



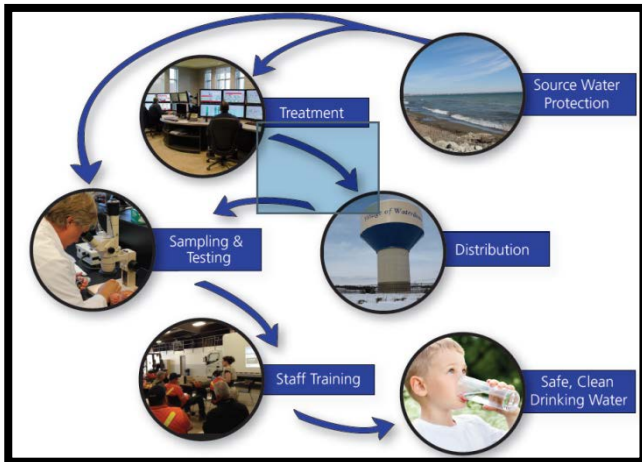
Hamilton

2018 WATER QUALITY REPORT

March 18, 2019

Presented by: Cari Vanderperk,
Manager Compliance & Regulations

2018 Annual Drinking Water Report



Regulatory Requirements

2018 Report Highlights

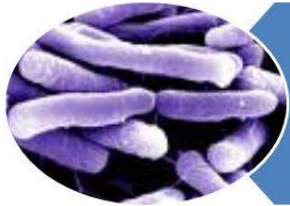
2018 Opportunities & Challenges

REGULATORY REQUIREMENTS



Incident:

- E. coli contamination – May 2000
- Agricultural (farm) runoff into adjacent well



Health Impacts:

- 7 deaths related to E. coli contamination
- 2,500 reported illnesses (over 40% of population)

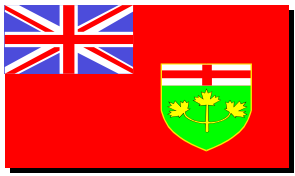


Failures:

- Improper operating practices
- Falsified records
- ***Management was unaware***

Justice O'Connor's 121 Inquiry recommendations focus on:

- Drinking water protection from source to tap
- Multi-barrier approach
- Drinking water standards
- Monitoring & testing
- Provincial, Owner and Operator roles
- Quality Management System
- Dedicated enforcement
- Competency of operators and staff



REGULATORY REQUIREMENTS

- Accessibility for Ontarians with Disabilities Act
- Building Code
- Clean Water Act
- Dangerous Goods Transportation Act
- Emergency Management and Civil Protection Act
- Endangered Species Act
- Environmental Assessment Act
- Environmental Bill of Rights
- Environmental Protection Act
- Fire Protection & Prevention Act
- Freedom of Information and Protection of Privacy Act
- Freedom of Information and Protection of Privacy Act
- Green Energy Act
- Highway Traffic Act
- Human Rights Code
- Nutrient Management Act
- Occupational Health and Safety Act
- Ontario Water Resources Act
- Pesticides Act
- Safe Drinking Water Act
- Technical Standards and Safety Act
- Toxics Reduction Act
- Workplace Safety and Insurance Act

Owner:

- Municipally operated systems
– Mayor and Council
- Shall exercise the level of care, diligence and skill in respect of a municipal drinking water system that a reasonably prudent person would be expected to exercise in a similar situation; and



Operating Authority:

- Staff within the HW Division responsible for the operation, maintenance and provision of support services to the City's DWSs

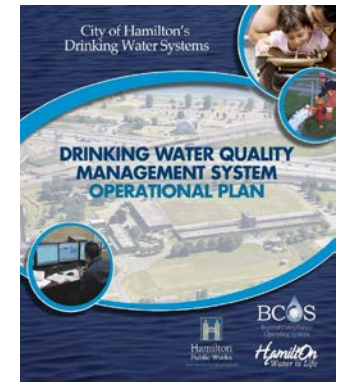
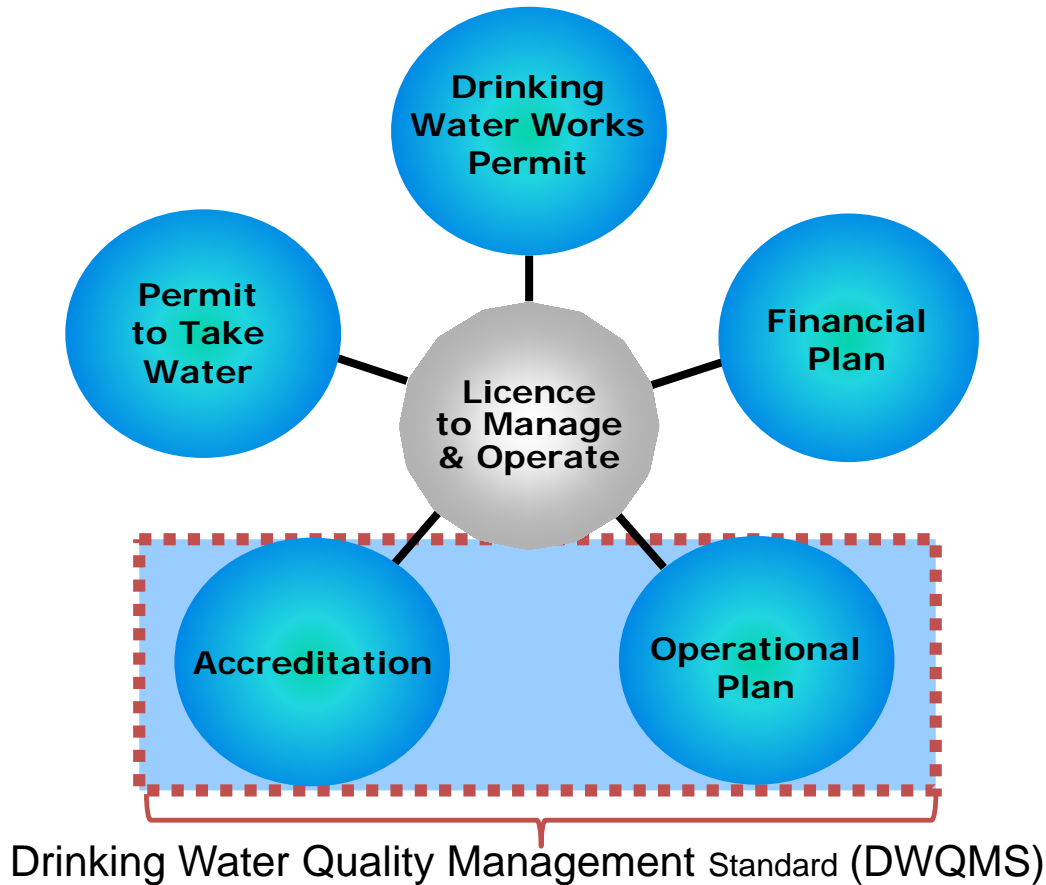
Top Management:

- GM Public Works & Director Hamilton Water

Systems Management Representative (SMR)

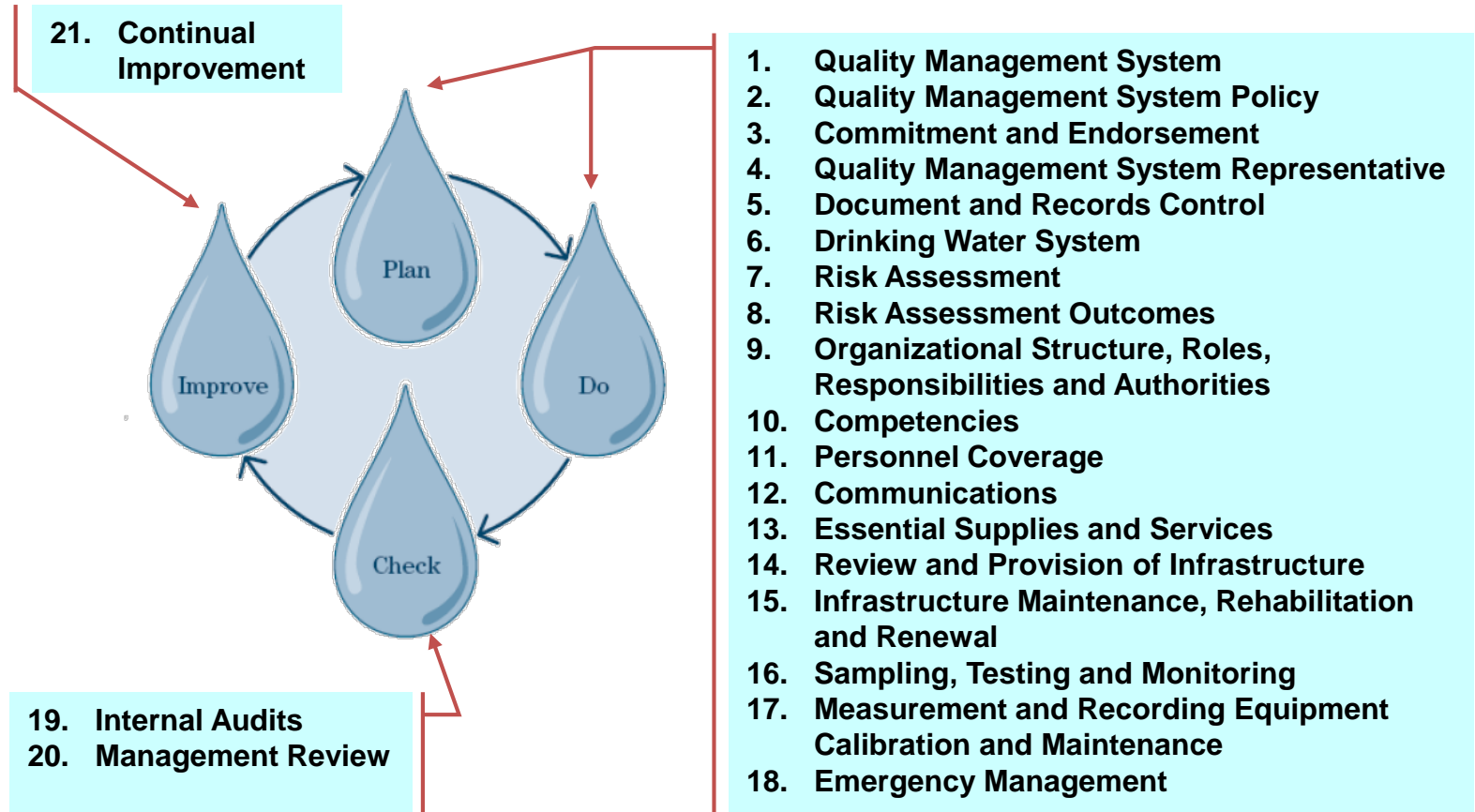
- Regulatory required position to represent the Owner
- Ensures compliance and administers DWQMS

REGULATORY REQUIREMENTS



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DWQMS Standard Elements



There are 21 Elements that form the basis of the DWQMS

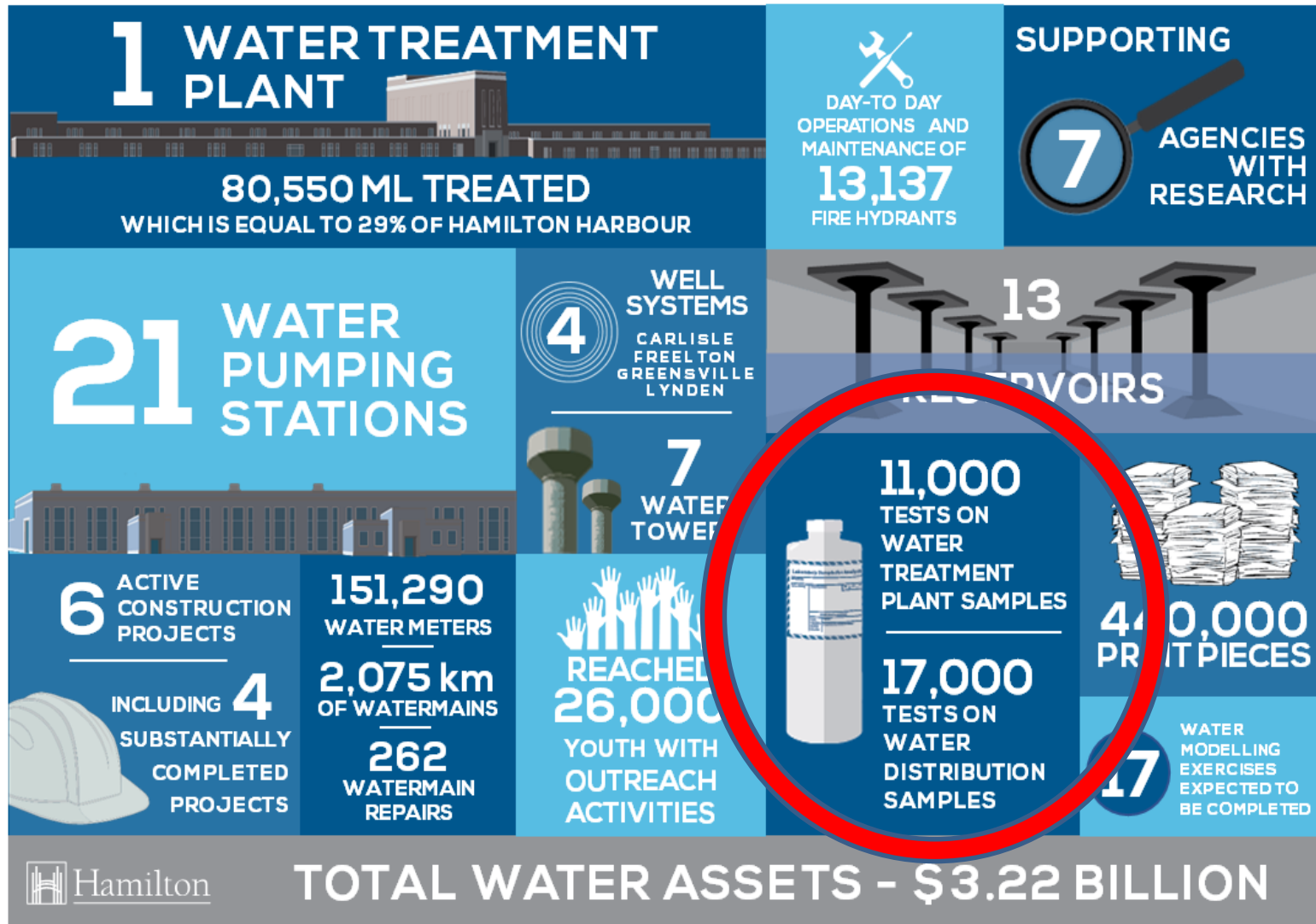
Hamilton Water's Integrated Management System



REGULATORY REQUIREMENTS



REGULATORY REQUIREMENTS

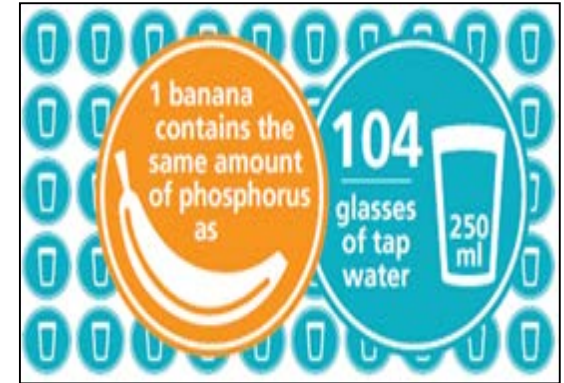


2018 REPORT HIGHLIGHTS

DWS	Adverse Water Quality Incidents (AWQIs)		Findings		MECP Inspection Rating	
			Self-Declared Non-Compliance	MECP Inspection Non-Compliance	2017	2018
	Not Confirmed	Confirmed				
Freelton	0	0	2	0	100%	96.74%
Greenville	0	0	1	0	100%	99.36%
Lynden	1	0	1	0	100%	100%
Woodward	5	2	0	1	Not conducted in 2017	96.32%
Fifty Road	1	0	0	0	100%	100%
Carlisle	0	0	2	1	100%	94.40%

Corrosion Control Program – Woodward DWS

- System wide approach to control lead at the tap
- Extensive outreach and education activities
- Orthophosphate addition started in November 2018
- Post implementation monitoring and reporting ongoing
- Minimal amount of inquiries/complaints from public to-date



Lynden Well Upgrades

- Improved water quality and storage capabilities
- Construction to commence in Spring 2019
- Project completion Q2 2020
- Project is supported by the Clean Water and Wastewater Fund (CWWF)



Risk Assessment

- Conducted every 3 years and reviewed annually
- In 2018 no significant risks were identified that are not already identified in an existing Hamilton Water initiative or project



Infrastructure Review

- Conducted annually
- The 2018 Review found:
 - Our maintenance program is largely reactive and resources are required to implement a more robust preventative maintenance program
 - Life-cycle reinvestment funds are being spent on emergency or short-term work



Financial Plan (Water Infrastructure)

Safe Drinking Water Act - O. Reg. 453/07 Requirements:

- Must address a min 6 year time-frame (ours covers 10 years)
- Must be approved by Council prior to provincial submission
- Must be made freely available to the general public
- Hamilton's latest Financial Plan was approved by Council on July 12, 2018, and submitted to the Province.



Top Management Review

DWQMS Standard Requires a Top Management Review be conducted annually:

- Reviewed suitability, adequacy and effectiveness of our DWQMS
- Attendees included the GM, Public Works; HW Directors; Section Managers; Overall Responsible Operators and Compliance Support Staff



2018 OPPORTUNITIES & CHALLENGES



Regulatory Challenges

- Implementation of a Quality Management System for wastewater will be resource consuming
- Watermain Disinfection Procedure – increased costs
- Health Canada contemplating decreasing of Max Acceptable Limit for Lead from 10ppb to 5ppb.
- Asset Management Plan Regulations
- Operator certification

Built Environment & Infrastructure

- Building an effective preventative maintenance program

Clean & Green

- Climate Change – algae blooms, severe weather, frozen services, watermain breaks



THANK YOU