



# Annual Activities Review

The Township of North Huron Water  
and Wastewater Operations and  
Maintenance Summary 2017 Presented  
by Veolia Water

# Water Projects/ Improvements/ Maintenance Completed

## Wingham Water

- Pre-contact and POE analyzer replaced at Well 4
- New water main on North St
- New chlorine pump installed at Well 3
- Wingham distribution hydrant flushing
- Hydrant painting
- Maintenance as per computerized maintenance system

## Blyth Water

- Blyth distribution hydrant flushing program
- Hydrant painting
- Preventative maintenance performed as per the computerized maintenance program

# Wastewater Projects/Improvements/ Maintenance Completed

## Wingham Wastewater

- UV system replaced
- Auto-sampler replaced
- Preventative maintenance completed as per the computer generated maintenance system

## Blyth Wastewater

- Clarifier rebuilt
- Blower # 2 rebuilt
- Preventative maintenance completed as per the computer generated maintenance system

# MOECC Inspections 2017

- Wingham Drinking Water System September 14, 2017
  - 100% Inspection rating
- Blyth Drinking Water System January 11, 2017
  - 100% Inspection rating

# Drinking Water Quality Management System

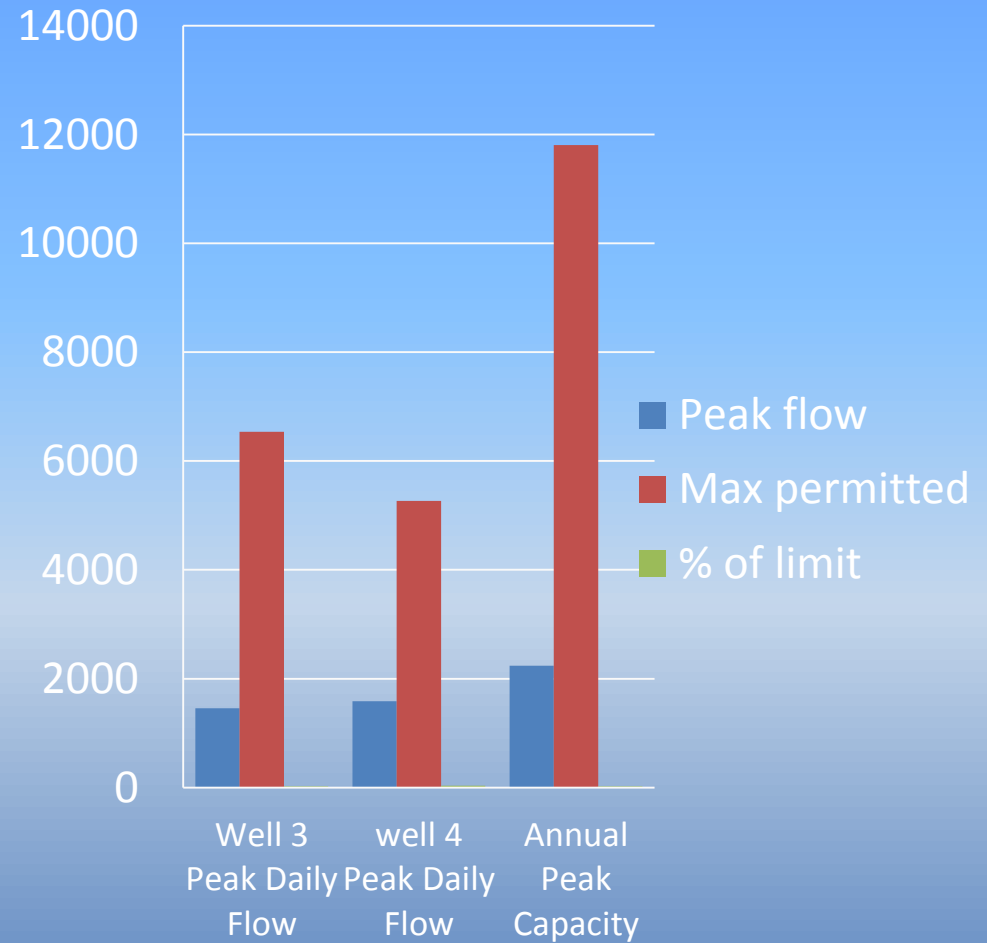
- Many updates made to incorporate Well 5 in Blyth (SOP's, contingency plans, maintenance schedule, sample schedule, system description, emergency phone list, etc.)
- External Audit performed by NSF International October 12, 2017
- 2 Minor Non-conformances Identified and addressed- monitoring the effectiveness of the corrective actions throughout this operating year
- 2018 External Off-site Audit scheduled for August 20<sup>th</sup> 2018

# Water Taking Limits 2017

Wingham Water PTTW: 7003-7GUHVA

- Permit to take water permits a max daily flow :
  - Well 3: 6537m<sup>3</sup>/day
  - Well 4 : 5270m<sup>3</sup>/day
  - Total: 11807m<sup>3</sup>/day
- Peak flows for 2017:
  - Well 3: 1454m<sup>3</sup> (22.2%)
  - Well 4: 1584m<sup>3</sup> (30.1%)
  - Max daily flow: 2241m<sup>3</sup> (19%)

## Wingham Water Taking 2017 Cubic Meters

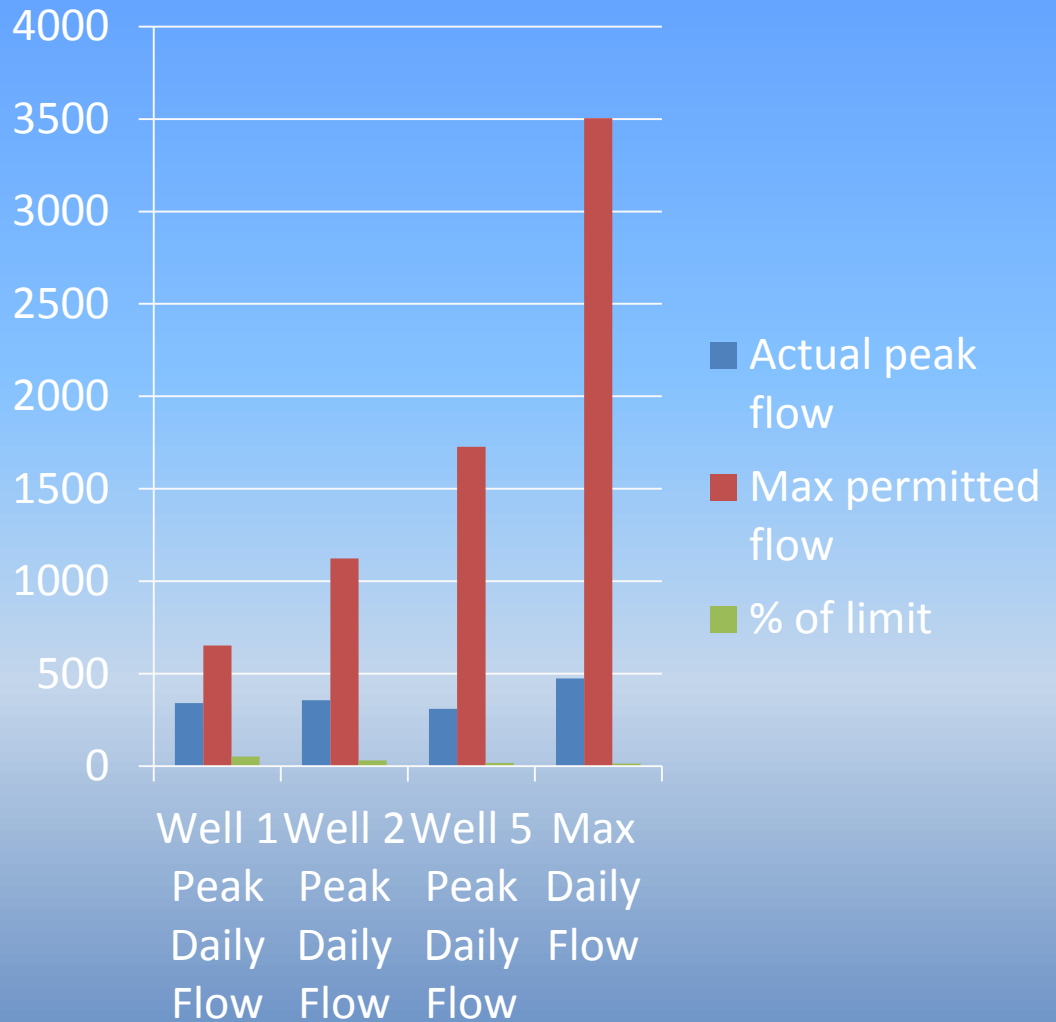


## Water Taking Limits 2017

Blyth Water PTTW: 6057-A3SJAU

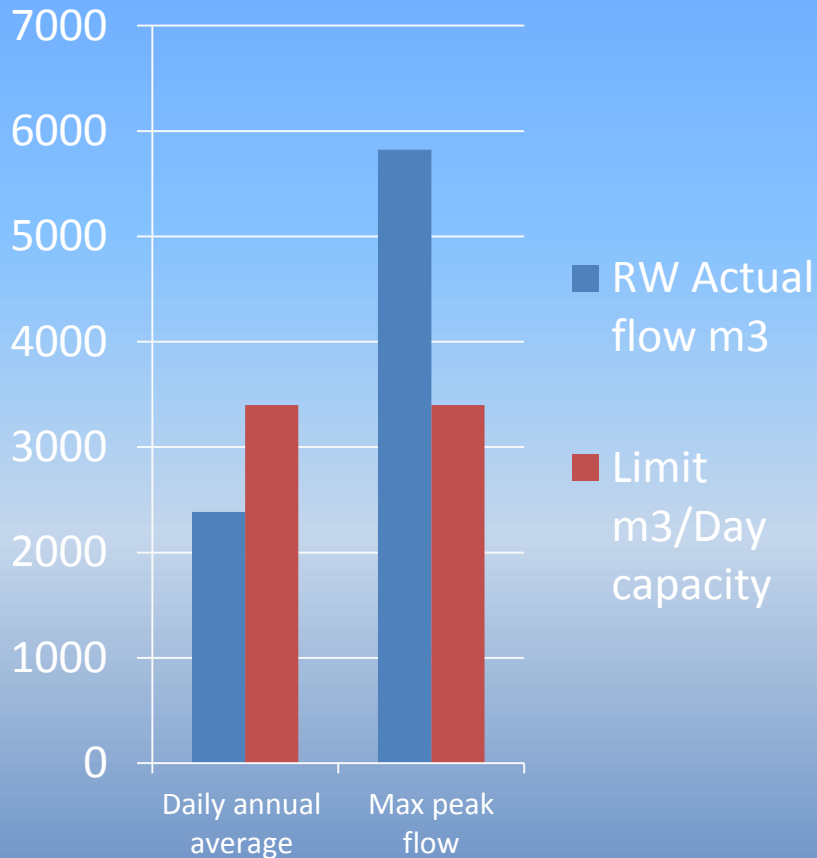
- Permit to take water permits a max daily flow :
  - Well 1: 653m<sup>3</sup>/day
  - Well 2 : 1123m<sup>3</sup>/day
  - Well 5: 1728m<sup>3</sup>/day
  - Total: 3504m<sup>3</sup>/day
- Peak flows for 2017:
  - Well 1: 341m<sup>3</sup> (52.2%)
  - Well 2: 356m<sup>3</sup> (31.7%)
  - Well 5: 310m<sup>3</sup> (17.9%)
  - Max daily flow: 474m<sup>3</sup> (13.5%)

## Blyth Water Taking 2017 Cubic Meters

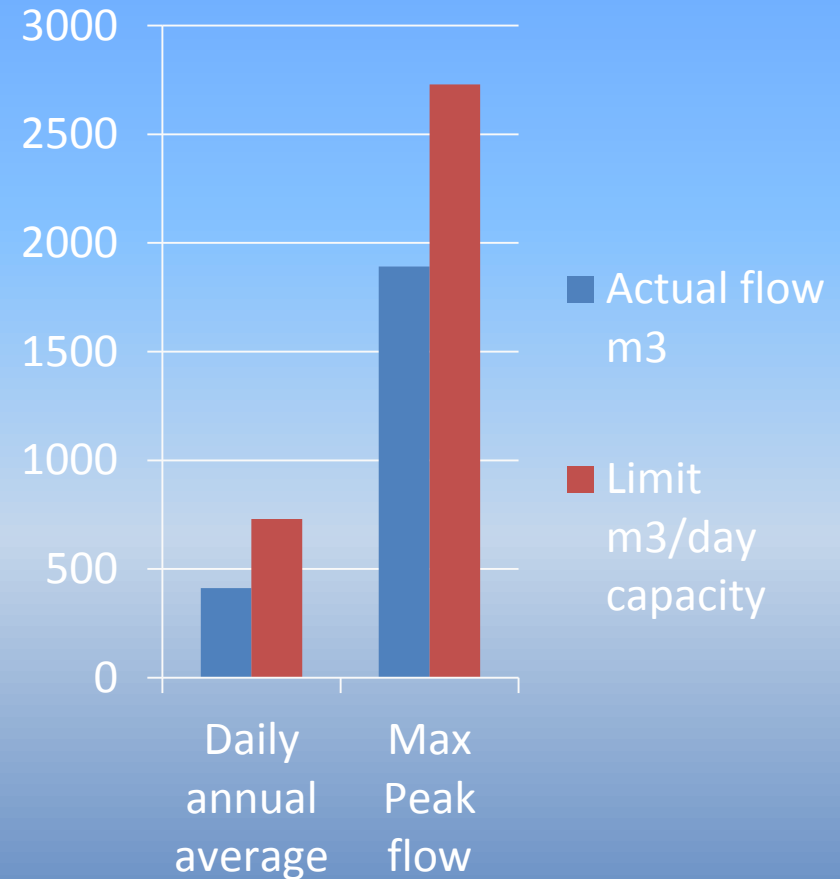


# Wastewater Capacity 2017

## Wingham STP



## Blyth STP





# Wastewater Bypasses 2017

- No bypasses at Wingham STP
- Blyth STP had a total of 7 secondary bypasses and 1 primary bypass in 2017
- A total of 9511m<sup>3</sup> was bypassed from the plant
- The bypass events lasted a total of 218.85 hours
- 4 events were because of heavy precipitation and infiltration
- 2 events in April were due to process upsets when lightening struck the plant and the generator overheated
- 1 event in July and 1 event in November were planned events as a results of maintenance being completed to repair the clarifier

# Water Quality Summary

## Wingham

- Distribution residuals taken in 2017: 454
- Average residual: 0.97mg/L
- Min: 0.29mg/L
- Max: 1.47mg/L
- 365 treated water chlorine residuals taken at both Well 3 and Well 4 all within required limits

## Blyth

- Distribution residuals taken in 2017: 459
- Average residual: 0.91mg/L
- Min: 0.50mg/L
- Max: 1.45mg/L
- 365 treated water chlorine residuals taken from Well 1, 2 & Well 5 all within required limits

# Wastewater Quality Summary

## Wingham

- 97.5% Biological Oxygen Demand removal
- 97.5% Total Suspended Solids removal
- 89.8% Phosphorous removal
- 94.5% Total Kjeldahl Nitrogen removal
- Non compliance With ECA with respect to the quarterly sampling requirements for Hydrogen Sulphide due to missed sample for second quarter, the 3 samples that were taken in the remaining quarters were non-detectable (under the method detection limit).
- The average monthly flows exceeded the capacity of the plant in January and May, when high flows occur at the Wingham STP we can discharge to the lagoons therefore avoiding a bypass.

## Blyth

- 98.4% Biological Oxygen Demand removal
- 98.3% total suspended solids removal
- 91.9% phosphorous removal
- 93.3% Total Kjeldahl Nitrogen removal
- Bypasses occur more often at the Blyth Sewage Plant, because the sand filters can only handle high flows for a short period of time, therefore when there is heavy precipitation or snow melt for an extended period of time a secondary bypass occurs

# Adverse Sample Results

## Wingham

- No Adverse Water Quality Incidents to report in 2017

## Blyth

- There was one Adverse Water Quality Incident for the Blyth Drinking Water System in 2017, one distribution sample collected on August 15, 2017 had a 1cfu/100mL Total Coliform result, resamples were collected upstream and downstream as well as at the source of the adverse on August 17, 2017 and the results were zero.

# Questions





Thank you

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