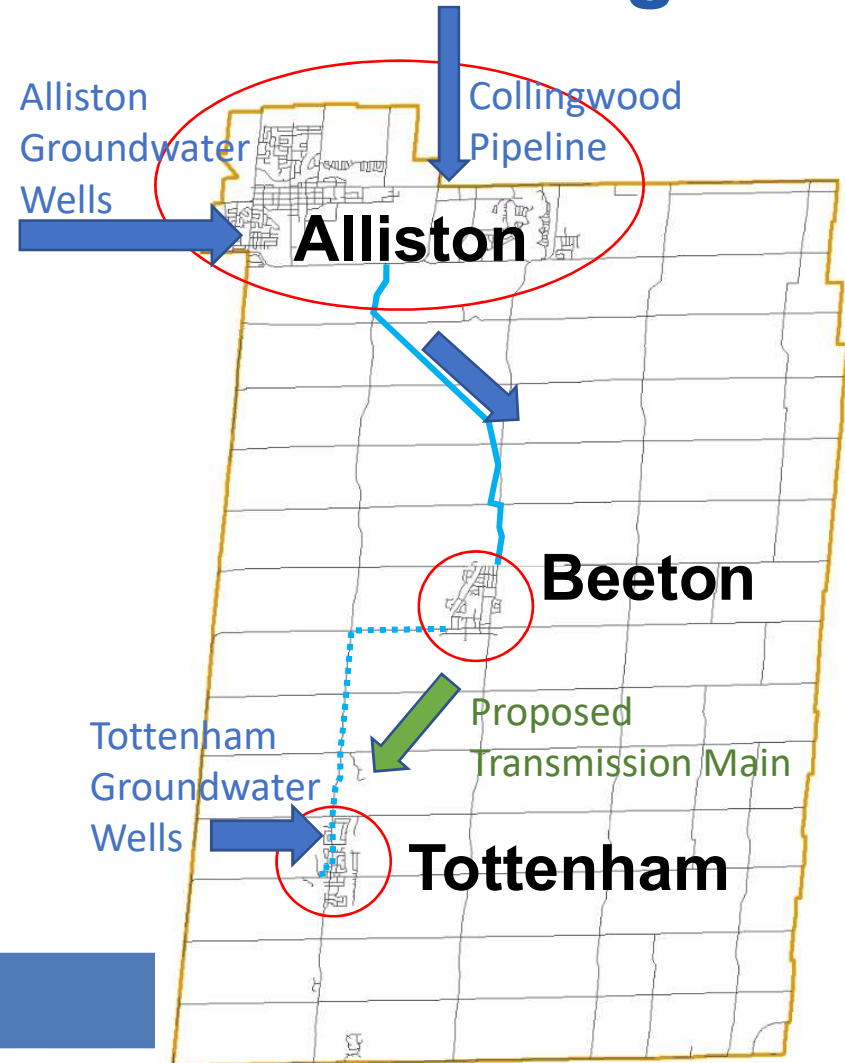


# Tottenham Public Information Meeting

April 2, 2019



Tottenham Community and Fitness Centre



R.V. Anderson Associates Limited  
engineering • environment • infrastructure



# AGENDA

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- 7:00 to 7:30 pm - Presentation
  - Welcome – *Blaine Parkin, Town CAO*
  - Introduction and Meeting Format – *Jim Faught (LURA)*
  - Consultant Presentation – *Ken Campbell (RVA)*
    1. Tottenham Water Initiatives
    2. Background – Water Master Plans
    3. Existing Water Quality and Treatment
    4. Preferred solution
    5. Tottenham Transmission Main
    6. Schedule and Next Steps
- 7:30 to 9:00 pm – Open House

# INTRODUCTION

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- Purpose of this meeting is to communicate the work that has been done since the 2016 Water Master Plan
  - Status of Master Plan work
  - Timing of Tottenham Transmission Main
  - What the Town is currently doing to address THMs
- Meeting Format
  - 7:00 to 7:30 pm - Presentation
  - 7:30 to 9:00 pm – Please hold questions for open discussions at the information boards following the presentation

# 1.1 TOTTENHAM WATER INITIATIVES

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- The Town recognizes that there are challenges with the Tottenham water supply and treatment system, and that the public is concerned about the safety and aesthetics of the Tottenham water supply
- The long term solution is to replace the Tottenham groundwater supply with a connection to the Beeton water system
- The Town is working with Collingwood to secure increased water capacity
- The Tottenham Transmission main is currently under design, and is expected to be online by 2022

## 1.2 TOTTENHAM WATER INITIATIVES

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- The Town is actively managing trihalomethanes (THM) levels through operational practise such as flushing and swabbing
- The Town is investigating short term solutions to further reduce THMs at Mill St Reservoir by adding aeration treatment.
- It is also important that we step back and understand the background of the issues and solutions

## 2.1 BACKGROUND – 2007 MASTER PLAN

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- 2007 Water Master Plan recommended Tottenham Transmission Main to meet increased water demands from projected development
  - Tottenham demands were expected to exceed groundwater well capacity by year 2016
- Very little development occurred from 2007 to 2014
- The timing of the Tottenham Transmission main project was to be aligned with growth. Growth didn't happen, so the project did not proceed.
- Historical and existing water demands continue to be within the current water supply capacity.

## 2.2 BACKGROUND – 2016 MASTER PLAN

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Water Supply, Distribution and Storage Master Plan looked at solutions to address Tottenham water system challenges:

1. **Population Growth** - 51% population increase from 2016 to 2031
2. **Supply Capacity** – Future water demands will exceed existing water supply capacity
3. **Water Quality** - Groundwater wells have challenging water quality
4. **Security** – Improve redundancy and reliability at Mill St Reservoir
5. **Aging infrastructure**

## 3.1 EXISTING WATER QUALITY AND TREATMENT

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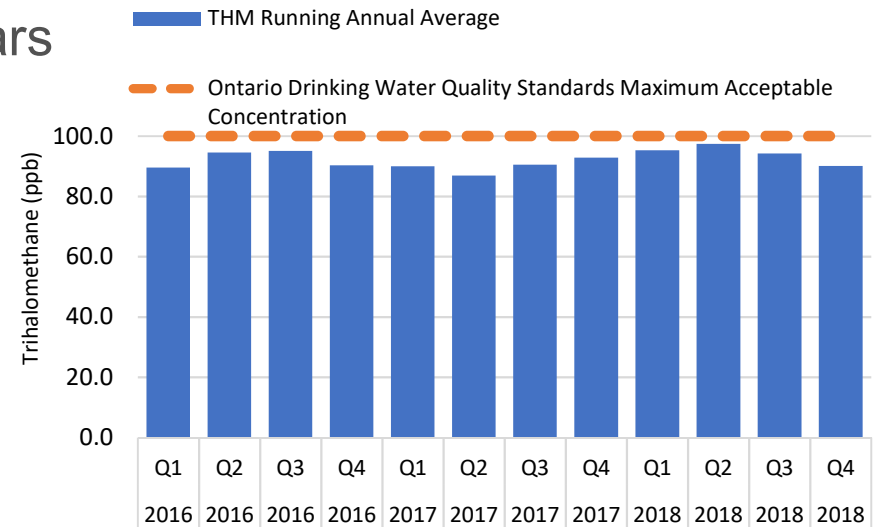
- Tottenham has challenging water quality for traditional groundwater treatment methods
  - Naturally occurring ammonia, methane, organics, iron and bromide
- Chlorine is required for disinfection
  - Reduce bacteria, viruses and other pathogens
  - Reduce bacterial regrowth and biofilm formation in the distribution system
- Ammonia, methane, organics and bromide when combined with chlorine can result in the formation of **Trihalomethanes (THMs)**
- Iron, when oxidized by chlorine will precipitate, leading to **aesthetic water complaints**



## 3.2 EXISTING WATER QUALITY AND TREATMENT

### DRINKING WATER SAFETY - THMs

- 2017/2018 Chief Drinking Water Inspector Annual Report and 2018 Tottenham Annual Report
  - Tottenham meets all THM drinking water regulations
- Town employs additional operational activities to help reduce THMs:
  - Directional flushing program 3 times per year
  - Swabbing program every 2 years
- Investigating additional aeration treatment at the Mill St Reservoir to reduce THM levels before water enters the distribution system



Running Annual Average, calculated as per the MECP Requirements

### 3.3 EXISTING WATER QUALITY AND TREATMENT (CONT'D)

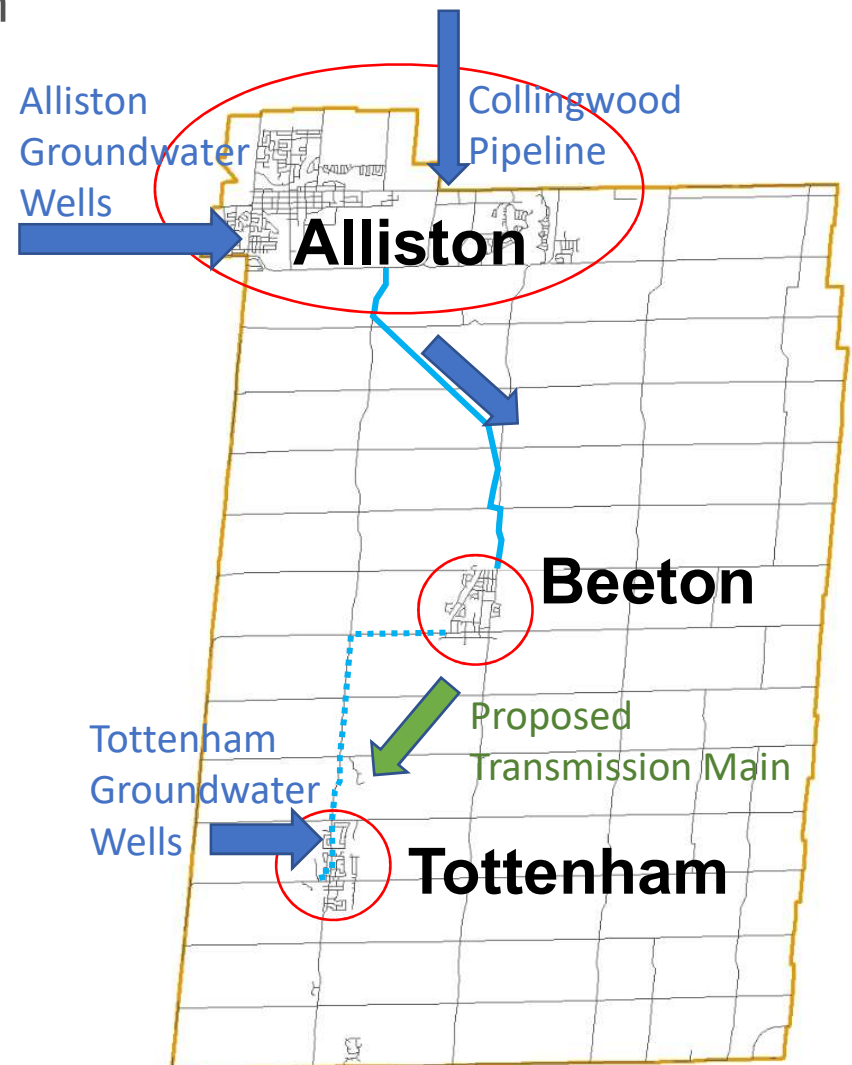
## DRINKING WATER AESTHETICS - IRON

- Naturally occurring iron is present in groundwater from mineral deposits
- Tottenham dissolved iron levels are 0.52 – 0.85 mg/L
  - Ontario Drinking Water Standard Aesthetic Objective is 0.3 mg/L
- Iron oxidized by chlorine required for disinfection results in:
  - Discoloured looking water
  - Reddish brown stains on plumbing fixtures and laundry
  - Can impact water taste



# 5.1 PREFERRED SOLUTION

- Tottenham water supply from Alliston via a new transmission main
- Maintain Tottenham wells as backup
- Expand Mill St Reservoir to increase storage capacity and improve redundancy and reliability
- Oct/16 – Objection to the preferred solution (Part II Order) filed with MECP
- Apr/18 - MECP reviewed the project file and Part II Order request and determined that the project could proceed
- Sept/18 – Council Awarded Route Study and Preliminary Design works



## 6.1 TOTTENHAM TRANSMISSION MAIN

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- Route Selection Study is now being conducted to identify the preferred route of the Tottenham Transmission Main to convey water from Beeton to the Mill St. Reservoir in Tottenham in order to improve the quality of treated water and increase the available water supply capacity to meet future growth in Tottenham.
- Town working with Collingwood to increase the Collingwood Supply Agreement to 33,500 m<sup>3</sup>/day

## 7. SCHEDULE AND NEXT STEPS

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- Aug 2018 - Town issued RFP for Engineering Design Services
- Sep 2018 - Engineering Project Awarded
  - Sep/18 to Apr/19 - Route Selection Study
  - Mid 2019 – Final Design / Approvals for Transmission Main and Reservoir Expansion
  - Early 2020 –Tender Award and Construction
  - 2021 – Construction Ongoing
  - 2022 – Commissioning
- Spring 2019 – investigation into additional improvements at Mill St Reservoir to reduce THMs, such as aeration system
- Ongoing implementation of operational enhancements / improvements

## 7.1 SUMMARY

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- The Town recognizes the current challenges associated with Tottenham water
  - Water meets all provincial standards (THMS)
  - System has challenges in meeting aesthetic objectives
- Town is implementing operational enhancements / improvements
- Transmission main from Beeton is proceeding

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# Open House Presentation

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# Additional Printed Boards



# WELCOME

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## Tottenham Water Public Information Meeting

### PLEASE SIGN IN

April 2, 2019, 7:00 pm to 9:00 pm

Tottenham Community and Fitness Center, 139 Queen St N,  
Tottenham, ON

The Town of New Tecumseth welcomes you to this Public  
Information Meeting

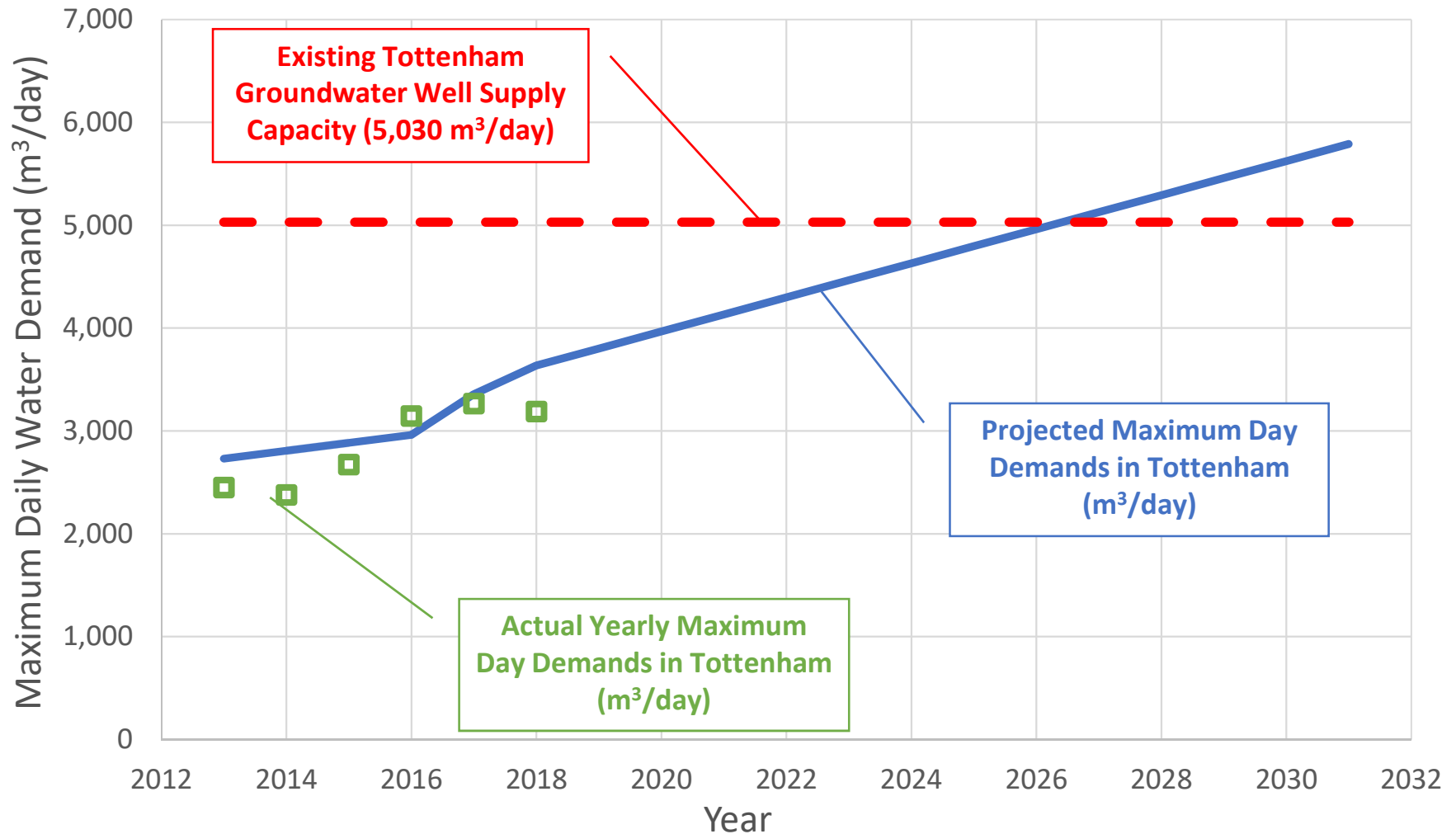
Please review the presentation material on display and provide  
us with any comments you may have. Staff are available to  
answer your questions and record your comments.

Comment sheets are also available.

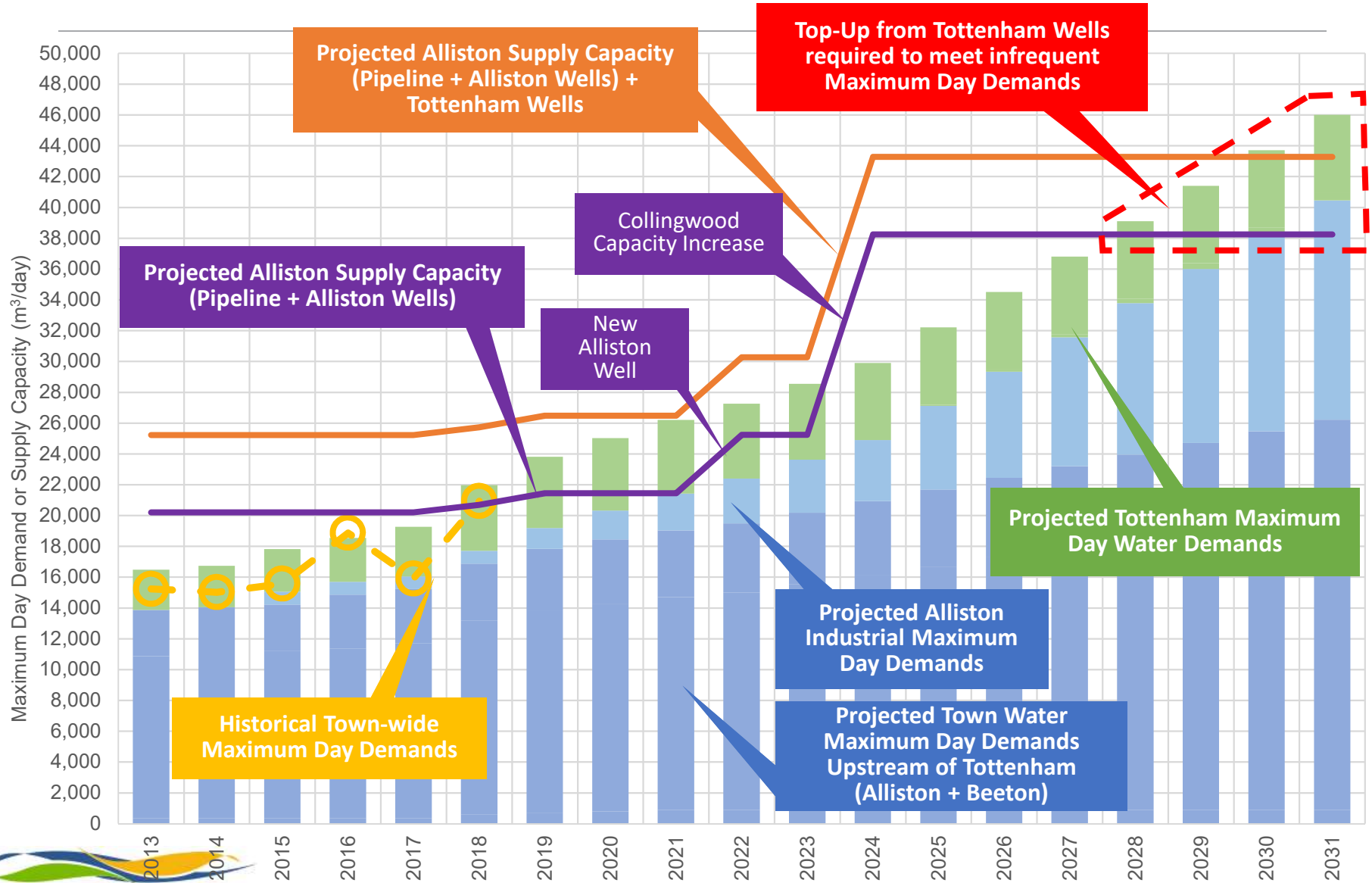
Your comments are important to us.

**Thank you for attending this Public Information Centre**

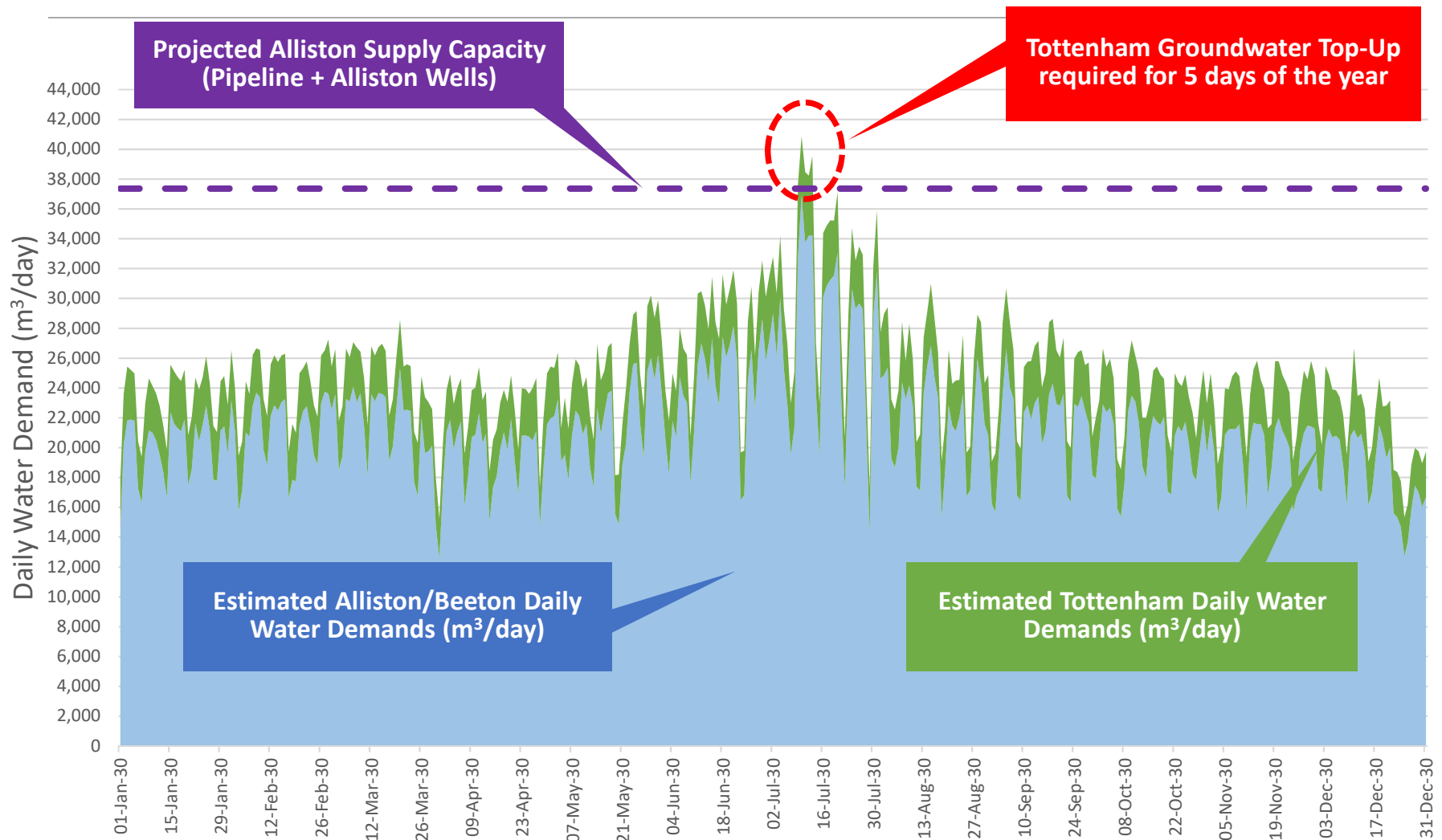
# GROWTH IN WATER DEMANDS



# PROJECTED WATER DEMANDS AND SUPPLY CAPACITY



# PROJECTED DAILY WATER DEMANDS - 2030



Demand pattern based on 2017/2018 year, which had a hot dry summer and experienced high maximum day demands