

## Temagami North & South Water & Wastewater Systems Quarterly Operations Report

### GENERAL

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- All preventative maintenance completed as per the work management system
- Municipal drinking water sampling and testing required by Ontario Regulation 170/03 was completed and all results complied with limits.
- Wastewater sampling and testing required by the systems' Environmental Compliance Approval and the Wastewater Systems Effluent Regulation was completed.
- Municipal Wastewater Systems reporting and Wastewater Systems Effluent Regulation reporting was completed as required.

### 2021 CAPITAL RECOMMENDATIONS & PROGRESS

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Temagami North WTP	
Scope of Work	Status
Clearwell Inspection & Cleaning (if required)	Approved (2020)
Submersible Pump for CW level analyzer	Approved (2020)
Chlorination system at the tower	Completed
Process pH analyzers for filters 1 & 2	Approved
Spare chlorine analyzer	Approved
Spare parts for chlorine analyzer	Approved
Chemical transfer pump	In Progress
Tower work (as per Landmark Recommendations)	Approved
Unplanned Capital	
Chemical Feed Pump	Completed
Alum panel and chemical feed system	Completed
Waste pit pump repair	Completed

Temagami South WTP	
Scope of Work	Status
Refurbish/replace old plant (filter 1 train)	Deferred
Alum chemical panel	Completed
Chemical transfer pump	In Progress
Clearwell Inspection & cleaning (if required)	Approved (2020)
Investigate and repair water tower riser leak	Approved (2020)
Tower repairs (as per Landmark Recommendations)	Approved (2020)
Unplanned Capital	
Treated water line repair	Completed
Replace leak detection controller	Completed
New router	Completed
Repair tower radio communication	Completed
Replace photo cell in chlorine analyzer	Completed

Temagami North Lagoon	
Scope of Work	Status
Desludging of Cells	Completed
Aeration Line Repair	Approved (2020)
Unplanned Capital	
Replace battery on auto sampler	Completed

Temagami South Lagoon	
No recommendations for 2021	

## QUALITY & ENVIRONMENTAL MANAGEMENT SYSTEM (QEMS) PROGRESS

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This year, OCWA is being re-accredited as the Operating Authority for the Temagami Drinking Water Systems' through a third party audit of the Temagami Drinking Water Quality & Environmental Management System. Re-accreditation occurs every third year and in two steps; an off-site desk top audit and then an on-site verification audit. The off-site portion was completed on July 5<sup>th</sup> and all items were found to conform to the Drinking Water Quality Management Standard. The on-site portion will be completed virtually in October.

## INSPECTIONS & FINDINGS

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There were no inspections in the second quarter of 2021.

## HEALTH & SAFETY

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The monthly Health and Safety inspections were completed.

Health & Safety training topics reviewed include: Distracted Driving, Facility Emergency Binder Review and OCWA's "Don't Walk By" Program.

## INCIDENTS & COMPLAINTS

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### Temagami South Lagoon - Spill April 29

Details: Sewage coming up from force main onto ground due to break.

Cause: Sewer force main break (1.5" elbow crack)

Corrective Action: Repaired force main, removed and hauled contaminated soil. MOH and SAC notified: Ref# 1-E630D.

### Temagami South Lagoon - TSS Exceedance (Spring Discharge)

Details: TSS exceeded the seasonal average concentration and loadings limits for the spring discharge.

- Seasonal average concentration for TSS = 32.5 mg/L and limit is 25 mg/L.
- Seasonal average loadings for TSS = 93.5 kg/day and the limit is 71.9 kg/d

NOTE: Due to high TSS in 2020, the ferric addition was increased from 1/4 of a tank to 1/3 and the lagoon was allowed to settle for three weeks prior to discharging.

Resolution:

- Continue to monitor
- North cell drained and checked - sludge accumulation is increasing
- Investigate and problem solve resolutions
- MOH and SAC notified: Ref# 4181-C3ZR99

**Temagami North DWS - Loss of Pressure June 17**

Details: Pressure dropped to under 20 psi at 11:21 hrs for four minutes (minimum of 17 psi) and again at 13:50 for 2 minutes (minimum of 8 psi) while distribution flushing was being completed. The chlorine residual was 1.0 mg/L at 11:21 and 0.96 mg/L at 13:50 when the pressure dropped.

Resolution: Check/monitor the chlorine residual, notify health unit and monitor pressure, stop flushing until pressure returns.

**Temagami North DWS - Maximum Treated Flow Limit Exceeded June 6**

Details: The total treated water for the day was 383 m3/day exceeding the maximum of 328 m3/day allowed by the MDWL.

Cause: The flow exceedance is due to increased demand from the community during hot weather (temperature was 30 °C).

Resolution: Monitor

- SCADA programming will be completed to help reduce flow exceedance.

**Temagami North DWS - Maximum Treated Flow Limit Exceeded June 7**

Details: The total treated water for the day was 330 m3/day exceeding the maximum of 328 m3/day allowed by the MDWL.

Cause: The flow exceedance is due to increased demand from the community during hot weather (temperature was 30 °C).

Resolution: Monitor

- SCADA programming will be completed to help reduce flow exceedance.

**CALL-BACK SUMMARY**

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System	Call-Backs this Quarter	Total Call-Backs to Date
Temagami North WTP	6	10
Temagami North Lagoon	0	0
Temagami South WTP	2	6
Temagami South Lagoon	0	0
<b>Total</b>	<b>8</b>	<b>16</b>

Please see Appendix A for Call-Back details

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**DRINKING WATER SYSTEM PERFORMANCE & COMPLIANCE SUMMARY**

Temagami North Drinking Water System		April	May	June	Compliance
Maximum Daily Raw Flow Volume (m <sup>3</sup> /d)		255	273	407	Max 460
Maximum Peak Raw Flow Rate (L/min)		376	370	900 <sup>1</sup>	Max 456
Maximum Treated Flow (m <sup>3</sup> /d)		228	230	383 <sup>2</sup>	Max 328
Total Treated Flow (m <sup>3</sup> /d)		5,649	5,682	6,557	NA
Free Chlorine Residual from analyzer (mg/L)		0.99 to 1.5	1.13 to 2.13	1.37 to 2.08	Min 0.85
Distribution Chlorine Residual (mg/L)		0.24 to 1.33	0.27 to 1.83	0.27 to 1.79	Min 0.05
% of time turbidity ≤ 0.3 NTU	Filter 1	100	100	100	Min 95%
	Filter 2	100	100	100	

1 - Raw flow rate spiked to 900 L/min for about 10 minutes during increased usage on June 7

2 Total treated flow exceeded due to high demand, see Incidents section for more details

Temagami South Drinking Water System		April	May	June	Compliance
Maximum Daily Raw Flow Volume (m <sup>3</sup> /d)		293	246	351	Max 1,005
Maximum Peak Raw Flow Rate (L/min)		623	629	672	Max 700
Maximum Treated Flow (m <sup>3</sup> /d)		149	196	329	Max 950
Total Treated Flow (m <sup>3</sup> /d)		2,805	3,510	5,244	NA
Free Chlorine Residual from analyzer (mg/L)		1.35 to 1.64	0.95 to 1.89	1.28 to 1.89	Min 1.00
Distribution Chlorine Residual (mg/L)		0.81 to 1.5	0.46 to 1.42	0.25 to 1.52	Min 0.05
% of time turbidity ≤ 0.3 NTU (filter 2)		100	100	100	Min 95%

**WASTEWATER TREATMENT SYSTEM PERFORMANCE & COMPLIANCE SUMMARY**

Temagami North Lagoon		April	May	June	Compliance
<i>As per the Environmental Certificate of Approval</i>					
Average Daily Flow - Influent (m <sup>3</sup> /day)		478	370	256	Max 390 (annual average)
Max Daily Flow (m <sup>3</sup> /day)		682	581	384	Max 1,200/day
Total Volume Treated (m <sup>3</sup> )		14,339	11,455	7,687	NA
cBOD <sub>5</sub> (mg/L)		2.58	1.93	1.8	20 (monthly average)
Total Suspended Solids (mg/L)		4.75	2.67	2.5	30 (monthly average)
Total Phosphorous (mg/L)		0.063	0.032	0.042	0.6 (monthly average)
Total Ammonia Nitrogen (mg/L)		1.19	0.31	0.41	6 (monthly average)
Dissolved Oxygen		10.2	9.6	8.3	NA
pH (units)		7.52 - 7.98	7 - 9.7	7 - 7	6.0 to 9.5 (inclusive)
Temperature (°C)		7.3 - 11.7	7.3 - 11.7	7 - 10.6	NA
Un-ionized Ammonia (mg/L)		0.013	0.081	0.002	NA
<i>Escherichia coli</i> ( <i>E. coli</i> ) (cfu/100mL)		44.3	58.5	65	Geometric Mean of 200 (objective)
<b>AS PER WASTEWATER SYSTEM EFFLUENT REGULATIONS (WSER)</b>					
cBOD <sub>5</sub> (mg/L)		2.24		25 (quarterly average)	
Total Suspended Solids (mg/L)		3.69		25 (quarterly average)	

\*No effluent flow from May 17<sup>th</sup> to June 29<sup>th</sup>; lagoon lowered and then effluent flow stopped for sludge removal.

Temagami South Lagoon	April	May	June	Compliance
<i>As per the Environmental Certificate of Approval</i>				
<b>Influent</b>				
Average Daily Flow (m <sup>3</sup> /day)	154	113	131	Annual Average of 232
Total Volume Treated (m <sup>3</sup> )	4,621	3,505	3,934	NA
<b>Prior to Discharge Sampling</b>				
Total Phosphorous (mg/L)		0.127		NA
Hydrogen Sulphide (mg/L)		<0.02		NA
<i>Escherichia coli</i> ( <i>E. coli</i> ) (cfu/100mL)		<5		NA
<b>Effluent - Spring Discharge</b>				
Discharge Period		May 25 to June 4		May 1 <sup>st</sup> to June 15 <sup>th</sup>
Average Discharge Flow (m <sup>3</sup> /day)		2,877		Max 2,877.12
Total Volume Discharged (m <sup>3</sup> )		31,647		NA
BOD5 (mg/L)		21.7		25 ( <i>seasonal average</i> )
Total Suspended Solids (mg/L)		32.5*		25 ( <i>seasonal average</i> )
Total Phosphorous (mg/L)		0.344		1.0 ( <i>seasonal average</i> )
Total Ammonia Nitrogen (mg/L)		10.3		NA
<b>AS PER WASTEWATER SYSTEM EFFLUENT REGULATIONS (WSER)</b>				
cBOD <sub>5</sub> (mg/L)		10		25 ( <i>annual average</i> )
Total Suspended Solids (mg/L)		32.5		25 ( <i>annual average</i> )

\*See Incidents section for exceedance details

# **APPENDIX A**

## **CALL BACK REPORTS**

# Work Order Call Back Details Report

2223048: chem pump fail 6030 temagami north wtp

**Asset:**

**Location:** 6030-WTTM-P-DI 6030, Temagami North WTP, Process, Disinfection

<b>Page Time:</b>	04/10/2021 04:00 AM
<b>Arrive time:</b>	04/10/2021 04:45 AM
<b>Leave time:</b>	04/10/2021 05:15 AM
<b>Finish Time:</b>	04/11/2021 10:03 AM
<b>Report Date:</b>	4/11/21
<b>Reported By:</b>	Claude Mongrain
<b>Supervisor:</b>	

<b>Site:</b>	OCWASITE
<b>Priority:</b>	5
<b>Work Type:</b>	CALL
<b>Status:</b>	CLOSE
<b>Classification:</b>	REFURBISH/REPLACE
<b>GL Account:</b>	TEMAGY6030-210M

Actual Labor				
Task ID	Craft	Labor	Regular Hours	Premium Hours
	MECHANIC	Claude Mongrain	00:00	04:00

Log		
Date	Created By	Description
4/11/21	Claude Mongrain	hypo pump fail
re prime test pump and put back in service		

# Work Order Call Back Details Report

2223052: chem pump fail 6030 temagami north wtp

**Asset:**

**Location:** 6030-WTTM-P-DI 6030, Temagami North WTP, Process, Disinfection

<b>Page Time:</b>	04/11/2021 06:00 AM
<b>Arrive time:</b>	04/11/2021 07:55 AM
<b>Leave time:</b>	04/11/2021 08:40 AM
<b>Finish Time:</b>	04/11/2021 10:13 AM
<b>Report Date:</b>	4/11/21
<b>Reported By:</b>	Claude Mongrain
<b>Supervisor:</b>	

<b>Site:</b>	OCWASITE
<b>Priority:</b>	5
<b>Work Type:</b>	CALL
<b>Status:</b>	CLOSE
<b>Classification</b>	REFURBISH/REPLACE
<b>GL Account:</b>	TEMAGY6030-210M

Actual Labor				
Task ID	Craft	Labor	Regular Hours	Premium Hours
	MECHANIC	Claude Mongrain	00:00	04:00

Log		
Date	Created By	Description
4/11/21	Claude Mongrain	hypo pump fail
re prime pump ,change #2 pump flow switch top fitting lock like there is a lot of air in hypo		



# Work Order Call Back Details Report

2225122: Plant Shut Down 6030

**Asset:** 0000293644 ANALYZER CHLORINE PORTABLE  
**Location:** 6030-WTTM 6030, Temagami North WTP

<b>Page Time:</b>	04/22/2021 04:30 AM
<b>Arrive time:</b>	04/22/2021 05:30 AM
<b>Leave time:</b>	04/22/2021 07:30 AM
<b>Finish Time:</b>	04/22/2021 07:30 AM
<b>Report Date:</b>	4/22/21
<b>Reported By:</b>	Bryce Logan
<b>Supervisor:</b>	

<b>Site:</b>	OCWASITE
<b>Priority:</b>	5
<b>Work Type:</b>	CALL
<b>Status:</b>	CLOSE
<b>Classification</b>	REFURBISH/REPLACE
<b>GL Account:</b>	TEMAGY6030-210M

Actual Labor				
Task ID	Craft	Labor	Regular Hours	Premium Hours
	SUPER	Bryce Logan	00:00	04:00

Log		
Date	Created By	Description
4/22/21	Bryce Logan	Plant Shut Down

Plant shut down due to low backwash flow. Bled air out of the backwash singer valve and started a second backwash and monitored backwash everything worked as it should plant back online

# Work Order Call Back Details Report

2268942: Call For Loss Comm to tower/ Power Fail 6030

**Asset:**

**Location:** 6030-WTTW      6030, Temagami North WTP Tower

<b>Page Time:</b>	05/13/2021 06:45 PM
<b>Arrive time:</b>	05/13/2021 07:30 PM
<b>Leave time:</b>	05/13/2021 09:45 PM
<b>Finish Time:</b>	05/13/2021 09:45 PM
<b>Report Date:</b>	5/19/21
<b>Reported By:</b>	Bryce Logan
<b>Supervisor:</b>	

<b>Site:</b>	OCWASITE
<b>Priority:</b>	5
<b>Work Type:</b>	CALL
<b>Status:</b>	COMP
<b>Classification</b>	REFURBISH/REPLACE
<b>GL Account:</b>	TEMAGn6028-21co

Actual Labor				
Task ID	Craft	Labor	Regular Hours	Premium Hours
	SUPER	Bryce Logan	00:00	04:00

Log		
Date	Created By	Description
5/19/21	Bryce Logan	Loss Comm Power Fail

Call for loss comm with tower due to power fail temagami north wtp power is back on in townsite and tower communication back up.

# Work Order Call Back Details Report

2307752: Low CL2 6028

**Asset:**  
**Location:** 6028-WTTM      6028, Temagami South WTP

<b>Page Time:</b>	05/26/2021 07:00 PM
<b>Arrive time:</b>	05/26/2021 07:45 PM
<b>Leave time:</b>	05/26/2021 09:30 PM
<b>Finish Time:</b>	05/26/2021 09:30 PM
<b>Report Date:</b>	6/1/21
<b>Reported By:</b>	Bryce Logan
<b>Supervisor:</b>	

<b>Site:</b>	OCWASITE
<b>Priority:</b>	5
<b>Work Type:</b>	CALL
<b>Status:</b>	COMP
<b>Classification</b>	REFURBISH/REPLACE
<b>GL Account:</b>	TEMAGY6028-210M

Actual Labor				
Task ID	Craft	Labor	Regular Hours	Premium Hours
	SUPER	Bryce Logan	00:00	04:00

Log		
Date	Created By	Description
6/1/21	Bryce Logan	Low CL2

Call temagami south WTP for low cl2 residual on arrival found the residual back to normal. Reviewed data logger and it showed the chlorine dropped below one for one pump cycle and came right back. The high lifts were offline so no need for CT calc. Checked to make sure proper flow to unit all seemed ok.

# Work Order Call Back Details Report

2313492: alum pump fail temagami north WTP6030

**Asset:**

**Location:** 6030-WTTM-P      6030, Temagami North WTP, Process

<b>Page Time:</b>	06/06/2021 09:25 PM
<b>Arrive time:</b>	06/06/2021 10:00 PM
<b>Leave time:</b>	06/06/2021 10:15 PM
<b>Finish Time:</b>	06/07/2021 11:57 AM
<b>Report Date:</b>	6/7/21
<b>Reported By:</b>	Claude Mongrain
<b>Supervisor:</b>	

<b>Site:</b>	OCWASITE
<b>Priority:</b>	5
<b>Work Type:</b>	CALL
<b>Status:</b>	COMP
<b>Classification</b>	REFURBISH/REPLACE
<b>GL Account:</b>	TEMAGY6030-210M

Actual Labor				
Task ID	Craft	Labor	Regular Hours	Premium Hours
	MECHANIC	Claude Mongrain	00:00	04:00

Log		
Date	Created By	Description
6/7/21	Claude Mongrain	alum pump fail
due to low raw flow float swicht to high lower swicht now ok		

# Work Order Call Back Details Report

2313496: low clear well temagami north WTP6030

**Asset:** 0000293644 ANALYZER CHLORINE PORTABLE  
**Location:** 6030-WTTM 6030, Temagami North WTP

<b>Page Time:</b>	06/06/2021 08:30 PM
<b>Arrive time:</b>	06/06/2021 09:00 PM
<b>Leave time:</b>	06/06/2021 09:15 PM
<b>Finish Time:</b>	06/07/2021 12:24 PM
<b>Report Date:</b>	6/7/21
<b>Reported By:</b>	Claude Mongrain
<b>Supervisor:</b>	

<b>Site:</b>	OCWASITE
<b>Priority:</b>	5
<b>Work Type:</b>	CALL
<b>Status:</b>	COMP
<b>Classification</b>	REFURBISH/REPLACE
<b>GL Account:</b>	TEMAGn6028-21co

Actual Labor				
Task ID	Craft	Labor	Regular Hours	Premium Hours
	MECHANIC	Claude Mongrain	00:00	04:00

Log		
Date	Created By	Description
6/7/21	Claude Mongrain	low clear well
due to hot weather lot of water usage low clear well		

# Work Order Call Back Details Report

2315094: Power Failure due to Lightning Temagami S WTP 6028

**Asset:**

**Location:** 6028-WTTM-F      6028, Temagami South WTP, Facility

<b>Page Time:</b>	06/13/2021 07:00 PM
<b>Arrive time:</b>	06/13/2021 08:00 PM
<b>Leave time:</b>	06/13/2021 09:45 PM
<b>Finish Time:</b>	06/14/2021 07:40 AM
<b>Report Date:</b>	6/14/21
<b>Reported By:</b>	Chris Barkhouse
<b>Supervisor:</b>	

<b>Site:</b>	OCWASITE
<b>Priority:</b>	5
<b>Work Type:</b>	CALL
<b>Status:</b>	COMP
<b>Classification</b>	REFURBISH/REPLACE
<b>GL Account:</b>	TEMAGn6028-21co

Actual Labor				
Task ID	Craft	Labor	Regular Hours	Premium Hours
	INSTTECH	Chris Barkhouse	00:00	04:00

Log		
Date	Created By	Description
6/14/21	Chris Barkhouse	

Respond to a turbidity alarm at the Temagami South WTP. Arrived to find the plant stopped. Reviewed trends and alarm screen and found multiple alarms related to power failure due to a lightning storm that just went through the area. Started plant and HL pumps to check operation of the plant. Everything was working normally. Monitored operation for a bit.