

# Best Management Practices (BMPs)



# Overview

- Gain a better understand of best management practice(BMP) component of DWQMS Element 21
- Discuss BMP questions MECP inspector might ask
- Share BMP experiences



# Learning Objectives

By the end of this session, you will be able to:

- ✓ Describe the requirements of Element 21 – BMP section
- ✓ Recognize some of the questions that may be asked during an MECP inspection
- ✓ Prepare a list of BMPs to be reviewed as part of the 36-month review requirement



# DWQMS

## Plan/Do Elements

- Element 1 – Quality Management System
- Element 2 – Quality Management System Policy
- Element 3 – Commitment and Endorsement
- Element 4 – QMS Representative
- Element 5 – Document and Records Control
- Element 6 – Drinking-Water System
- Element 7 – Risk Assessment
- Element 8 – Risk Assessment Outcomes
- Element 9 – Organizational Structure, Roles, Responsibilities and Authorities
- Element 10 – Competencies
- Element 11 – Personnel Coverage
- Element 12 – Communications

# DWQMS

## Plan/Do Elements

- Element 9 – Organizational Structure, Roles, Responsibilities and Authorities
- Element 10 – Competencies
- Element 11 – Personnel Coverage
- Element 12 – Communications
- Element 16 – Sampling, Testing and Monitoring
- Element 17 – Measurement and Recording Equipment Calibration and Maintenance
- Element 18 – Emergency Management

## Check Elements

- Element 19 – Internal Audits
- Element 20 – Management Review

## Improve Element

- Element 21 – Continual Improvement

# Element 21 – Continual Improvement



- **Plan** – the operating authority shall develop a procedure for tracking and measuring continual improvement of its QMS by:
  - Reviewing and considering applicable best management practices, including any published by the MECP at least once every 36 months

# Element 21 - Continual Improvement

- **Do** – the operating authority shall strive to continually improve the effectiveness of its QMS by implementing and conforming to the procedure



# Where do BMPs come from?



- MECP Document (not yet published)
- DWQMS Conference
- Municipal Water Wastewater Regulatory Committee (MWWRC) website
- Other conferences
- MECP Bulletins, trade magazines, publications
- Ministers Annual Report on Drinking Water
- Chief Drinking Water Inspector's Annual Report
- Neighbouring Municipalities
- Staff Suggestions

# BMPs - MECP Inspections

- MECP Inspectors can ask questions with respect to BMPs
- There is a section on the inspection report for BMPs
- BMPs will not affect the Inspection Rating Record (IRR)



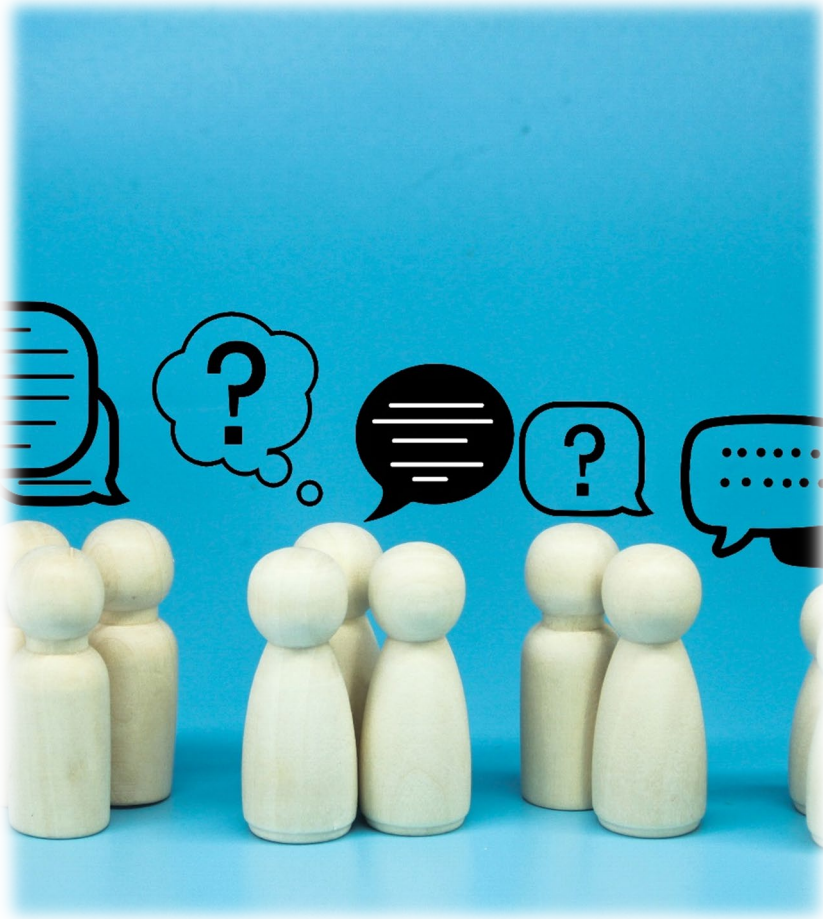
# MECP Inspection BMP Questions

- Broken into six categories:
  - Treatment System
  - Storage
  - Distribution
  - Contingency and Security
  - Planning and Management
  - Logbooks and Record Keeping



# Breakout Session

- In your group consider some BMP questions that may be asked by the MECP inspector for one of the categories listed below:
  - Treatment System
  - Storage
  - Distribution
  - Contingency and Security
  - Planning and Management
  - Logbooks and Record Keeping



# Treatment System

- Filter Monitoring and Inspection
  - Were operators aware of the operational criteria necessary to achieve primary disinfection?
- Source Water Quality
  - Were trends in source water quality monitored?



# Storage

- Cleanout, Inspection and Maintenance
  - Did the owner have a program or maintain a schedule for routine cleanout, inspection and maintenance of reservoirs and elevated storage
- Covered and Secure
  - Were all storage facilities completely covered and secure?
  - Were air vents and overflows associated with reservoirs and elevated storage structures equipped with screens?



# Distribution

- Watermain Flushing
  - Had the owner implemented a program for flushing of watermains per industry standards?
- Valve Exercise and Inspection
  - Was there a program in place for inspecting and exercising valves?
- Hydrant Operation and Inspection
  - Was there a program in place for inspecting and operating hydrants



# Distribution

- Hydrant Access
  - Was there a bylaw or policy in place limiting access to hydrants?
- Pressure Monitoring
  - Was the owner able to maintain proper pressures in the distribution system and was pressure monitored to alert the operator of conditions of loss of pressure below the value under which the system was designed to operate?



# Distribution

- Disinfection Residuals
  - Did records confirm that disinfectant residuals were routinely checked at the extremities and dead ends of the distribution system?
- Backflow
  - Was there a backflow prevention program, policy and/or bylaw in place that addressed cross connections and connections to high hazard facilities?



# Contingency and Security

- Spill Containment
  - Was spill containment provided for process chemicals and standby power generator fuel?
- Spill Clean-up
  - Were equipment and materials in place for the clean up of spills?
- Standby Power Testing
  - If available, were standby power generators tested under normal load conditions?



# Contingency and Security

- Security – General
- Cybersecurity
  - Did the owner provide security measures to protect components of the drinking water system?



# Planning and Management

- Water Metering
- Water Loss
- Water Conservation
  - Had the owner and/or operating authority undertaken efforts to promote water conservation and reduce water losses in the drinking water system?



# Logbooks and Record Keeping

- All Log Entries
- Digital Log Entries
- Process Safeguards
- Verifying Accuracy of Records



# Accreditation

## What would make it better?

- Discussion on the Accreditation Program
- Suggestions for improvements



# Other BMPs

Discuss participants experiences with BMPs



# DWQMS 3.0 Update

C, O, M, I, N, G,  
S, O, O, N,

- MECP has begun the process of reviewing and updating the standard
- Changes are imminent!



## **WCWC is committed to supporting the owners, operators and operating authorities of Ontario's drinking water systems**

- Hands-on training
- Helpline
- Drinking Water Resource Library
- Public & on-site courses
- Pilot testing

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