

2023 Annual Drinking Water and Summary Reports

Mitchell Drinking Water System



February 27, 2024

Municipality of West Perth
160 Wellington Street
P.O. Box 609
Mitchell ON N0K 1N0

**ATTENTION: Mr. Greg Borduas
CAO**

**REFERENCE: 2023 Annual Drinking Water and Summary Reports
Mitchell Drinking Water System**

Please find enclosed the 2023 Annual Drinking Water and Summary Reports for the Mitchell Drinking Water System. The reports are prepared in accordance with O. Reg 170/03 of the Safe Drinking Water Act.

Under O. Reg 170/03 the Annual Report must cover the period from January 1 to December 31 in a year and must be prepared by February 28 of the following year. The annual report is to be made available free of charge to anyone who requests a copy.

O. Reg 170/03 also requires the preparation of a Summary Report for the preceding year which must be presented to council no later than March 31.

A copy of the reports will be available at the Municipal Office, the West Perth Public Library and on the Municipality's website.

Any questions or concerns regarding the reports can be directed towards the Environmental Services Department.

Sincerely,



Environmental Services
Municipality of West Perth

Part 1 - ANNUAL REPORT (as required by O. Reg. 170/03, Section 11)

Drinking-Water System Number:	210000577
Drinking-Water System Name:	Mitchell Drinking Water System
Drinking-Water System Owner:	Municipality of West Perth
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2023 to December 31, 2023

Complete if your Category is Large Municipal Residential or Small Municipal Residential	Complete for all other Categories
<p><i>Does your Drinking-Water System serve more than 10,000 people?</i></p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p><i>Number of Designated Facilities served:</i></p> <p style="text-align: right;">-</p>
<p><i>Is your annual report available to the public at no charge on a web site on the Internet?</i></p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p><i>Did you provide a copy of your annual report to all Designated Facilities you serve?</i></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p><i>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</i></p> <p>Municipal Office, West Perth Public Library and Municipality of West Perth Website</p>	<p><i>Number of Interested Authorities you report to:</i></p> <p style="text-align: right;">-</p>
	<p><i>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?</i></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:	
Drinking Water System Name	Drinking Water System Number
N/A	

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?
N/A

Indicate how you notified system users that your annual report is available and is free of charge.		
<input checked="" type="checkbox"/> Public access/notice via the web	<input checked="" type="checkbox"/> Public access/notice via Government Office	<input checked="" type="checkbox"/> Public access/notice via a newspaper
<input checked="" type="checkbox"/> Public access/notice via Public Request	<input checked="" type="checkbox"/> Public access/notice via a Public Library	<input type="checkbox"/> Public access/notice via Other Method

Describe your Drinking Water System

The Mitchell Drinking Water System is a Class II Distribution and Supply sub-system owned and operated by the Municipality of West Perth. The system consists of four drilled groundwater wells.

Well #1, contained within Well-house #1, is 23.2m deep and has a 200mm steel liner inserted into the original 305mm well casing. Raw water from this well is pumped through piping past Well-house #2 where, when required, it is combined with raw water from Well #2 and directed to Distribution Center 123.

Well #2 is 30.2m deep and has a 200mm steel liner inserted into the original 305mm well casing. Raw water is combined with raw water from Well #1 when required and directed to Distribution Center 123.

Well #3 is the main well for Distribution Center 123. The well is 54.7m deep with a 200mm steel liner inserted into the original 305mm well casing. Water from this well is conveyed through piping to Distribution Center 123.

Well #4, located within Distribution Center 4, was drilled to a final depth of 71.6m with a 300mm steel casing. Raw water from this well is treated within Distribution Center 4.

Raw water from all four wells is typically free from any bacteriological activity. The water is hard and naturally has elevated levels of fluoride and sodium. The turbidity of the raw water ranges from 0 to 1 NTU.

Other than the normal increase in usage during the summer months, there are no major operational challenges due to event-driven fluctuations.

Distribution Center 123 is located on the west side of St. George St. The storage reservoir is located adjacent to the eastern limit of the plant. It has a baffled section with a capacity of 155m³ and an unbaffled section with a capacity of 243m³. Raw water from Wells 1, 2 and 3 is conveyed into the plant, after which treatment chemicals are injected; sodium silicate for iron sequestering, and sodium hypochlorite for disinfection. The treated water is directed into the reservoir for contact time and then through the high lift pumps into the distribution system. The disinfection system at Distribution Center 123 has been designed with backup chemical pumps.

Distribution Center 4 is located near the NW corner of Arthur St and Herbert St. The plant includes a disinfection system and a 305m³ baffled, below grade reservoir. Sodium silicate is injected for iron sequestering. Disinfection is achieved using liquid sodium hypochlorite. As in Distribution Center 123, the treated water is directed into the reservoir for contact time and then through the high lift pump into the distribution

system. The disinfection system at Distribution Center 4 has been designed with backup chemical pumps.

The Mitchell Standpipe is located at 97 Arthur Street. It is approximately 46m high and approximately 11m wide. The standpipe control building houses level and pressure monitoring equipment. A diesel-powered fire pump is also connected to the piping system.

The Mitchell Water Tower is located at 125 Clarke Street. It is approximately 41m high and has a capacity of 1,000 m³. The control room houses level, pressure, flow monitoring equipment, and re-chlorination equipment.

The works currently service a population of approximately 4,200. There is approximately 42 km of distribution piping of various diameters and materials contained within the Mitchell Drinking Water System. There are approximately 1950 service connections and 242 fire hydrants. Flow varies across the grid, with lower flow volumes in the most remote and dead-end parts of the grid. Pressure within the distribution system is maintained by the level of the standpipe and water tower. If required, the distribution system pressure can be controlled by the high lift pumps at each Distribution Centre's.

List all water treatment chemicals used over this reporting period

- Liquid Chlorine 12% - NSF certified
- Liquid Chlorine 6% - NSF certified
- Sodium Silicate - NSF certified

Please provide a brief description and a breakdown of monetary expenses incurred

- Distribution Center 123 ICIP Grant Upgrades:
 - o Replaced generator, high lift pumps, MCC, PLC, valves and piping
- Hydrant servicing:
 - o Replaced a damaged hydrant, relocated one hydrant from high traffic area
- New SCADA Server
- Water treatment chemicals

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Corrective Action Date	Corrective Action
11-06-23	Sodium	42mg/L	11-14-23	Resample D123: 39mg/L
11-06-23	Sodium	49mg/L	11-14-23	Resample D4: 48mg/L

Note: Please be advised that HPPH requested the distribution of notices regarding elevated sodium levels to residents.

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period					
	Number of Samples	Range of E. Coli Results (Min-Max)	Range of Total Coliform Results (Min-Max)	Number of HPC Samples	Range of HPC Results (Min-Max)
Raw Well #1	52	0-0	0-0	N/A	N/A
Raw Well #2	52	0-0	0-0	N/A	N/A
Raw Well #3	52	0-0	0-0	N/A	N/A
Raw Well #4	52	0-0	0-0	N/A	N/A
POE #123	46*	0-0	0-0	46	0-3
POE #4	52	0-0	0-0	52	0-4
Distribution	208	0-0	0-0	52	0-24

*Value due to operational maintenance

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report					
	Continuous Monitoring	Number of Grab Samples	Range of Results Continuous (Min-Max)	Range of Results Grab Samples (Min-Max)	Units
Turbidity Raw Well #1	N/A	45*	N/A	0.05-0.20	NTU
Turbidity Raw Well #2	N/A	45*	N/A	0.04-0.21	NTU
Turbidity Raw Well #3	N/A	45*	N/A	0.04-0.21	NTU
Turbidity Raw Well #4	N/A	52	N/A	0.05-0.25	NTU
Chlorine - POE 123	8760	480	0.00* – 1.79	0.97-1.68	mg/L
Chlorine - POE 4	8760	648	0.71 – 1.79	1.05-1.75	mg/L
Distribution	N/A	365	N/A	0.73-1.53	mg/L

*Value due to operational maintenance

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument				
Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
N/A				

Distribution Center 123

Summary of Inorganic parameters tested during this reporting period or the most recent sample results				
Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Apr 12 2021	ND	µg/L	No
Arsenic	Apr 12 2021	3.3	µg/L	No
Barium	Apr 12 2021	68	µg/L	No
Boron	Apr 12 2021	120	µg/L	No
Cadmium	Apr 12 2021	ND	µg/L	No
Chromium	Apr 12 2021	ND	µg/L	No
Lead - see results below				
Mercury	Apr 12 2021	ND	µg/L	No
Selenium	Apr 12 2021	ND	µg/L	No
Sodium	Nov 6 2023	42	mg/L	Yes
Uranium	Apr 12 2021	ND	µg/L	No
Fluoride	Dec 12 2022	1.8	mg/L	Yes
Nitrite	Jan 3 2023	ND	µg/L	No
Nitrate	Jan 3 2023	ND	µg/L	No
Nitrite	Apr 18 2023	ND	µg/L	No
Nitrate	Apr 18 2023	ND	µg/L	No
Nitrite	Jul 4 2023	ND	µg/L	No
Nitrate	Jul 4 2023	ND	µg/L	No
Nitrite	Oct 2 2023	ND	µg/L	No
Nitrate	Oct 2 2023	ND	µg/L	No

ND = Not detected

Distribution Center 4

Summary of Inorganic parameters tested during this reporting period or the most recent sample results				
Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Dec 5 2022	ND	µg/L	No
Arsenic	Dec 5 2022	1.7	µg/L	No
Barium	Dec 5 2022	63	µg/L	No
Boron	Dec 5 2022	110	µg/L	No
Cadmium	Dec 5 2022	ND	µg/L	No
Chromium	Dec 5 2022	ND	µg/L	No
Lead - see results below				
Mercury	Dec 5 2022	ND	µg/L	No
Selenium	Dec 5 2022	ND	µg/L	No
Sodium	Nov 6 2023	49	mg/L	Yes
Uranium	Dec 5 2022	0.29	µg/L	No
Fluoride	Dec 12 2022	1.9	mg/L	Yes
Nitrite	Jan 3 2023	ND	µg/L	No
Nitrate	Jan 3 2023	ND	µg/L	No
Nitrite	Apr 3 2023	ND	µg/L	No
Nitrate	Apr 3 2023	ND	µg/L	No
Nitrite	Jul 4 2023	ND	µg/L	No
Nitrate	Jul 4 2023	ND	µg/L	No
Nitrite	Oct 2 2023	ND	µg/L	No
Nitrate	Oct 2 2023	ND	µg/L	No

ND = Not detected

Lead Testing Results

Summary of Lead Results during this reporting period (Winter: Dec 15 – April 15; Summer: June 15 - Oct 15)				
Sampling Period	Location	Distribution System Lead (ug/L)	Distribution System Alkalinity (mg/L)	Any Adverse Water Quality Incidents?
Mar 6 2023	Hydrant #29	N/A	230	No
Mar 6 2023	Hydrant #101	N/A	230	No
Mar 6 2023	Hydrant #180	N/A	220	No
Jul 17 2023	Hydrant #29	N/A	220	No
Jul 17 2023	Hydrant #101	N/A	210	No
Jul 17 2023	Hydrant #180	N/A	220	No

N/A = Not applicable

Point of Entry 123

Summary of Organic parameters tested during this reporting period or the most recent sample results				
Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Semivolatile Organics				
2,3,4,6- Tetrachlorophenol	Apr 12 2021	ND	µg/L	No
2,4,6-Trichlorophenol	Apr 12 2021	ND	µg/L	No
2,4-D	Apr 12 2021	ND	µg/L	No
2,4-Dichlorophenol	Apr 12 2021	ND	µg/L	No
Alachlor	Apr 12 2021	ND	µg/L	No
Atrazine	Apr 12 2021	ND	µg/L	No
Des-ethyl atrazine	Apr 12 2021	ND	µg/L	No
Atrazine+Desethyl-atrazine	Apr 12 2021	ND	µg/L	No
Bromoxynil	Apr 12 2021	ND	µg/L	No
Carbaryl	Apr 12 2021	ND	µg/L	No
Carbofuran	Apr 12 2021	ND	µg/L	No
Chlorpyrifos(Dursban)	Apr 12 2021	ND	µg/L	No
Diazinon	Apr 12 2021	ND	µg/L	No
Dicamba	Apr 12 2021	ND	µg/L	No
Diclofop-methyl	Apr 12 2021	ND	µg/L	No
Dimethoate	Apr 12 2021	ND	µg/L	No
Malathion	Apr 12 2021	ND	µg/L	No
MCPA	Apr 12 2021	ND	µg/L	No
Metolachlor	Apr 12 2021	ND	µg/L	No
Metribuzin(Sencor)	Apr 12 2021	ND	µg/L	No
Pentachlorophenol	Apr 12 2021	ND	µg/L	No
Phorate	Apr 12 2021	ND	µg/L	No
Picloram	Apr 12 2021	ND	µg/L	No
Prometryne	Apr 12 2021	ND	µg/L	No
Simazine	Apr 12 2021	ND	µg/L	No
Terbufos	Apr 12 2021	ND	µg/L	No
Triallate	Apr 12 2021	ND	µg/L	No
Trifluralin	Apr 12 2021	ND	µg/L	No
Benzo(a)pyrene	Apr 12 2021	ND	µg/L	No
Volatile Organics				
1,1-Dichloroethylene	Apr 12 2021	ND	µg/L	No
1,2-Dichlorobenzene	Apr 12 2021	ND	µg/L	No
1,2-Dichloroethane	Apr 12 2021	ND	µg/L	No
1,4-Dichlorobenzene	Apr 12 2021	ND	µg/L	No
Benzene	Apr 12 2021	ND	µg/L	No
Carbon Tetrachloride	Apr 12 2021	ND	µg/L	No
Chlorobenzene	Apr 12 2021	ND	µg/L	No

Summary of Organic parameters tested during this reporting period or the most recent sample results				
Methylene Chloride (Dichloromethane)	Apr 12 2021	ND	µg/L	No
Ethylbenzene	Apr 12 2021	ND	µg/L	No
Tetrachloroethylene	Apr 12 2021	ND	µg/L	No
Toluene	Apr 12 2021	ND	µg/L	No
Trichloroethylene	Apr 12 2021	ND	µg/L	No
Vinyl Chloride	Apr 12 2021	ND	µg/L	No
o-Xylene	Apr 12 2021	ND	µg/L	No
p+m-Xylene	Apr 12 2021	ND	µg/L	No
Total Xylenes	Apr 12 2021	ND	µg/L	No
PCBs				
Total PCB	Apr 12 2021	ND	µg/L	No
Pesticides & Herbicides				
Glyphosate	Apr 12 2021	ND	µg/L	No
Diquat	Apr 12 2021	ND	µg/L	No
Diuron	Apr 12 2021	ND	µg/L	No
Guthion (Azinphos-methly)	Apr 12 2021	ND	µg/L	No
Paraquat	Apr 12 2021	ND	µg/L	No

ND = Not detected

Point of Entry 4

Summary of Organic parameters tested during this reporting period or the most recent sample results				
Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Semivolatile Organics				
2,3,4,6- Tetrachlorophenol	Dec 5 2022	ND	µg/L	No
2,4,6-Trichlorophenol	Dec 5 2022	ND	µg/L	No
2,4-D	Dec 5 2022	ND	µg/L	No
2,4-Dichlorophenol	Dec 5 2022	ND	µg/L	No
Alachlor	Dec 5 2022	ND	µg/L	No
Atrazine	Dec 5 2022	ND	µg/L	No
Des-ethyl atrazine	Dec 5 2022	ND	µg/L	No
Atrazine+Desethyl-atrazine	Dec 5 2022	ND	µg/L	No
Bromoxynil	Dec 5 2022	ND	µg/L	No
Carbaryl	Dec 5 2022	ND	µg/L	No
Carbofuran	Dec 5 2022	ND	µg/L	No
Chlorpyrifos(Dursban)	Dec 5 2022	ND	µg/L	No
Diazinon	Dec 5 2022	ND	µg/L	No
Dicamba	Dec 5 2022	ND	µg/L	No

Summary of Organic parameters tested during this reporting period or the most recent sample results				
Diclofop-methyl	Dec 5 2022	ND	µg/L	No
Dimethoate	Dec 5 2022	ND	µg/L	No
Malathion	Dec 5 2022	ND	µg/L	No
MCPA	Dec 5 2022	ND	µg/L	No
Metolachlor	Dec 5 2022	ND	µg/L	No
Metribuzin(Sencor)	Dec 5 2022	ND	µg/L	No
Pentachlorophenol	Dec 5 2022	ND	µg/L	No
Phorate	Dec 5 2022	ND	µg/L	No
Picloram	Dec 5 2022	ND	µg/L	No
Prometryne	Dec 5 2022	ND	µg/L	No
Simazine	Dec 5 2022	ND	µg/L	No
Terbufos	Dec 5 2022	ND	µg/L	No
Triallate	Dec 5 2022	ND	µg/L	No
Trifluralin	Dec 5 2022	ND	µg/L	No
Benzo(a)pyrene	Dec 5 2022	ND	µg/L	No
Volatile Organics				
1,1-Dichloroethylene	Dec 5 2022	ND	µg/L	No
1,2-Dichlorobenzene	Dec 5 2022	ND	µg/L	No
1,2-Dichloroethane	Dec 5 2022	ND	µg/L	No
1,4-Dichlorobenzene	Dec 5 2022	ND	µg/L	No
Benzene	Dec 5 2022	ND	µg/L	No
Carbon Tetrachloride	Dec 5 2022	ND	µg/L	No
Chlorobenzene	Dec 5 2022	ND	µg/L	No
Methylene Chloride (Dichloromethane)	Dec 5 2022	ND	µg/L	No
Ethylbenzene	Dec 5 2022	ND	µg/L	No
Tetrachloroethylene	Dec 5 2022	ND	µg/L	No
Toluene	Dec 5 2022	ND	µg/L	No
Trichloroethylene	Dec 5 2022	ND	µg/L	No
Vinyl Chloride	Dec 5 2022	ND	µg/L	No
o-Xylene	Dec 5 2022	ND	µg/L	No
p+m-Xylene	Dec 5 2022	ND	µg/L	No
Total Xylenes	Dec 5 2022	ND	µg/L	No
PCBs				
Total PCB	Dec 5 2022	ND	µg/L	No
Pesticides & Herbicides				
Glyphosate	Dec 5 2022	ND	µg/L	No
Diquat	Dec 5 2022	ND	µg/L	No
Diuron	Dec 5 2022	ND	µg/L	No
Guthion (Azinphos-methyl)	Dec 5 2022	ND	µg/L	No
Paraquat	Dec 5 2022	ND	µg/L	No

ND = Not detected

Distribution System

Summary of Organic parameters tested during this reporting period or the most recent sample results				
Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
THM (Running Annual Average)	Q1-Q4 2023	11.42	µg/L	No
HAA (Running Annual Average)	Q1-Q4 2023	19.75	µg/L	No

Point of Entry 123

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.				
Parameter	Sample Date	Result Value	Unit of Measure	ODWS Standard
Fluoride	Dec 12 2022	1.8	mg/L	1.5

Point of Entry 4

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.				
Parameter	Sample Date	Result Value	Unit of Measure	ODWS Standard
Fluoride	Dec 12 2022	1.9	mg/L	1.5

Note: Fluoride is naturally occurring in Mitchell's Drinking Water Supply. For more information on fluoride visit Huron Perth Public Health Unit at:

<https://www.hpph.ca/en/health-matters/water.aspx>

Part 2 – SUMMARY REPORT (as required by O. Reg. 170/03, Schedule 22)

Non-Compliance with Legislations, Regulations, Approvals & Orders

Findings from the 2023 Mitchell Drinking Water System Inspection Report by The Ministry of Environment, Conservation and Parks:

- Finding: The owner had not ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.
Action: Once notified of the requirement for completion of the Director's Notification Form, the Owner / Operating Authority immediately prepared and submitted the required form to the Ministry of Environment, Conservation and Parks.

- Finding: The owner/operating authority was not in compliance with the requirement to prepare Form 3 and associated documents as required by their Drinking Water Works Permit during the inspection period.
Action: The Owner / Operating Authority shall forthwith complete an assessment of the noise emissions associated with the new generator including a comparison to the NPC-300 publication as prescribed by Drinking Water Works Permit #060-201, Issue #5, Schedule B, Section 5.5.3 and 5.7. This assessment shall be forwarded to Neville Rising of the MECP upon its completion and include any potential recommendations required to comply with the NPC-300 publication, as applicable.

Well exceedances are listed as follows:

May 1, 2023 – Well # 4

The flow recorded exceeded the flow rate specified in the MDWL and PTTW. Duration 2 min. No corrective action needed, caused by a program update. The maximum daily volume did not exceed the PTTW limit.

May 1, 2023 – Well # 4

The flow recorded exceeded the flow rate specified in the MDWL and PTTW. Duration 1 min. No corrective action needed, caused by a program update. The maximum daily volume did not exceed the PTTW limit.

May 1, 2023 – Well # 4

The recorded flow exceeded the flow rate specified in the MDWL and PTTW. Duration 1 min. No corrective action needed, caused by a program update. The maximum daily volume did not exceed the PTTW limit.

May 5, 2023 - Well #3

The recorded flow exceeded the flow rate specified in the MDWL and PTTW. Duration 1 min. No corrective action needed, caused by program update. No water flowed that day. The maximum daily volume did not exceed the PTTW limit.

May 15, 2023 - Well #1

The recorded flow exceeded the flow rate specified in the MDWL and PTTW. Duration 3 min. No corrective action needed, caused by program update. The maximum daily volume did not exceed the PTTW limit.

May 18, 2023 - Well #1

The recorded flow exceeded the flow rate specified in the MDWL and PTTW. Duration 5 min. Scaling was off, corrective action, adjust scaling. The maximum daily volume did not exceed the PTTW limit.

May 23, 2023 - Well #1

The recorded flow exceeded the flow rate specified in the MDWL and PTTW. Duration 60 min. Scaling was off, corrective action, adjust scaling. The maximum daily volume did not exceed the PTTW limit.

May 24, 2023 – Well #1

The recorded flow exceeded the flow rate specified in the MDWL and PTTW. Duration 1 min. Scaling was off, corrective action, adjust scaling. The maximum daily volume did not exceed the PTTW limit.

May 24, 2023 – Well #1

The recorded flow exceeded the flow rate specified in the MDWL and PTTW. Duration 1 min. Scaling was off, corrective action, adjust scaling. The maximum daily volume did not exceed the PTTW limit.

May 31, 2023 - Well #2

The well pump exceeded the flow rate specified in the MDWL and PTTW. Duration 1 min. No corrective action needed, exceedance due to all three wells running and Well 1 shut off causing a decrease in pressure. The maximum daily volume did not exceed the PTTW limit.

August 21, 2023 - Well #1

The well pump exceeded the flow rate specified in the MDWL and PTTW. Duration 1 min. No corrective action needed, well was shutting off when an Operator turned in on manually to sample causing the flow to increase. The maximum daily volume did not exceed the PTTW limit.

September 7, 2023 – Well #2

The well pump exceeded the flow rate specified in the MDWL and PTTW. Duration 1 min. No corrective action needed, exceedance due to all three wells running and Well 1 shut off causing a decrease in pressure. The maximum daily volume did not exceed the PTTW limit.

October 3, 2023 – Well #2

The well pump exceeded the flow rate specified in the MDWL and PTTW. Duration 1 min. No corrective action needed, exceedance due to all three wells running and Well 1 shut off causing a decrease in pressure. The maximum daily volume did not exceed the PTTW limit.

Well #1

System Capability Assessment			
Comparison of Flow Rates (raw flow; m ³):			
Month	Average Daily Flow	Maximum Daily Flow	Max Flow (L/min)
January	237.06	1197.01	1726.20
February	207.36	1197.99	1707.60
March	0.97	10.98	1688.40
April	89.20	727.02	1744.80
May	69.27	1244.85	1694.40
June	358.79	1163.85	1755.60
July	272.24	1152.73	1755.00
August	278.39	1445.76	1895.40
September	317.47	1128.74	1754.40
October	322.13	1418.82	1785.60
November	600.16	1274.54	1695.00
December	553.64	1159.27	1744.80
Maximum	N/A	1445.76	1895.40
Average	275.56	1093.46	1745.60
PTTW (m³)	2617.92	2617.92	1818
% of PTTW Max.	-	55%	104%
% of PTTW Avg.	11%	42%	96%

Well #2

System Capability Assessment			
Comparison of Flow Rates (raw flow; m ³):			
Month	Average Daily Flow	Maximum Daily Flow	Max Flow (L/min)
January	333.93	1944.80	2060.40
February	376.07	1896.67	2090.40
March	2.68	28.61	2122.80
April	196.52	1898.02	2092.80
May	348.18	1716.77	2127.00
June	478.57	1969.51	1959.60
July	465.83	1740.74	1908.60
August	405.56	1723.82	2088.00
September	394.91	1799.05	2122.20
October	498.38	1619.23	2111.40
November	7.69	41.98	1912.80
December	4.20	24.44	2122.20
Maximum	N/A	1969.51	2127.00
Average	292.71	1366.97	2059.85
PTTW (m³)	3024	3024	2100
% of PTTW Max.	-	65%	101%
% of PTTW Avg.	10%	45%	98%

Well #3

System Capability Assessment			
Comparison of Flow Rates (raw flow; m ³):			
Month	Average Daily Flow	Maximum Daily Flow	Max Flow (L/min)
January	879.48	2477.99	2757.00
February	865.29	2424.02	2757.60
March	1.81	16.01	2714.40
April	401.43	2460.00	2851.80
May	534.88	1985.24	2770.80
June	1106.73	2259.01	2748.00
July	963.78	2044.18	2748.00
August	903.90	2293.04	2752.20
September	952.43	2061.83	2754.00
October	1045.10	2249.13	2764.80
November	961.00	2017.15	2745.60
December	883.12	1833.27	2752.80
Maximum	N/A	2477.99	2851.80
Average	791.58	2010.07	2759.75
PTTW (m³)	3900	3900	2880
% of PTTW Max.	-	64%	99%
% of PTTW Avg.	20%	52%	96%

Well #4

System Capability Assessment			
Comparison of Flow Rates (raw flow; m ³):			
Month	Average Daily Flow	Maximum Daily Flow	Max Flow (L/min)
January	1615.58	3862.00	4325.93
February	1640.50	4908.00	4331.77
March	3320.55	5389.00	5517.28
April	2499.00	4324.00	4821.35
May	2320.26	4202.00	4379.40
June	1942.90	4017.00	5537.54
July	1670.16	3266.00	4372.28
August	1638.68	3078.00	4360.27
September	1490.50	3117.00	4295.38
October	1526.32	3217.00	4360.26
November	1558.53	3119.00	4372.80*
December	1466.81	3216.00	4342.44
Maximum	N/A	5389.00	5537.54
Average	1890.82	3809.58	4584.73
PTTW (m³)	8640	8640	6000
% of PTTW Max.	-	62%	92%
% of PTTW Avg.	22%	44%	76%

*Highest recorded value in November was 8736.66, which occurred during the flowmeter verification and is not a true reading.

Wells - Combined

System Capability Assessment		
Comparison of Flow Rates (total treated flow; m ³ /d):		
Month	Average Flow	Maximum Daily Flow
January	3066.06	4833.79
February	3089.21	4908.00
March	3326.01	5389.00
April	3186.15	4795.04
May	3272.60	4507.07
June	3886.98	5815.87
July	3372.02	4860.28
August	3226.53	4672.62
September	3155.32	4905.25
October	3391.94	5376.34
November	3127.38	4018.69
December	2907.77	3951.00
Average	3250.66	N/A
Maximum	N/A	5815.87
System Capacity (m³)	8640	8640
Capacity (%)	38%	67%

Distribution Center 123

System Capability Assessment		
Comparison of Flow Rates (total treated flow; m ³ /d):		
Month	Average Flow	Maximum Daily Flow
January	1323.29	3776.65
February	1300.27	3563.32
March	0	0
April	589.04	3723.17
May	811.34	3221.82
June	1712.61	3322.35
July	1477.00	3003.72
August	1389.38	3729.60
September	1471.97	3048.50
October	1622.28	3650.90
November	1555.29	3287.20
December	1428.50	2987.40
Average	1223.41	N/A
Maximum	N/A	3776.65
System Capacity (m³)	8640	8640
Capacity (%)	14%	44%

Distribution Center 4

System Capability Assessment		
Comparison of Flow Rates (total treated flow; m ³ /d):		
Month	Average Flow	Maximum Daily Flow
January	1570.65	3738.00
February	1594.79	4789.00
March	3222.71	5234.00
April	2427.37	4195.00
May	2252.19	4061.00
June	1886.80	3929.00
July	1624.71	3170.00
August	1593.00	2990.00
September	1449.47	3041.00
October	1483.87	3145.00
November	1514.73	3057.00
December	1425.45	3150.00
Average	1837.15	N/A
Maximum	N/A	5234.00
System Capacity (m³)	8640	8640
Capacity (%)	21%	61%

Distribution Centers - Combined

System Capability Assessment		
Comparison of Flow Rates (total treated flow; m ³ /d):		
Month	Average Flow	Maximum Daily Flow
January	2893.93	3981.50
February	2895.06	4789.00
March	3222.71	5234.00
April	3016.40	4242.58
May	3063.54	4061.00
June	3599.41	5501.77
July	3101.71	4164.70
August	2982.38	4022.90
September	2921.44	4050.20
October	3106.15	4988.30
November	3070.02	3993.20
December	2853.95	3875.10
Average	3060.56	N/A
Maximum	N/A	5501.77
System Capacity (m³)	8640	8640
Capacity (%)	35%	64%