

Information for Arran-Elderslie Council Meeting on  
March 25, 2024

23-012

Background Information

- Existing Well CPW #1 got contaminated by Iron Bacteria
- Iron Bacteria formed a clogging film over the well screen
- Remedial measures adopted were expensive and in-effective
- There was a reduction in Water Supply from CPW #1
- Available water supply capacity reduction is a serious matter
- Efforts began to replace CPW #1

Environmental Assessment (EA)

- EA initiated in 2023 by publishing information pertaining to problem definition and available Reasonable Alternatives.
- No comments were received from Public

## Additional Supply from Existing Wells CPW #2 & #3

- Hydrogeological analysis indicates a decline in efficiency of CPW #2
- The permitted capacity of CPW #2 is available on short-term basis only
- Rehabilitation of CPW #2 is recommended to restore capability
- A pump test after rehabilitation shall be needed to determine rehabilitation success

## New Well TW2-23/CPW #4

- Construction Programme commenced in 2022
- Pilot hole TW1-22 was constructed and tested and was unsuccessful
- Following unsuccessful results from TW1-22, well TW2-23 was constructed and tested in 2023
- TW2-23 investigations confirms that well can provide acceptable water quality in sufficient quantities
- Hydrogeologist has recommended constructing new CPW #4 at the location of TW2-23 and confirm that it can produce 34 L/sec (450 igpm), which matches CPW #3 supply

## Issues with TW2-23

- The well is capable of providing water in sufficient quantity and acceptable quality, however
- The well possibly interferes with Private Wells at Locations:
  - 1773 Bruce Road 10
  - 1747 Bruce Road 10
  - 1748 Bruce Road 10
  - 1735 Bruce Road 10
  - 1720 Bruce Road 10
  - 1689 Bruce Road 10
  - 015139 Bruce Road 10
- Adoption of TW2-23 (CPW #4) will require addressing Private well interference by:
  - Lowering the pumps in private wells to overcome interference
  - Municipality to provide compensation for pump adjustment

## Next Steps

Public meeting in April 2024 (Date to be determined)

## Arran-Elderslie Water Works Facts

Rated Capacity 5564 m<sup>3</sup>/day(850 igpm)

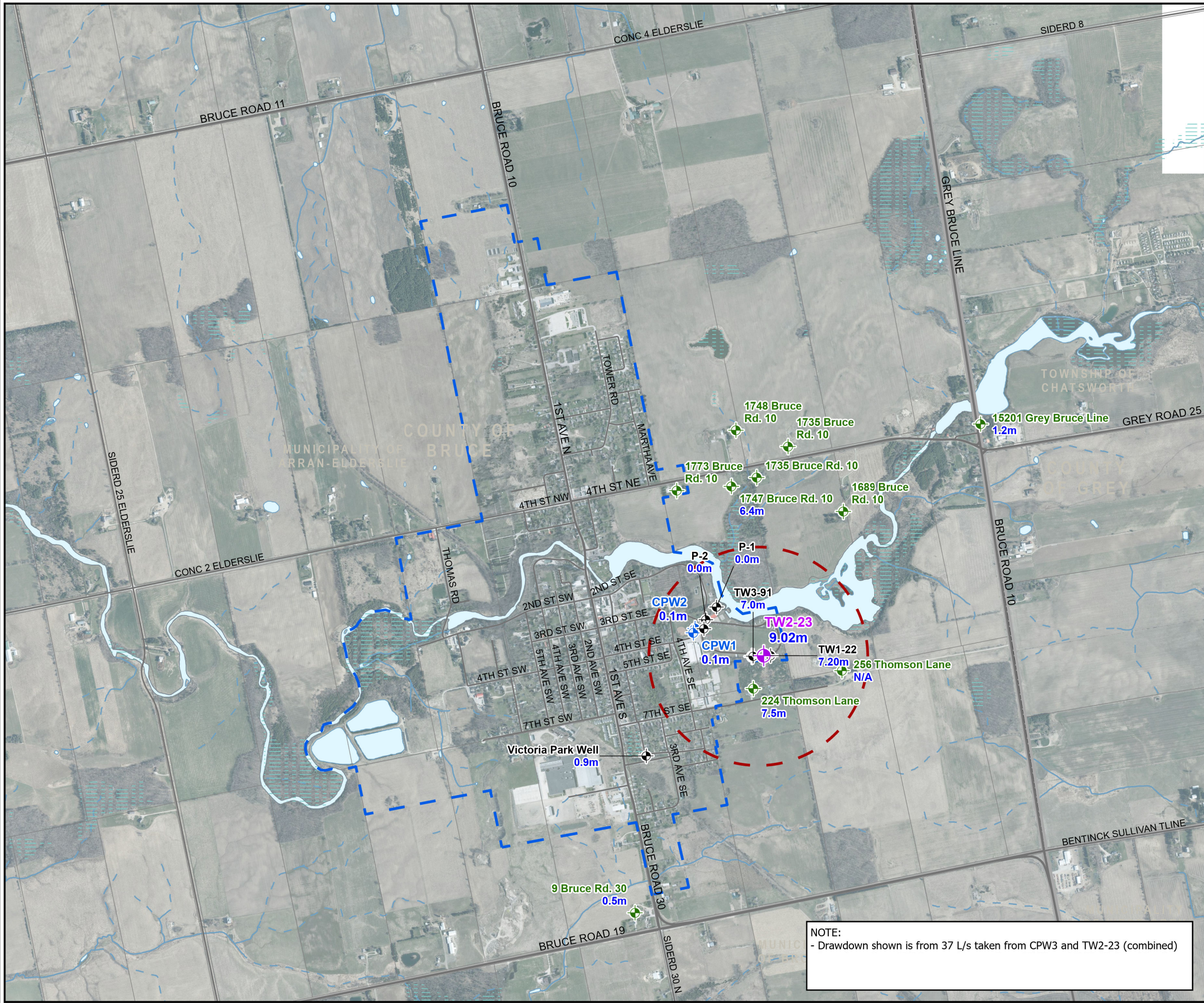
### Permit to Take Water Information:

CPW #1 1800 m<sup>3</sup>/day(275 igpm)

CPW #2 2127 m<sup>3</sup>/day(325 igpm)

CPW #3 2946 m<sup>3</sup>/day(450 igpm)





- Legend**
- Town of Chesley Boundary
  - Test Well Location
  - Existing Supply Well
  - Monitoring Well
  - Private Supply Well
  - 500m Buffer around Test Well
  - Arterial / Collector
  - Local
  - Wetland
  - Waterbody: Permanent
  - Watercourse: Permanent
  - Watercourse: Intermittent
  - Municipal Boundary
  - Municipal Boundary
  - Lot and Concession

**Sources:**

- Ministry of Natural Resources and Forestry, © King's Printer for Ontario.
- Natural Resources Canada, © His Majesty the King in Right of Canada.

Datum: North American 1983 CSRS  
Coord. System: NAD 1983 CSRS UTM Zone 17N

0 100 200 300 400 500 600 700 800 900 1,000 1,000 1,000  
Metres



Client  
**MUNICIPALITY OF ARRAN-ELDERSLIE  
COMMUNITY OF CHESLEY**

Figure Title  
**WATER SUPPLY EA  
PRIVATE WELL LOCATIONS**  
DRAWDOWN DURING PUMPING TEST

Drawn	Checked	Date	Figure No. <b>1</b>
SK	JD	March 2024	
Scale		Project No.	
1:17,500		300057828	

**NOTE:**  
- Drawdown shown is from 37 L/s taken from CPW3 and TW2-23 (combined)