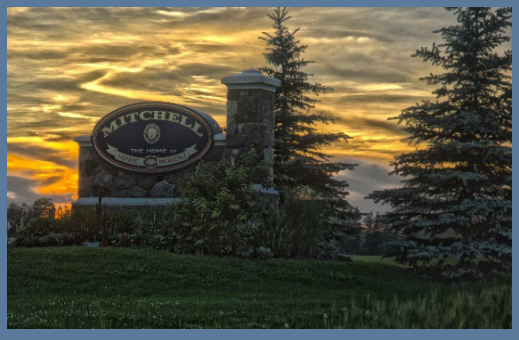
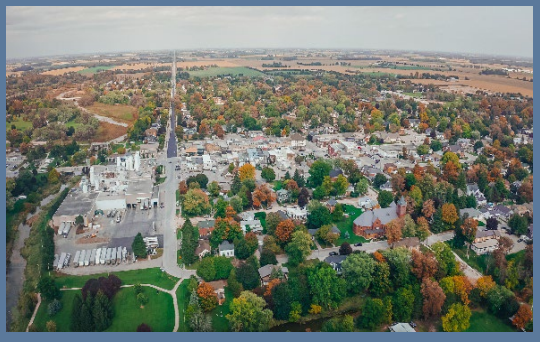
MUNICIPALITY OF
West Perth

2022 Annual Drinking Water Report and Summary Report

Mitchell Drinking Water System





February 27, 2023

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

ATTENTION: **Mr. Jeff Brick**
CAO

REFERENCE: **Municipality of West Perth**
2022 Annual Drinking Water Report and Summary Report

Please find enclosed the 2022 Annual Drinking Water Report and Summary Report 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, 2022 to December 31, 2022

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

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.		
☑ Public access/notice via the web	☑ Public access/notice via Government Office	☐ Public access/notice via a newspaper
☑ Public access/notice via Public Request	☑ Public access/notice via a Public Library	☐ 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. 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 155m^3 and an unbaffled section with a capacity of 243m^3. 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 305m^3 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 4,000. 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 238 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 pump at Distribution Center 4.

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

- Georgina St Reconstruction
- Reservoirs at both Distribution Centers were cleaned and inspected
- ROV inspection of Water Tower
- New generator at D123
- Replaced Well 4 VFD
- Distribution Center 123 ICIP Grant

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
N/A				

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	53	0-0	0-0	N/A	N/A
POE #123	59	0-0	0-0	56	0-4
POE #4	55	0-0	0-0	55	0-7
Distribution	208	0-0	0-0	52	0-15

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	52	N/A	0.04-0.18	NTU
Turbidity Raw Well #2	N/A	52	N/A	0.04-0.17	NTU
Turbidity Raw Well #3	N/A	52	N/A	0.06-0.17	NTU
Turbidity Raw Well #4	N/A	52	N/A	0.04-0.16	NTU
Chlorine - POE 123	8760	549	0.00* – 2.61	1.06-1.67	mg/L
Chlorine - POE 4	8760	573	0.00* – 1.84	0.75-1.68	mg/L
Distribution	N/A	365	N/A	0.60-1.38	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	Apr 12 2021	40	mg/L	Yes
Uranium	Apr 12 2021	ND	µg/L	No
Fluoride	Dec 12 2022	1.8	mg/L	Yes
Nitrite	Jan 4 2022	ND	µg/L	No
Nitrate	Jan 4 2022	ND	µg/L	No
Nitrite	Apr 4 2022	ND	µg/L	No
Nitrate	Apr 4 2022	ND	µg/L	No
Nitrite	Jul 4 2022	ND	µg/L	No
Nitrate	Jul 4 2022	ND	µg/L	No
Nitrite	Oct 3 2022	ND	µg/L	No
Nitrate	Oct 3 2022	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	Dec 5 2022	47	mg/L	Yes
Uranium	Dec 5 2022	0.29	µg/L	No
Fluoride	Dec 12 2022	1.9	mg/L	Yes
Nitrite	Jan 4 2022	ND	µg/L	No
Nitrate	Jan 4 2022	ND	µg/L	No
Nitrite	Apr 4 2022	ND	µg/L	No
Nitrate	Apr 4 2022	ND	µg/L	No
Nitrite	Jul 4 2022	ND	µg/L	No
Nitrate	Jul 4 2022	ND	µg/L	No
Nitrite	Oct 3 2022	ND	µg/L	No
Nitrate	Oct 3 2022	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 21 2022	Hydrant #225	N/A	230	No
Mar 21 2022	Hydrant #122	N/A	220	No
Mar 21 2022	Hydrant #180	N/A	230	No
Jul 4 2022	Hydrant #29	N/A	210	No
Jul 4 2022	Hydrant #122	N/A	220	No
Jul 4 2022	Hydrant #180	N/A	210	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- Tetrachlorphenol	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- Tetrachlorphenol	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

Summary of Organic parameters tested during this reporting period or the most recent sample results				
Dicamba	Dec 5 2022	ND	µg/L	No
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-methly)	Dec 5 2022	ND	µg/L	No

Summary of Organic parameters tested during this reporting period or the most recent sample results				
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 2022	16.71	µg/L	No
HAA (Running Annual Average)	Q1-Q4 2022	18.00	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 2022 Mitchell Drinking Water System Inspection Report by The Ministry of Environment, Conservation and Parks:

- Finding:
  Up-to-date plans for the drinking water system were not kept in a place, or made available in such a manner, that they could be readily viewed by all persons responsible for all or part of the operation of the drinking water system in accordance with the DWWP and MDWL issued under Part V of the SDWA. MDWL #060-101, Issue #4 requires that any alteration to any treatment subsystem be incorporated into process flow diagrams, process and instrumentation diagrams, and record drawings and diagrams within one year of the substantial completion of the alteration. Current process and instrumentation diagrams for both Distribution Centers reference obsolete equipment.
  Action:
  Updated drawings were forwarded to the Ministry of Environment, Conservation and Parks on December 23, 2022.

- Finding:
  The owner did not have up-to-date documents describing the distribution components as required. Drinking Water Works Permit #060-201 – Issue #5, Schedule B, Section 3.5 stipulates that additions, modifications, replacements and extensions to the distribution system must be updated within the Watermain Inventory / Distribution map within 12 months of the aforementioned changes. The current watermain inventory map of the distribution system is dated 2020. The Owner/Operating Authority have indicated that there have been modifications / additional watermain installed over the last year which are not yet represented on this map.
  Action:
  The updated map was forwarded to the Ministry of Environment, Conservation and Parks on December 23, 2022.

Raw water flow rates exceed the maximum L/min flow rates as below:

January 14, 2022 – Well # 3
The well pump exceeded the flow rate specified in the Permit to Take Water. The maximum daily volume did not exceed the PTTW limit.

March 1, 2022 - Well #2
The well pump exceeded the flow rate specified in the Permit to Take Water. The maximum daily volume did not exceed the PTTW limit.

June 8, 2022 - Well #2
The well pump exceeded the flow rate specified in the Permit to Take Water. The maximum daily volume did not exceed the PTTW limit.

June 22, 2022 - Well #2
The well pump exceeded the flow rate specified in the Permit to Take Water. The maximum daily volume did not exceed the PTTW limit.

July 20, 2022 - Well #2
The well pump exceeded the flow rate specified in the Permit to Take Water. The maximum daily volume did not exceed the PTTW limit.

November 9, 2022 – Well #4
The well pump exceeded the flow rate specified in the Permit to Take Water. The maximum daily volume did not exceed the PTTW limit.

November 15, 2022 - Well #2
The well pump exceeded the flow rate specified in the Permit to Take Water. The maximum daily volume did not exceed the PTTW limit.

December 29, 2022 - Well #2
The well pump exceeded the flow rate specified in the Permit to Take Water. 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	218.13	1136.99	1756.20
February	248.75	1256.00	1737.00
March	226.74	1085.00	1768.20
April	199.83	1191.01	1765.20
May	201.48	1316.01	1722.00
June	256.33	1361.00	1749.60
July	255.39	1291.01	1714.20
August	213.97	1277.00	1762.80
September	243.37	1257.01	1775.40
October	324.45	1327.00	1759.20
November	274.67	1259.01	1767.00
December	246.68	1232.00	1713.60
Maximum	N/A	**1361.00**	**1775.40**
Average	**242.48**	**1249.09**	**1749.20**
PTTW (m^3)	N/A	**2617.92**	**1818**
% of PTTW Max.	-	**52%**	**98%**
% of PTTW Avg.	-	**48%**	**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	380.73	1883.69	1975.20
February	334.80	1982.49	2004.60
March	323.83	1998.11	2103.00
April	382.63	1885.03	2098.20
May	487.46	2262.00	2058.60
June	436.67	2137.19	2152.80
July	316.82	1969.49	2128.20
August	397.76	2015.00	2091.60
September	335.23	1890.22	2071.20
October	369.62	2022.78	2055.00
November	382.50	2039.74	2106.60
December	358.76	2060.48	2107.80
Maximum	N/A	**2262.00**	**2152.80**
Average	**375.57**	**2012.19**	**2079.40**
PTTW (m^3)	N/A	**3024**	**2100**
% of PTTW Max.	-	**75%**	**103%**
% of PTTW Avg.	-	**67%**	**99%**

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	920.90	2379.99	2881.20
February	941.14	2518.99	2874.60
March	790.43	2429.02	2869.20
April	868.77	2321.00	2764.20
May	1024.84	2774.01	2773.20
June	1038.40	2625.00	2762.40
July	878.16	2469.00	2791.80
August	906.45	2557.99	2759.40
September	920.70	2956.99	2760.60
October	1085.13	2574.00	2766.00
November	1011.87	2618.97	2797.80
December	927.32	2608.99	2764.20
Maximum	N/A	**2956.99**	**2881.20**
Average	**942.84**	**2569.50**	**2797.05**
PTTW (m^3)	N/A	**3900**	**2880**
% of PTTW Max.	-	**76%**	**100%**
% of PTTW Avg.	-	**66%**	**97%**

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	1516.81	3835.00	4276.15
February	1489.32	4000.00	4268.60
March	1682.06	3784.00	4299.84
April	1449.87	4023.00	4316.32
May	1608.52	4558.00	4357.86
June	1642.77	4272.00	4321.13
July	1731.68	4260.00	4371.25
August	1726.74	4181.00	4378.74
September	1754.40	4052.00	4354.43
October	1438.55	4459.00	5536.85
November	1583.30	3859.00	8736.67
December	1369.90	3994.00	4353.05
Maximum	N/A	**4558.00**	**8736.67**
Average	**1582.83**	**4106.42**	**4797.57**
PTTW (m^3)	N/A	**8640**	**6000**
% of PTTW Max.	-	**53%**	**146%**
% of PTTW Avg.	-	**48%**	**80%**

Wells - Combined

System Capability Assessment		
Comparison of Flow Rates (total treated flow; m^3/d):		
Month	**Average Flow**	**Maximum Daily Flow**
January	3036.57	4416.67
February	3014.01	4659.49
March	3023.07	4432.15
April	2901.10	4243.05
May	3322.30	5675.00
June	3374.17	5447.18
July	3182.05	4508.29
August	3244.92	4622.88
September	3253.69	4551.68
October	3217.75	4910.98
November	3252.34	4783.72
December	2902.66	4827.48
Average	**3143.72**	N/A
Maximum	N/A	**5675.00**
System Capacity (m^3)	**8640**	**8640**
Capacity (%)	**36%**	**66%**

Distribution Center 123

System Capability Assessment		
Comparison of Flow Rates (total treated flow; m^3/d):		
Month	**Average Flow**	**Maximum Daily Flow**
January	1381.03	3507.06
February	1403.49	3860.82
March	1253.04	3619.32
April	1305.26	3543.60
May	1523.00	4111.03
June	1564.69	4074.34
July	1330.78	3851.63
August	1363.13	3788.37
September	1357.78	3903.72
October	1643.93	4028.16
November	1525.10	3804.40
December	1396.07	3818.33
Average	**1420.61**	N/A
Maximum	N/A	**4111.03**
System Capacity (m^3)	**8640**	**8640**
Capacity (%)	**16%**	**48%**

Distribution Center 4

System Capability Assessment		
Comparison of Flow Rates (total treated flow; m^3/d):		
Month	**Average Flow**	**Maximum Daily Flow**
January	1479.68	3725.00
February	1450.43	3880.00
March	1638.23	3695.00
April	1412.63	3897.00
May	1565.52	4400.00
June	1598.90	4163.00
July	1685.97	4143.00
August	1679.77	4065.00
September	1706.17	3942.00
October	1397.94	4357.00
November	1540.07	3762.00
December	1334.58	3886.00
Average	**1540.82**	N/A
Maximum	N/A	**4400.00**
System Capacity (m^3)	**8640**	**8640**
Capacity (%)	**18%**	**51%**

Distribution Centers - Combined

System Capability Assessment		
Comparison of Flow Rates (total treated flow; m^3/d):		
Month	**Average Flow**	**Maximum Daily Flow**
January	2860.71	3801.44
February	2853.92	3881.04
March	2891.26	3727.97
April	2717.90	3900.74
May	3088.52	4962.47
June	3163.59	4516.92
July	3016.75	4172.42
August	3042.91	4104.24
September	3063.94	4314.99
October	3041.87	4802.37
November	3065.17	3956.40
December	2730.65	3999.68
Average	**2961.43**	N/A
Maximum	N/A	**4962.47**
System Capacity (m^3)	**8640**	**8640**
Capacity (%)	**34%**	**57%**