



# Desbarats Drinking Water System



## 2019 DWQMS - Report to Owner





# Executive Summary



A requirement of the Ontario Drinking Water Quality Management Standard is the implementation of an annual management review of the Drinking Water Quality Management System. The results of this review are to be conveyed to Top Management and the Owner (Township of Johnson).

A Management Review is held once per year by PUC Services to review the overall suitability, adequacy and effectiveness of the QMS. The last meeting was held February 14, 2020 in attendance by the Vice President, Operations & Engineering, Director of Water Operations, the QMS Representative/WTO Manager and WTO Supervisor.



# Top Management reviewed information summarized on Form 20-01:

- a) Incidents of regulatory non-compliance
- b) Incidents of adverse drinking water tests
- c) Deviations from critical control point limits and response actions
- d) Efficacy of the risk assessment process
- e) Results of audits (internal and external)
- f) Results of relevant emergency response testing
- g) Operational performance
- h) Raw water supply and drinking water quality trends
- i) Follow-up action items from previous management reviews
- j) Status of management action items identified between reviews
- k) Changes that could affect the QMS
- l) Summary of consumer feedback
- m) Resources needed to maintain the QMS
- n) Results of the infrastructure review
- o) Operational Plan currency, content and updates
- p) Summary of staff suggestions
- q) New Business – Other issues that impact on the quality management system
- r) Date of Next Meeting





# Incidents of Regulatory Non-Compliance



All regulatory non-compliances, identified during the MECP inspection process, are reported during management review. These results help Management identify regulatory deficiencies in our drinking-water systems.

- The most recent report was received January 20, 2020 for the inspection conducted on October 30, 2019 by Drinking Water Inspector Shelley Baggio. One non-compliance and 4 best practice recommendations were identified.

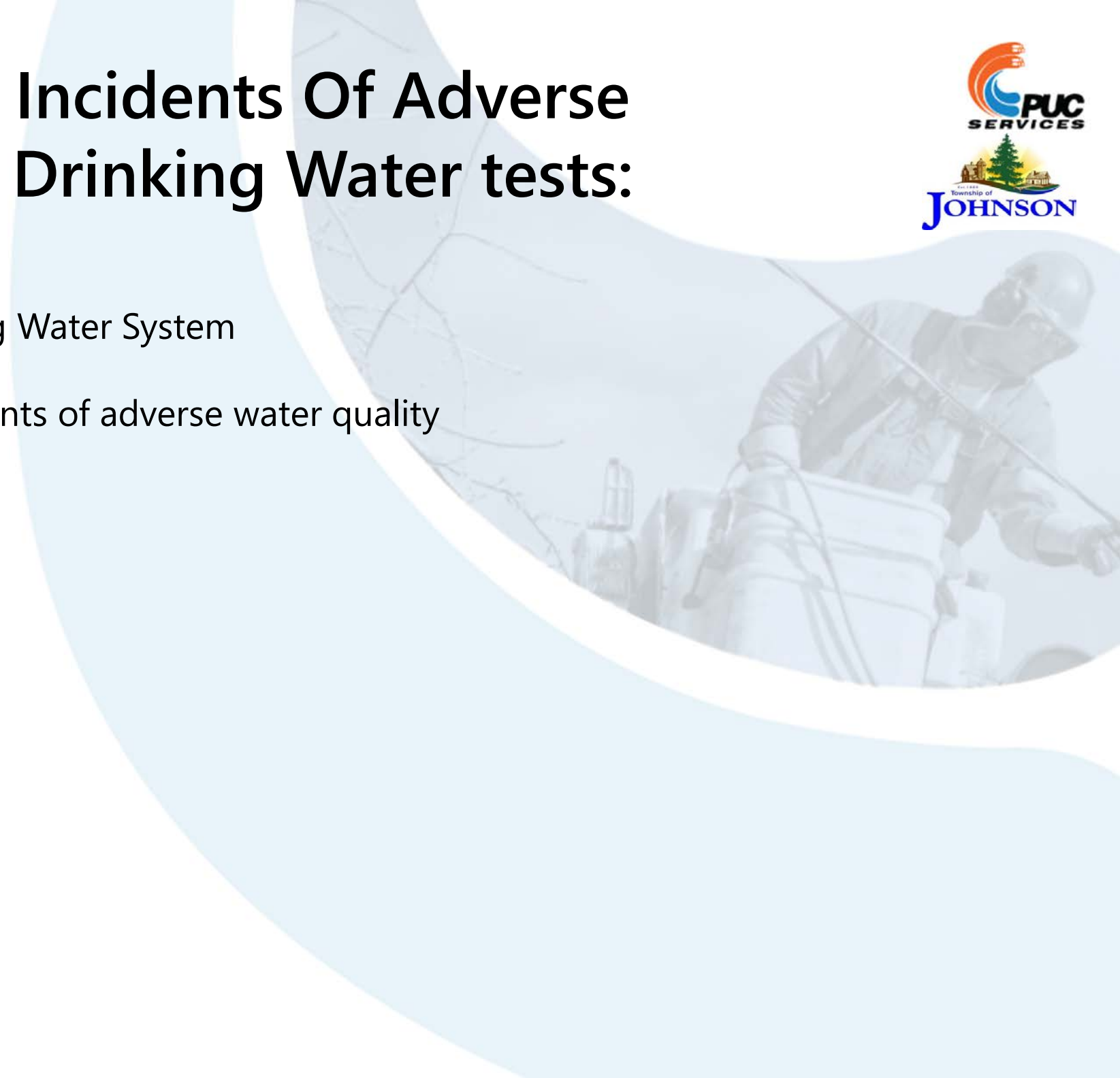
**The DWS received a final inspection rating of 99.32%.**



# Incidents Of Adverse Drinking Water tests:

Desbarats Drinking Water System

**2019** - Zero incidents of adverse water quality



# Deviations from Critical Control Points



Desbarats DWS experienced 2 deviations from Critical Control Point limits:

1. Filter Turbidity exceeding compliance limit of 1.0 NTU (April 13 – 1.50 NTU, April 14 – 1.53 NTU) both events occurred during spring lake turnover and dosing adjustment troubles, compliance maintained – no AWQI events were reported
2. Low Chlorine residual ( $<0.80$  mg/L) – October 16 – An operator was called out to this site before the residual dropped below 1.0 mg/L based on the decline noted through the weekend. The operator found a leak at the pump, repaired dosed cells, and calculated CT – primary disinfection was met.





# Efficacy of the Risk Assessment



The annual Risk Assessment review was conducted on September 19, 2019:

Each identified hazard was reviewed with evaluation for likelihood, consequence, and detectability, as well as control measures to mitigate or provide control of the hazards.

## Hazard ratings lowered due to improvements:

- Loss of Prime – addition of strainers reduced likelihood which in turn reduced the risk

## Follow-up Actions required:

- Algal bloom monitoring program required for new DWWP & License
- Intake inspections – best practice (5-year cycle)
- Clearwell level reading critical for operations
- BFP program or policy
- Pneumatic valves requires compressor (redundant spare always available)



# Results of Audits (Internal & External)



An internal audit was conducted on October 11, 2019 involving Desbarats staff.

**One minor non-conformances was identified.**

1. **Element 13** – Policy states an operator is on site to verify orders. Operators verify products before use but may not be on site for all deliveries. Some items delivered to Township buildings.





# Results of Audits (Internal & External)



An external “systems audit” was held on September 23, 2019 by SAI Global auditor – Rod Seabrook

3 minor non-conformances were identified:

1. **Element 14** – The infrastructure review procedure does not state that there is a consideration of the outcomes of the risk assessment documented under Element 8
2. **Element 15** – The Operational Plan does not document a long-term forecast of major infrastructure maintenance, rehabilitation and renewal activities
3. **Element 21** – The procedure does not fully address the requirements of the Standard regarding continual improvement in that it does not refer to a process to consider applicable best management practices or a process for identifying and implementing preventive actions to eliminate the occurrence of potential non-conformities

# Results of Audits (Internal & External) cont...



An external re-accreditation audit was conducted on November 7, 2019 by SAI Global – Rod Seabrook

2 minor non conformances were identified:

1. **Element 15** – The long-term capital forecast is not current
2. **Element 20** – Deviations from critical control limits were not reported at Management Review

17 OFI's were added to Form 21-03 Preventative Action Log for future consideration





# Results of relevant emergency response testing



Emergency Testing discussion was held with Desbarats staff on October 30, 2019 regarding 2 situations of the loss of supply.

Loss of Supply due to transmission line failure

- Temporary pump into WTP from shoreline

Loss of Supply due to large scale distribution breaks

- Use of SSM lay flat hose





# Operational Performance



The WTP operated well within compliance limits.

**1 non-compliance from the last Ministry of Environment, Conservation & Parks inspection with a Final Inspection rating of 99.32%.**

**Operational difficulties encountered in 2019:**

1. Seasonal raw water changes
2. Chemical pump failure issues



# Raw water supply and drinking quality trends



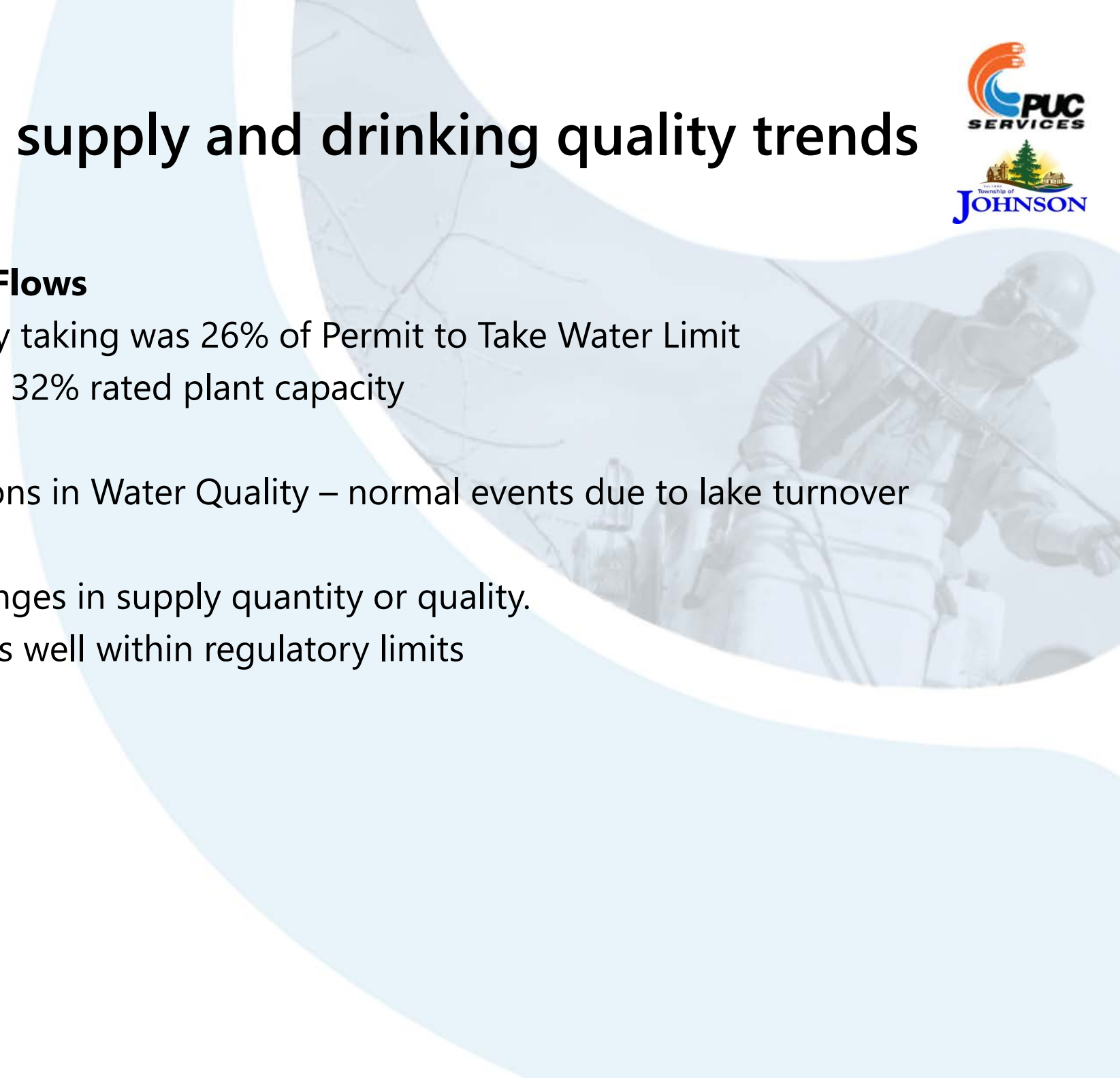
## 2019 Raw Water Flows

- Maximum daily taking was 26% of Permit to Take Water Limit
- Treated max at 32% rated plant capacity

Seasonal fluctuations in Water Quality – normal events due to lake turnover

No significant changes in supply quantity or quality.

All sampling results well within regulatory limits



# Follow-up Action Items from previous Management Reviews



## (I) Follow up action items from previous management reviews

- IT to monitor cellular and Bell line communication

## (J) Action Items identified between reviews

- New council - tour not yet conducted for awareness of the DWS

## (K) Changes affecting QMS

- Backflow Prevention Program

## (N) Results of Infrastructure review

- Filter media replacement ordered & on site (Planned replacement March Break 2020)
- Intake inspection (to be possibly coordinated with other PUC contracts)

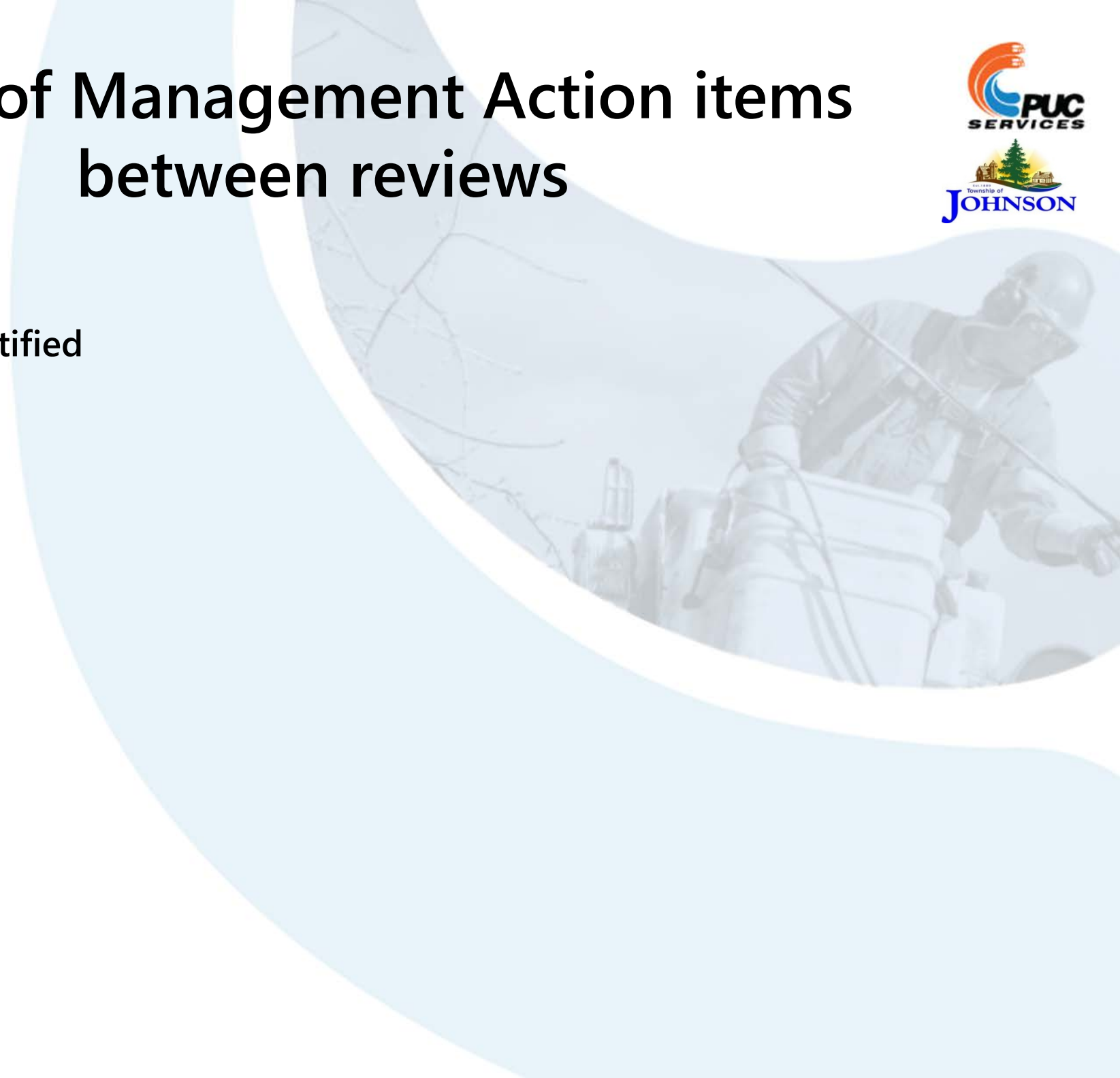




# Status of Management Action items between reviews



- No items identified

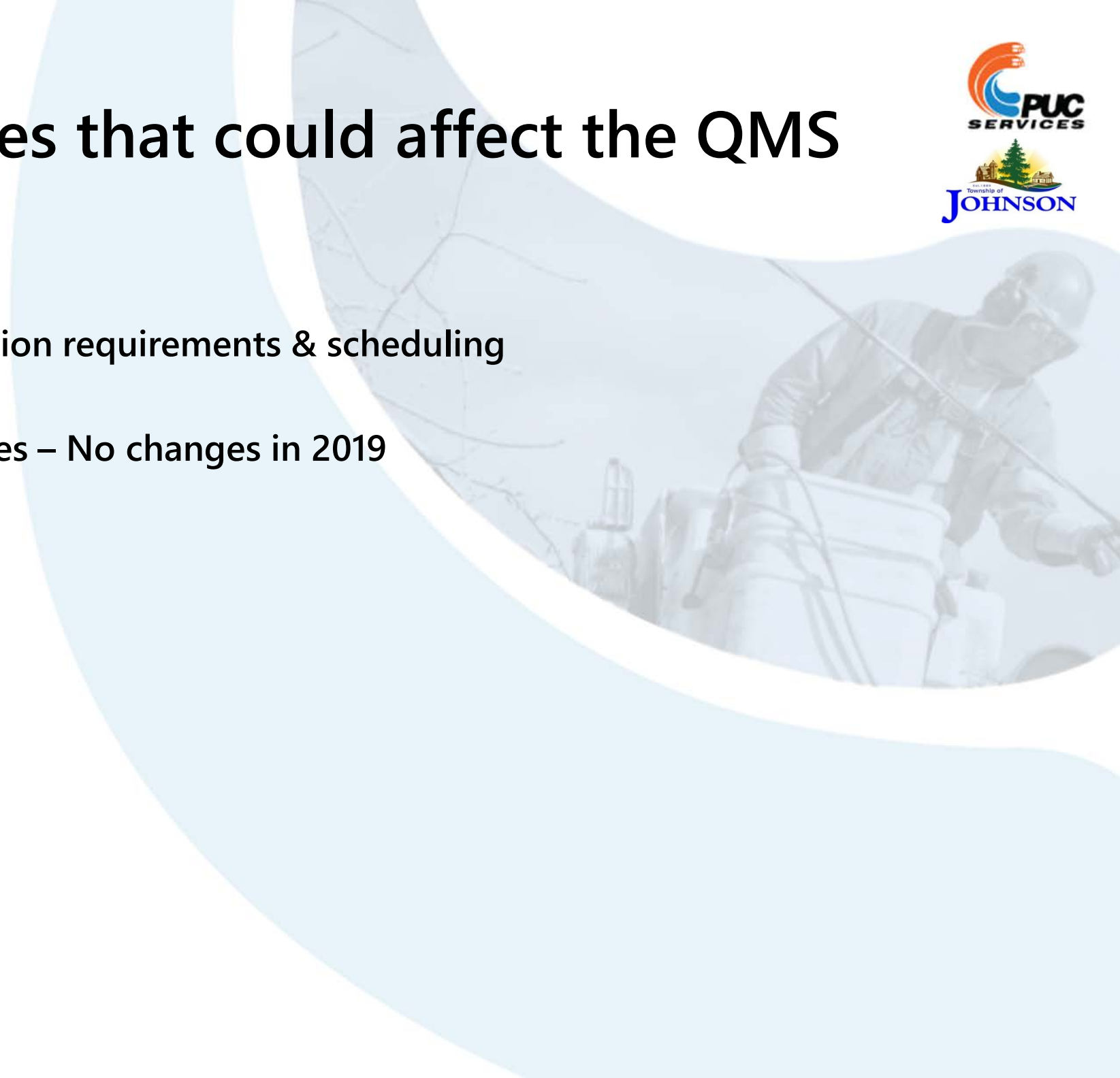




# Changes that could affect the QMS

Auditor or inspection requirements & scheduling

Regulatory changes – No changes in 2019





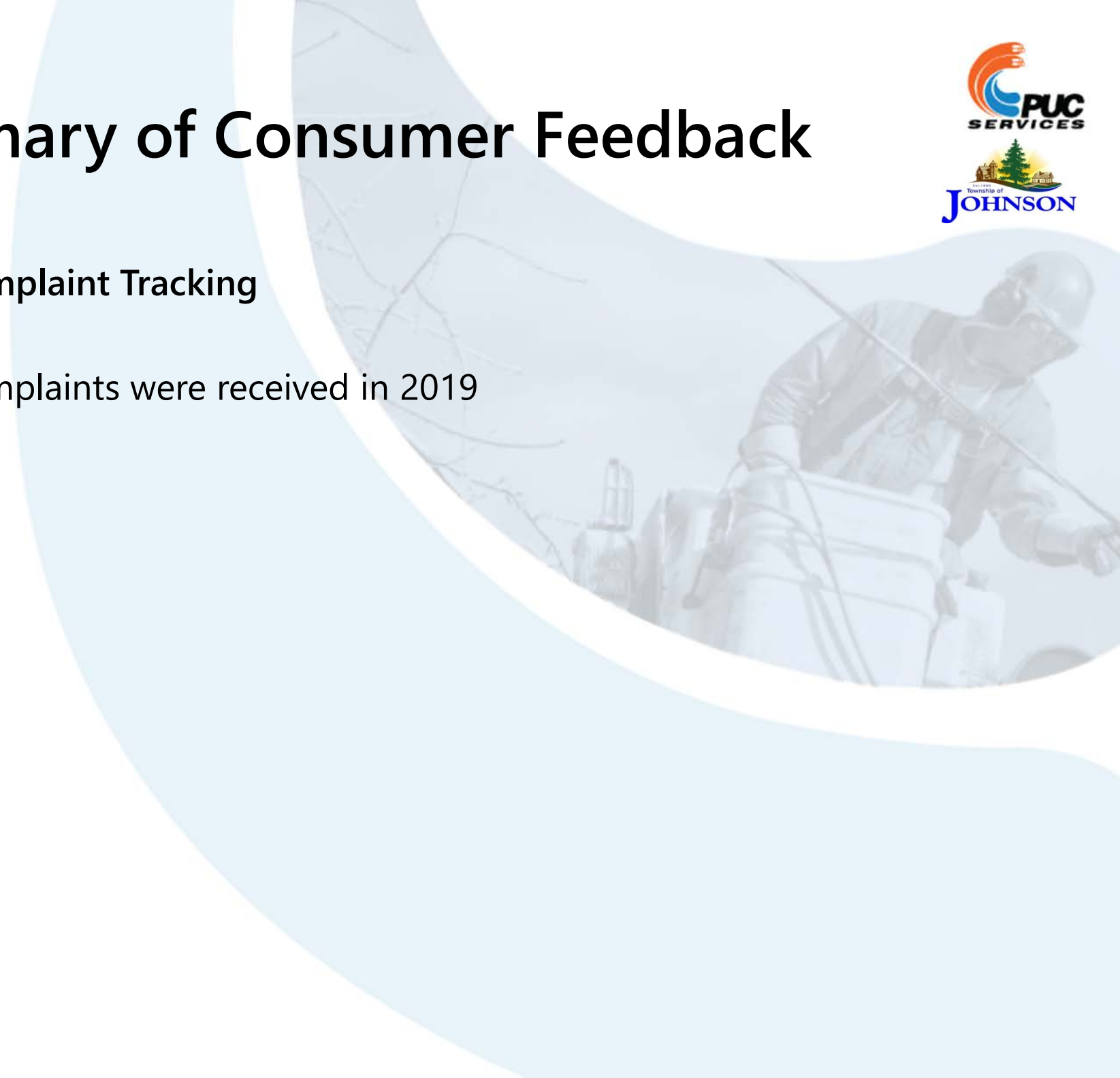


# Summary of Consumer Feedback



## Water Quality Complaint Tracking

Zero customer complaints were received in 2019



# Resources needed to maintain the QMS



## Review of departmental needs to maintain QMS

- Adequate resources are in place





# Results of the Infrastructure review

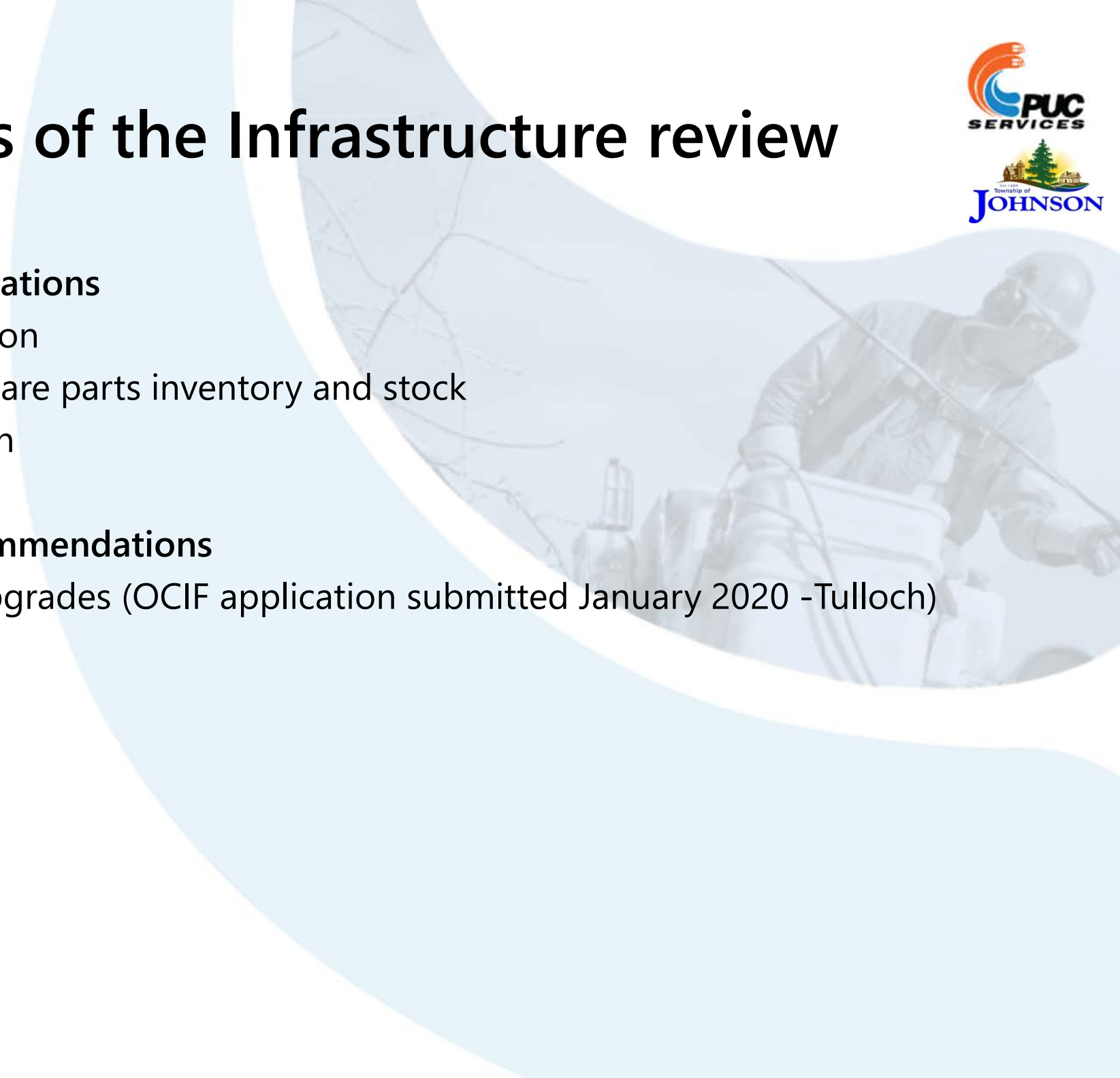


## 2020 Recommendations

- Intake Inspection
- Distribution spare parts inventory and stock
- HLP Installation

## Wastewater Recommendations

- Lagoon site upgrades (OCIF application submitted January 2020 -Tulloch)

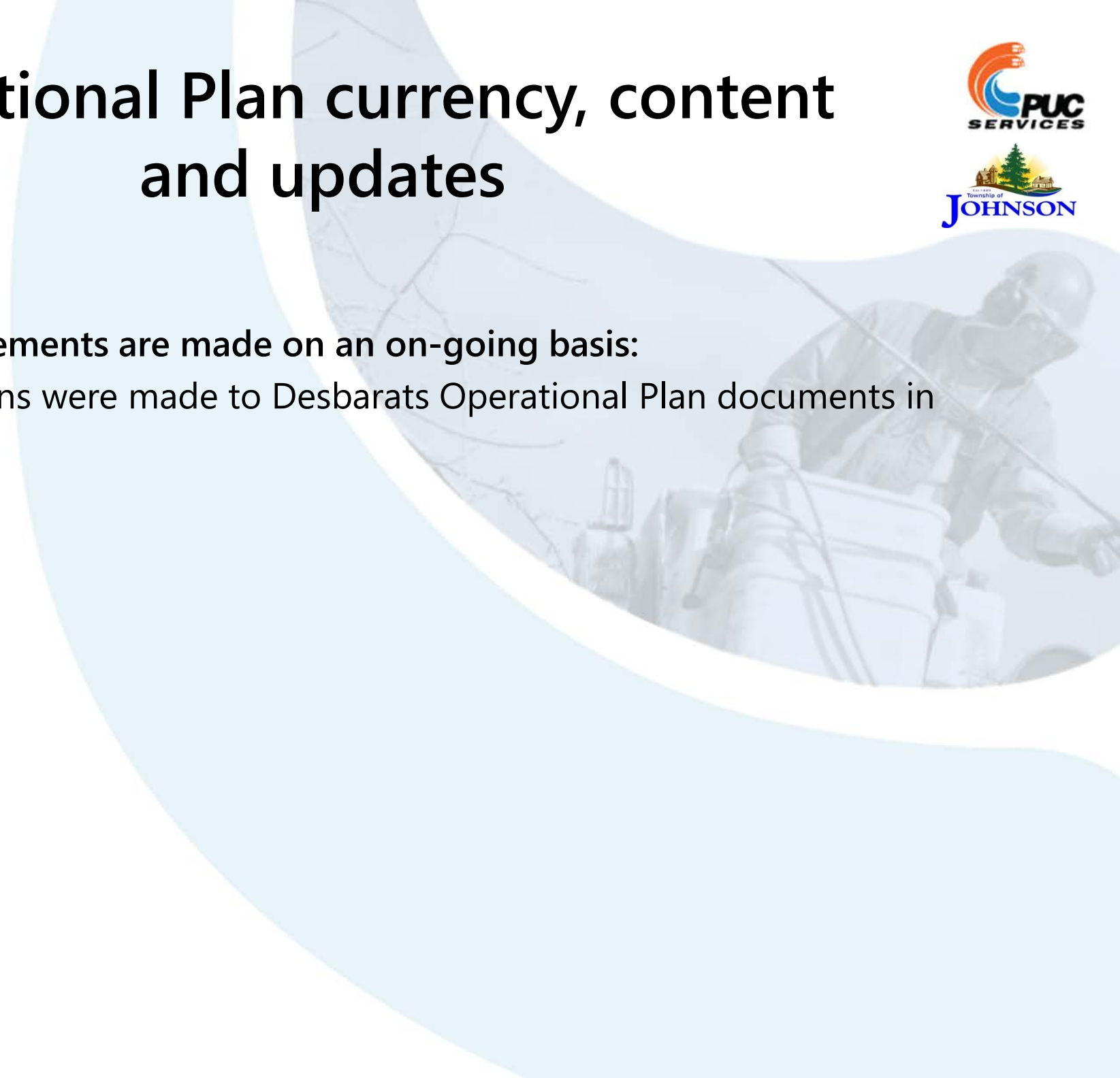


# Operational Plan currency, content and updates



Continual improvements are made on an on-going basis:

- 54 modifications were made to Desbarats Operational Plan documents in 2019





# Summary of Staff Suggestions



Suggestions are made and implemented regularly by staff through DWQMS management system

- Department staff participate in internal and external audits as well as annual reviews to implement improvements to the Operational Plan



# New Business

## - Other Issues that may impact the QMS

n/a

Next meeting – Q4

