



DWQMS Workshop
Continual Improvement Breakout Session
April 2018

Continual Improvement

The DWQMS requires you to:



Review and consider available best management practices (BMPs).



Have a process for identifying and managing corrective actions.



Have a process for identifying and implementing preventive actions.

Corrective Actions, Preventive Actions & Best Management Practices



Correction
Put fire out
(at the time)



Corrective Action
What caused fire
and how to prevent
recurrence
(after event)



Preventive Action
Stop fire from
happening
(before event)

Continual Improvement

21. Continual Improvement

PLAN – The Operating Authority shall develop a procedure for tracking and measuring continual improvement of its Quality Management System by:

- a) reviewing and considering applicable best management practices, including any published by the Ministry of the Environment and Climate Change and available on www.ontario.ca/drinkingwater, at least once every thirty-six months;



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- b) documenting a process for identification and management of Quality Management System Corrective Actions that includes:
- i. investigating the cause(s) of an identified non-conformity,
 - ii. documenting the action(s) that will be taken to correct the non-conformity and prevent the non-conformity from re-occurring, and
 - iii. reviewing the action(s) taken to correct the non-conformity, verifying that they are implemented and are effective in correcting and preventing the re-occurrence of the non-conformity.



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- c) documenting a process for identifying and implementing Preventive Actions to eliminate the occurrence of potential non-conformities in the Quality Management System that includes:
- i. reviewing potential non-conformities that are identified to determine if preventive actions may be necessary,
 - ii. documenting the outcome of the review, including the action(s), if any, that will be taken to prevent a non-conformity from occurring, and
 - iii. reviewing the action(s) taken to prevent a non-conformity, verifying that they are implemented and are effective in preventing the occurrence of the non-conformity.



Case Study 1

Scenario:

Chemical explosion occurred another water treatment plant in Ontario.

Background:

- Delivery person accidentally caused the explosion by mixing ammonia and chlorine.
- You have applicable policies and procedures that are part of your QMS.
- Your procedures are similar to those used in the system where the incident occurred.

Case Study 2

Scenario:

Non-compliance identified by Drinking Water Inspector

Background:

- You altered your drinking water system without approval.
- The alteration was not pre-authorized.

Case Study 3

Scenario:

You draw water from the same surface water source as a neighboring municipality. They have recently upgraded their filtration system.

Background:

- The neighboring municipality had identified an upward trend in amount and frequency of filter fouling.
- A pro-active study commissioned by the municipality recommended replacement of filter media and possible upgrades to allow more effective and less frequent backwash of the filters.
- You use the same filtration system / media that the system just replaced.

Case Study 4

Scenario:

You have a municipal storage yard adjacent to your drinking water system. Equipment is regularly cleaned and fueled at this location.

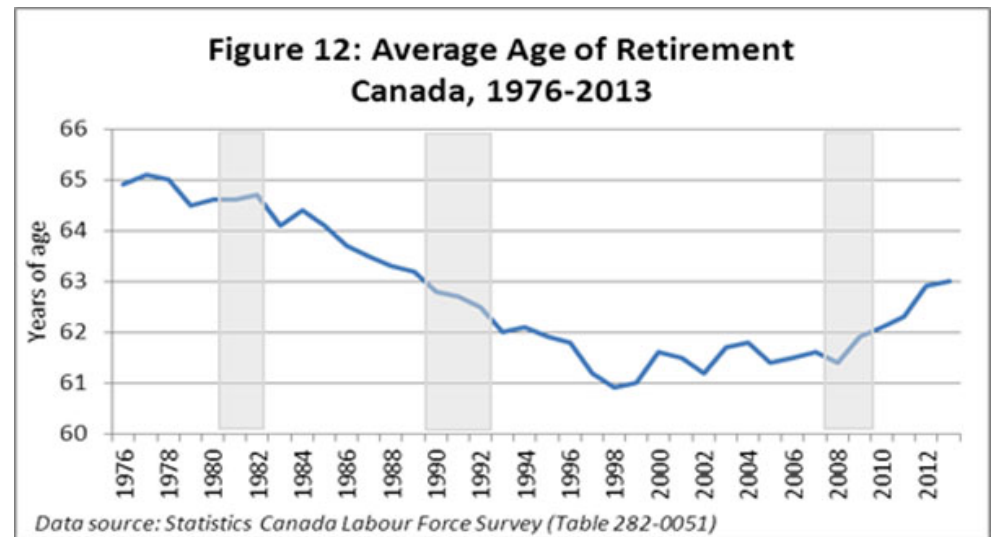
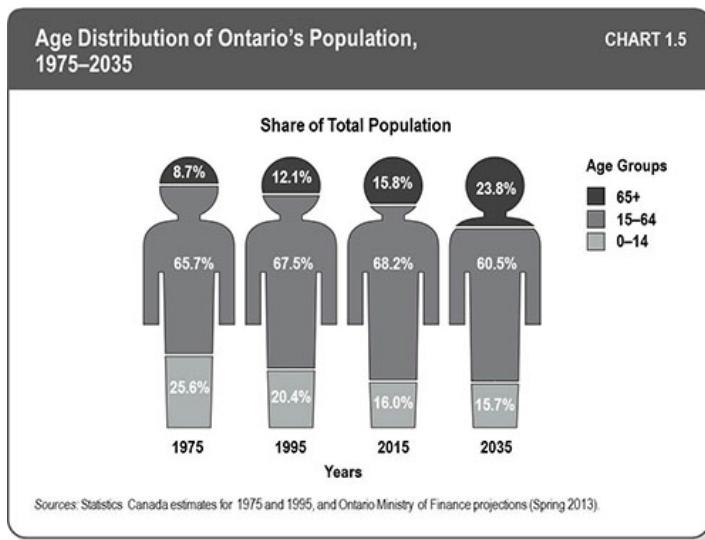
Background:

- Your system is supplied by a well field that is within 100m of the treatment plant.
- The storage yard falls within your wellhead protection area, with a high vulnerability score.
- Would you consider the location part of your drinking water system?
- How to you decrease the risk OR keep the risk from increasing?

Case Study 5

Scenario:

The average age of drinking water operators in your system is 56. Several of your operators have indicated that they plan to retire in the next 3 to 5 years.



Case Study 6

Scenario:

You have a new CAO that is motivated to find “operational efficiency” within every department.

Question:

- Can you leverage your QMS to demonstrate that operational efficiency is continually considered for drinking water operations?

