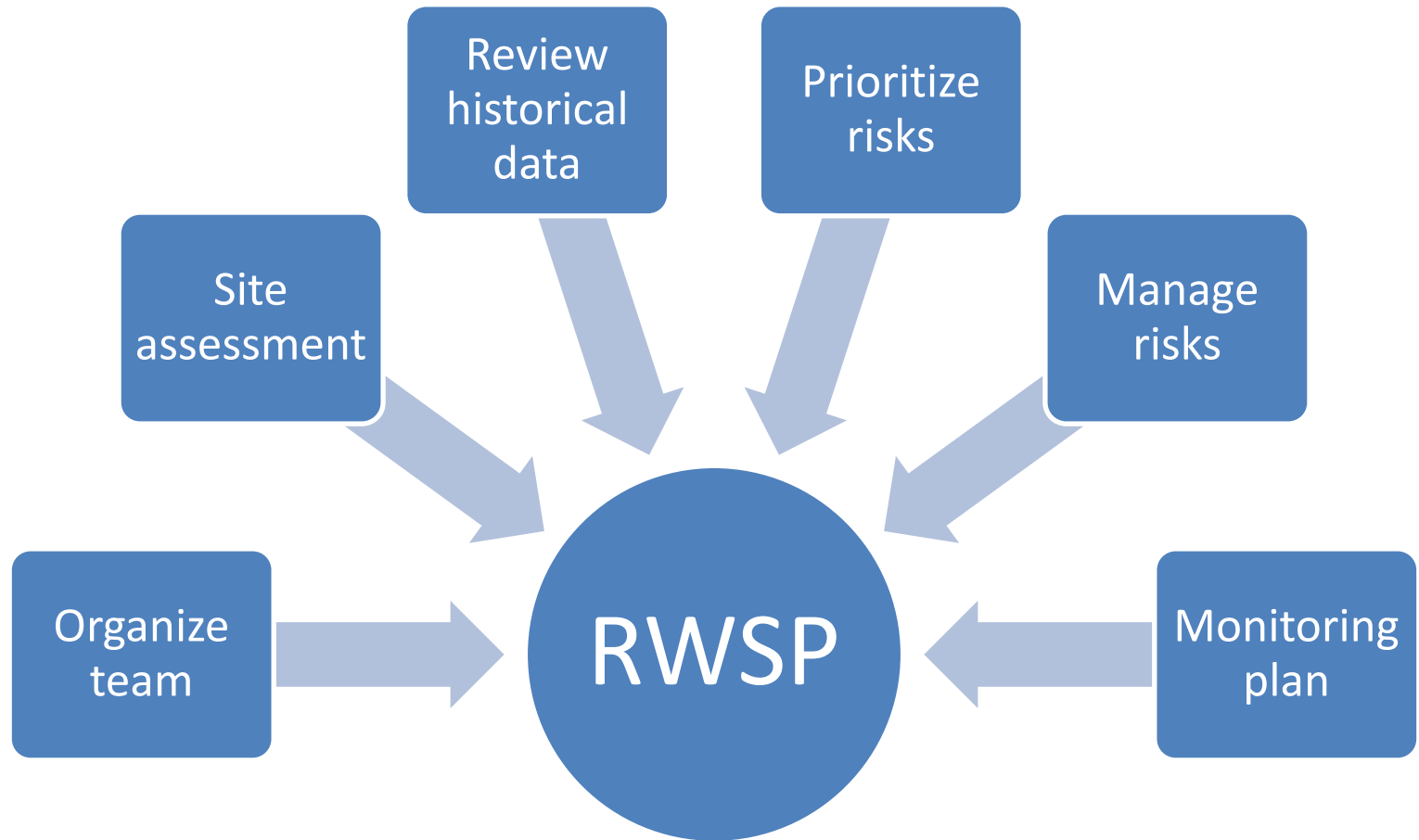
RWMP Purpose

- Develop a comprehensive risk assessment strategy to encompass bacteriological, chemical and physical risks to bathers.
- Set clear and meaningful water quality standards.
- Introduce a non-regulatory approach based on cooperation and collaboration between government/related agencies/operators (EP, WPAC, Watershed Stewardship Groups).
- Shared responsibility for assessment, monitoring, and management between AHS and operators.

RWMP Pilot Study

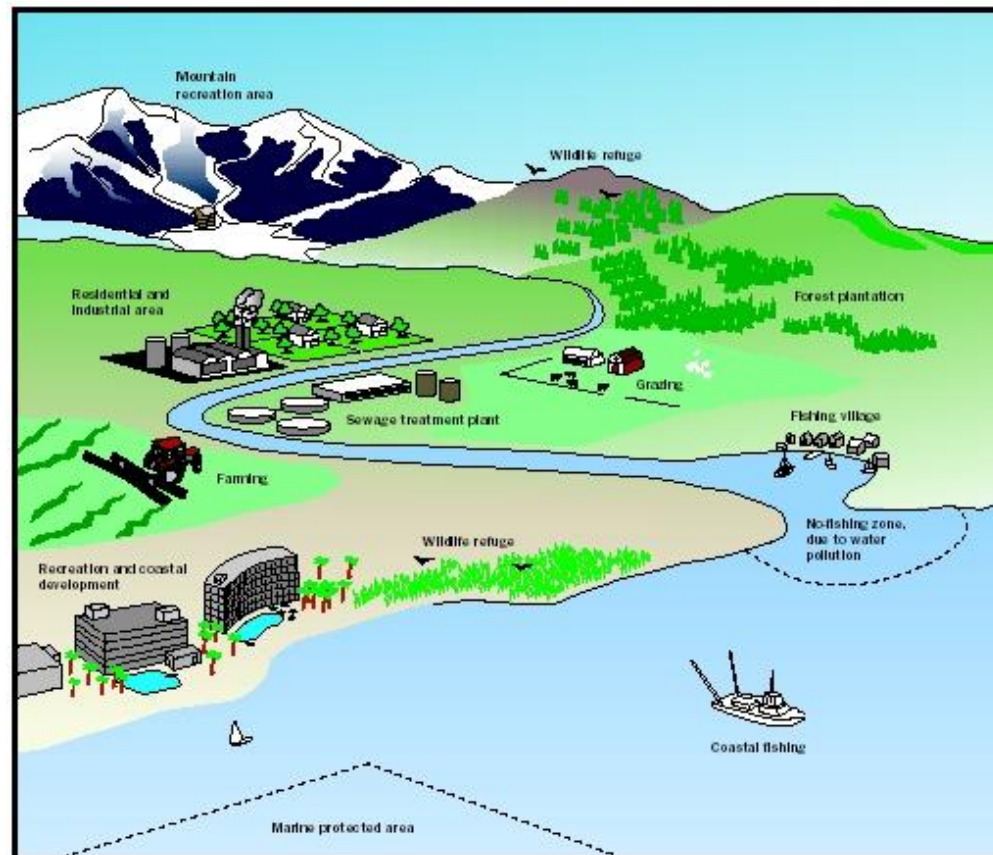
- 10 sites throughout the province (provincial and private).
 - South: County 40 Mile Park Beach
 - Calgary: Chestermere Lake, Auburn Bay
 - Central: Pigeon Lake, Gull Lake
 - Edmonton: Lake Wabamun, Hubbles Lake
 - North: Lac La Biche, Baptiste Lake
- Summer of 2016, operators will:
 - sample the beach for fecal coliforms and cyanobacteria throughout the season
 - conduct the site assessment
 - prepare a Recreational Water Safety Plan
- Evaluation in late fall 2016; revisit the draft Protocol.

Building a Recreational Water Safety Plan



Site Assessment

- Review past and present information; land uses, sampling results, lake conditions and biological, chemical and physical hazards.



Lead in Drinking Water

Lead in Drinking Water

Current Knowledge

- Recent studies indicate: no safe level of lead in drinking water; young children and infants are particularly vulnerable to lead.
- Lead at even low levels can result in behaviour and learning problems, lower IQ, hyperactivity.
- Drinking water is a lower contributor to overall lead intake. But, lead service lines, lead solder and brass fittings in plumbing contribute to lead exposure from water.
- EPA: Basic Information about Lead in Drinking Water (March 2016).

<https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water#health>

Lead in Drinking Water

Current Activities:

- In 2013, Alberta Health revised the document “Lead and Drinking Water from Lead Service Lines”.
(<http://www.health.alberta.ca/documents/CMOH-Drinking-Water-Lead-Services-2013.pdf>)
- Reviewing the sampling protocol for drinking water systems and individual buildings. (HC Guidance on Controlling Corrosion in Drinking Water Distribution Systems 2009)
- Cities of Edmonton and Calgary have introduced lead sampling programs focusing on neighborhoods with lead service lines; a LSL replacement program and NSF filtration units for individual homes with high lead. City of Wetaskiwin is considering a survey.
- One school district is undertaking a school screening project at elementary schools.

Reclaimed Water

Reclaimed Water: Current Status

- EPEA requires an approval before using treated wastewater for irrigation or any other purpose.
- Alberta Building Code and Plumbing Code require all plumbing systems to be directly connected to a sanitary drainage system.
- To allow use of reclaimed water for toilet/urinal flushing or irrigation, a variance under the Safety Codes Act must be issued by the local authority having jurisdiction (AHJ); separate second variance must be issued by the Technical Administrator for the equipment required to operate the reclaimed water reuse system.
- Generally, the municipality requests a review and comments from AHS as part of the variance approval.
- Details available at:
<http://www.municipalaffairs.alberta.ca/documents/ss/STANDATA/plumbing/FactSheet-AlternativeSolutionsGuideforReclaimedWaterReuse.pdf>

Reclaimed Water: Future

- Municipal Affairs introduced STANDATA 15.01, a plumbing safety variance for systems on a single property and under 25m³ per day.
- National Plumbing Code, to be adopted in AB, will allow reclaimed water use.
- Increasing number of applications in southern Alberta to incorporate reclaimed water for irrigation and toilet, urinal flushing, car washes, fire suppression etc.
- Currently applying Health Canada Guidelines for Domestic Reclaimed Water for Toilet and Urinal Flushing but need to develop water quality criteria for other uses.

Response to Drinking Water Quality Issues

Irina Arzumanyan
Public Health Inspector,
North zone, AHS

Response to Bacteriological Exceedances

Communication and Action Protocol for Failed Bacteriological Results in Waterworks under EPEA (January 2009)

- Prov Lab will fax ASAP the owner of the facility, AEP and district health office of failed bacteriological result.
- Owner/operator also notifies AEP of any emergency operations, significant problems that may impact water quality, AEP notifies AHS.

Response to Exceedances

- Collaboration between AEP/AHS to determine next steps which will include:
 - Re-sampling
- Might include:
 - Repair malfunction /damage
 - Optimize treatment
 - Increase disinfectant
 - Flush drains etc.
- If a condition is a potential public health concern, an executive officer (health inspector) may issue a boil water or 'do not use' order to the operator (bacteriological vs chemical).

Advisories

- The order usually includes requiring the operator to issue a 'boil water' or 'do not use' advisory to the customers.
- This may be done in conjunction with AHS. AHS often forwards the advisory to all facilities that AHS regulates (internally, an alert goes to healthcare facilities and AHS Comms).
- AHS Communications work with the municipality on messaging and notifying facilities, AEP and other agencies.
- The Acute Chemical Exceedance Protocol is scheduled for review and revision.
 - review reporting and actions responding to exceedance of 1-10 day exposure limits and MAC limits.

Questions??

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