

Mississippi Mills Wastewater Treatment Plant Annual Report 2015

Please find below the **2015 Annual Performance Report** and other supporting documents for the **Mississippi Mills Wastewater Treatment Plant**. This report is a requirement of the Environmental Compliance Approval (ECA) (formerly known as the certificate of approval (CofA)) Number 2425-8DXR5U (issued February 16, 2011). The ECA allotted of the operation of both the lagoon treatment facility as well as the new wastewater treatment plant (WWTP). The new WWTP was brought into service on July 11, 2012.

Summary

Flow Exceedances:

- There were no flow exceedances.

Non-compliance event:

- One ECA non-compliance event – month average total suspended solids month average in June 2015.

Bypass Events:

- There were no bypass events during this reporting period.

Overflow Events:

- There was one overflow event on Jan 08, 2015. Gemmill's Bay SPS.

Spills: During the reporting period there was/were:

- One (1) spill (digested sludge foam) event
- Two (2) collection system spills.

Effluent Compliance Limits

Parameter	Compliance Limit Met?		Treatment Objectives Met?	
	Concentration	Loadings	Concentration	Loadings
cBOD	YES	YES	YES	YES
Suspended Solids	No	YES	No	YES
Total Phosphorous	YES	YES	YES	YES
Total Ammonia	YES	YES	YES	YES
E. Coli (geo-mean)	N/A	N/A	YES	N/A

Flow Assessment:

WWTP Influent Flow Limits

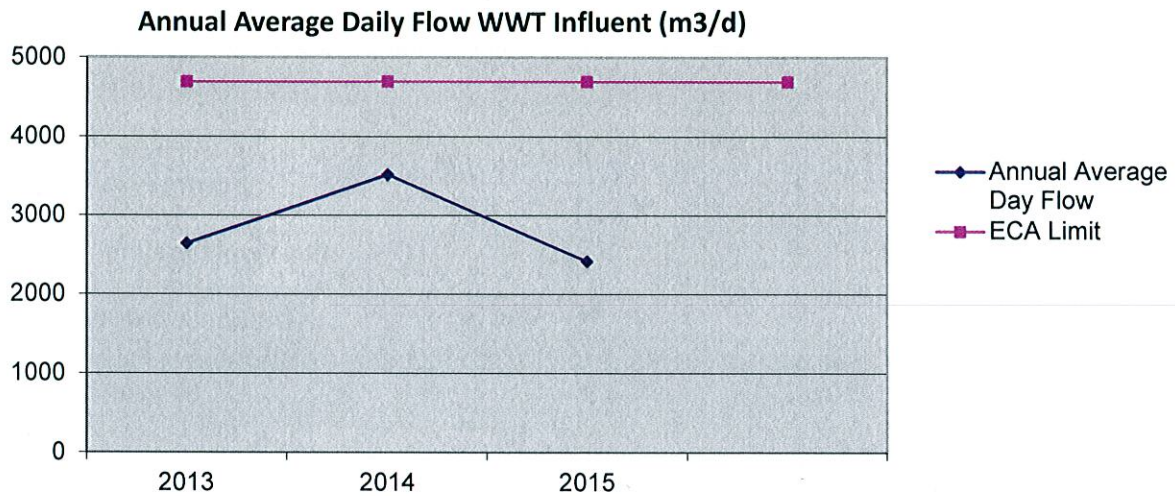
The WWTP ECA approves:

- A design average daily treatment capacity of 4,700 m³/d and a peak treatment capacity of 14,100 m³/d.

Annual Average Day Flow

The ECA limits the annual average day volume to 4700 m³/d. With a 2015 annual average day flow of 2427 m³/d, the WWTP is at **51.6 % capacity**.

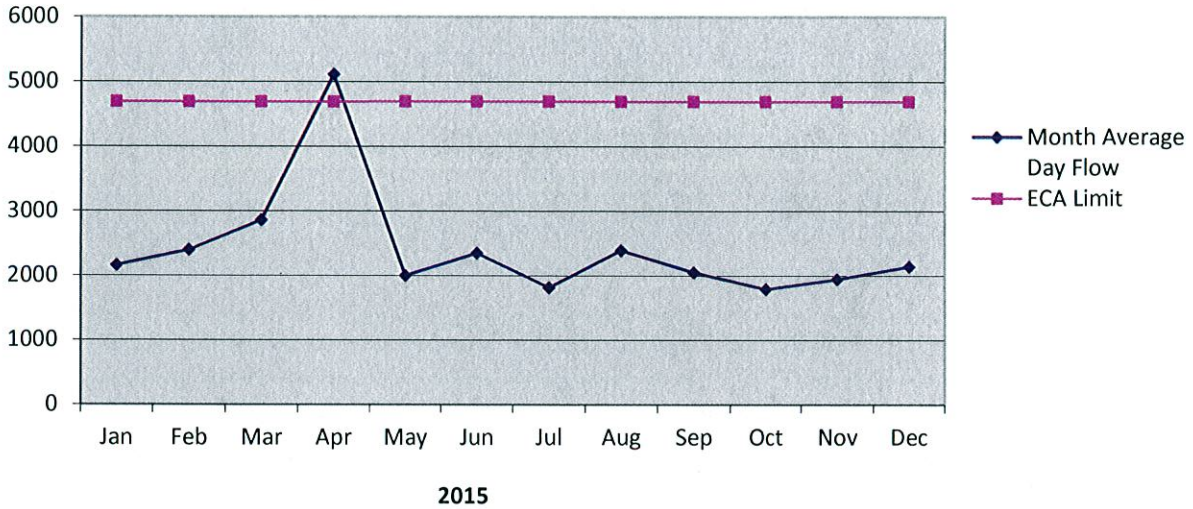
The chart below depicts the annual average day flow from the Gemmill's Bay Pumping Station.



Month Average Day Flow

The chart below depicts the month average day flow from the Gemmill's Bay Pumping Station. Note that April has the highest flows of the year. This is attributed to the spring freshet/melt.

Month Average Daily Flow WWT Influent (m3/d)

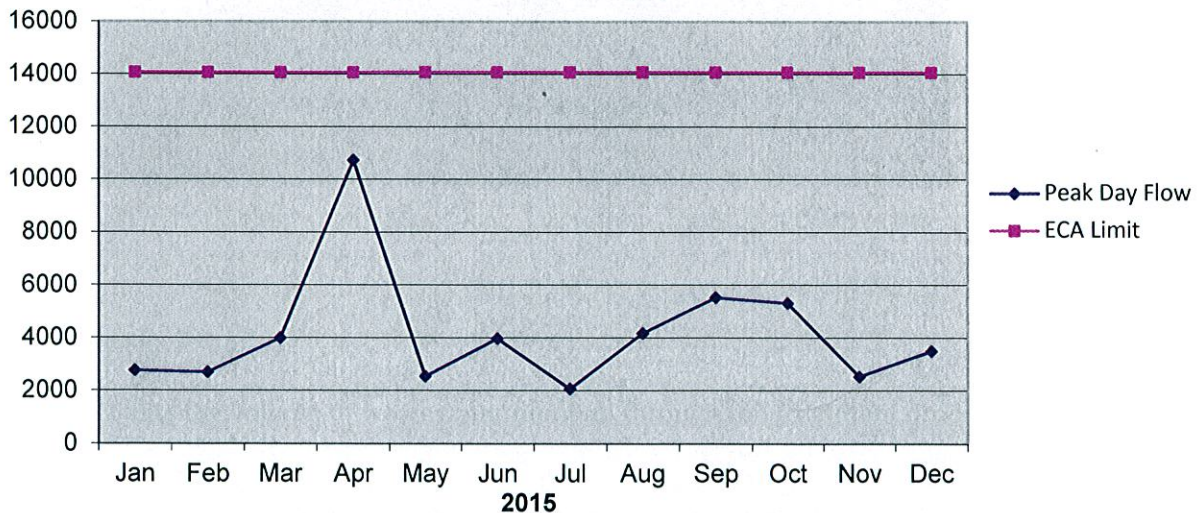


Peak Day Flow

The ECA limits the volume of wastewater pumped through the treatment processes at the WWTP to 14,100 m³/d. The peak raw sewage influent flow was 10,765.2 m³/d. The facility automatically diverts flows greater than 14,100 to an attenuation pond where the influent is stored and returned to the treatment facility for processing during lower flow periods; therefore the compliance limit has not been exceeded.

The chart below depicts the peak flow rates from the Gemmill’s Bay Pumping Station.

Peak Daily Flow: Influent(m3/d)



Capacity Assessment

Year	2011	2012 Jan - Jul (Lagoon)	2012 Jul- Dec (WWTP)	2013	2014	2015
Average Day Flow (m ³ /d)	2541	2380	1687	2657	3525	2427
ADF: Design Capacity (m ³ /d)	3020	3020	4700	4700	4700	4700
% of capacity, based on average daily flows	84.1	78.8	35.9	56.5	75.0	51.6
Maximum Day Flow (m ³ /d)	14989	16311	4901	9566	24081	10765

Effluent Limits & Objectives:

A summary and interpretation of all monitoring data and a comparison to the effluent limits including an overview of the success and adequacy of the *Works*

The requirements of the ECA for the treatment system are as follows:

Parameter	Effluent Limits	
	Concentration	Waste Loading
cBOD ₅	25.0 mg/L	117.5 kg/d
Suspended Solids	15.0 mg/L	70.5 kg/d
Total Phosphorous		
Sep 01 – May 30	0.3 mg/L	1.41 kg/d
Jun 01 – Aug 31	0.2 mg/L	0.94 kg/d
Total Ammonia		
Sep 01 – Apr 30	15 mg/L	70.5 kg/d
May 01 – Aug 31	5 mg/L	23.5 kg/d
pH of the effluent maintained between 6.0 to 9.5 inclusive, at all times.		

*Based on monthly average concentration and monthly average loading

Effluent Objectives

The requirements of the ECA for the treatment system are as follows:

Parameter	Effluent Objectives	
	Concentrations	Loading
cBOD ₅	10.0 mg/L	47 kg/d
Suspended Solids	10.0 mg/L	47 kg/d
Total Phosphorous	0.15 mg/L	0.71 kg/d
Total Ammonia		
Sep 01 – Apr 30	12 mg/L	56.4 kg/d

Parameter	Effluent Objectives	
	Concentrations	Loading
May 01 – Aug 31	3.0 mg/L	14.1 kg/d
E. Coli	100 organisms per 100 milliliters (Monthly geometric Mean Density)	Not applicable

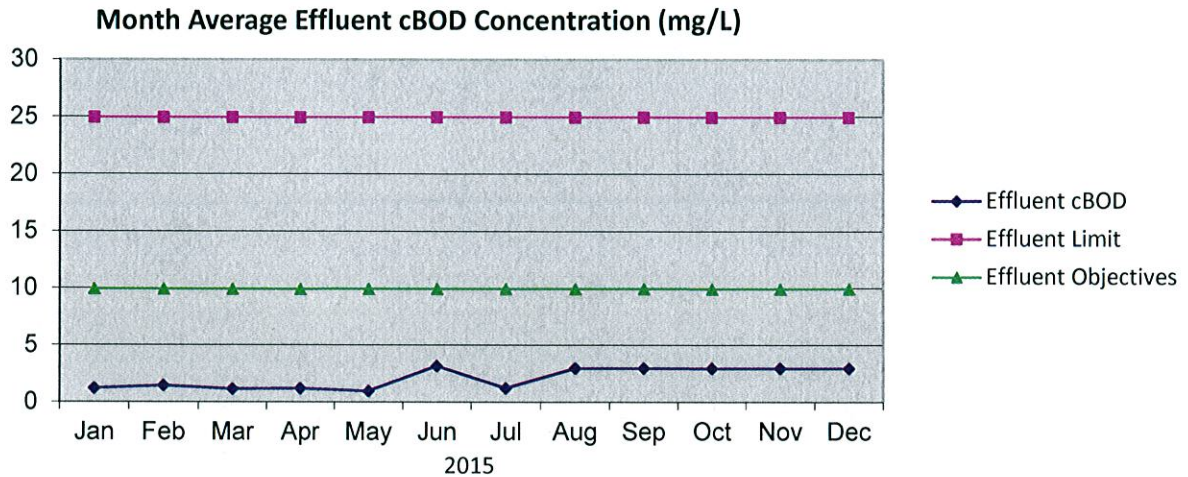
Please find attached a copy of OCWA's Performance Assessment Report (PAR) - this report summarizes flow and chemical analysis for samples taken throughout the year.

A report for effluent pH, temperature and unionized ammonia is attached.

The ECA requires quarterly samples to be taken and analyzed for Acute Lethality. The effluent passed the requirements of these tests.

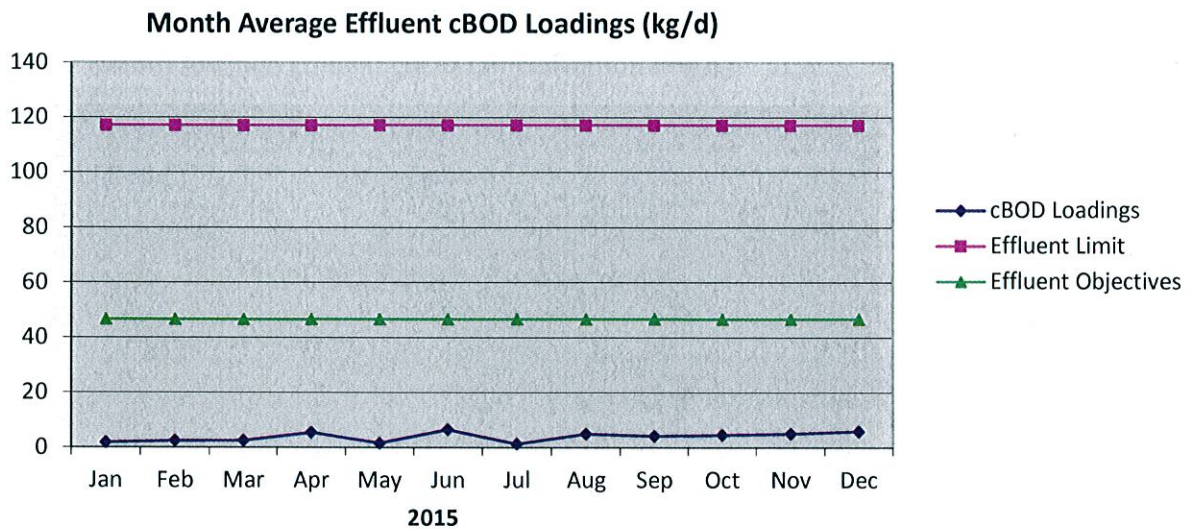
A report on Acute Lethality testing for the new WWTP is included. RBT = Rainbow Trout and DM = Daphnia Magna test results.

Effluent cBOD



Compliance Limit: The WWTP effluent met the compliance limits for cBOD effluent concentration.

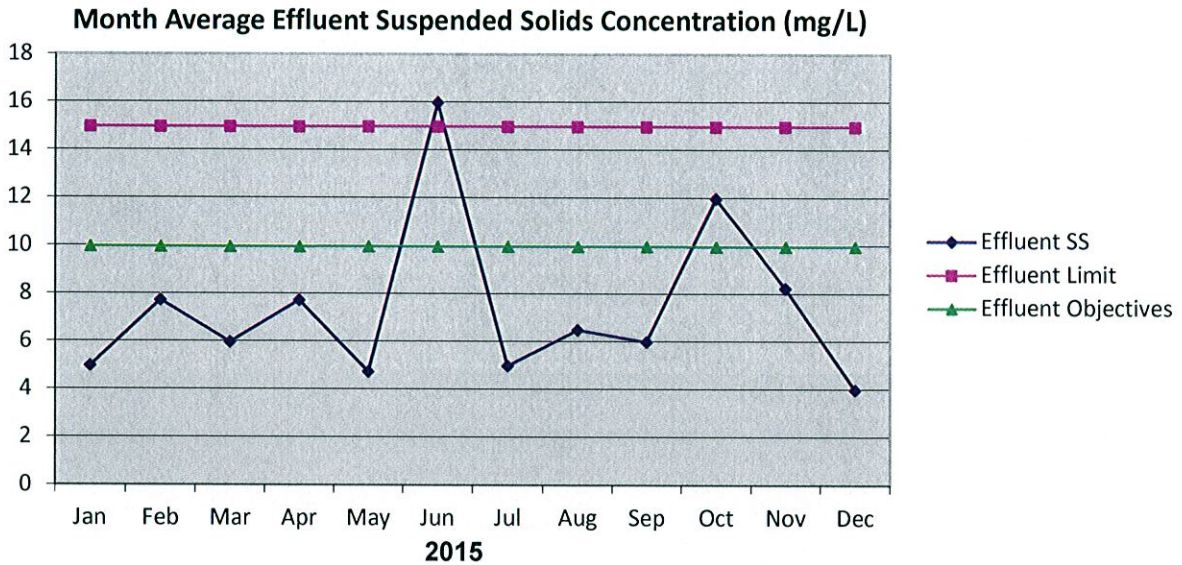
Effluent cBOD Objectives: The WWTP effluent met the effluent objectives for cBOD effluent concentration.



Compliance Limit: The WWTP effluent met the compliance limit for cBOD loadings.

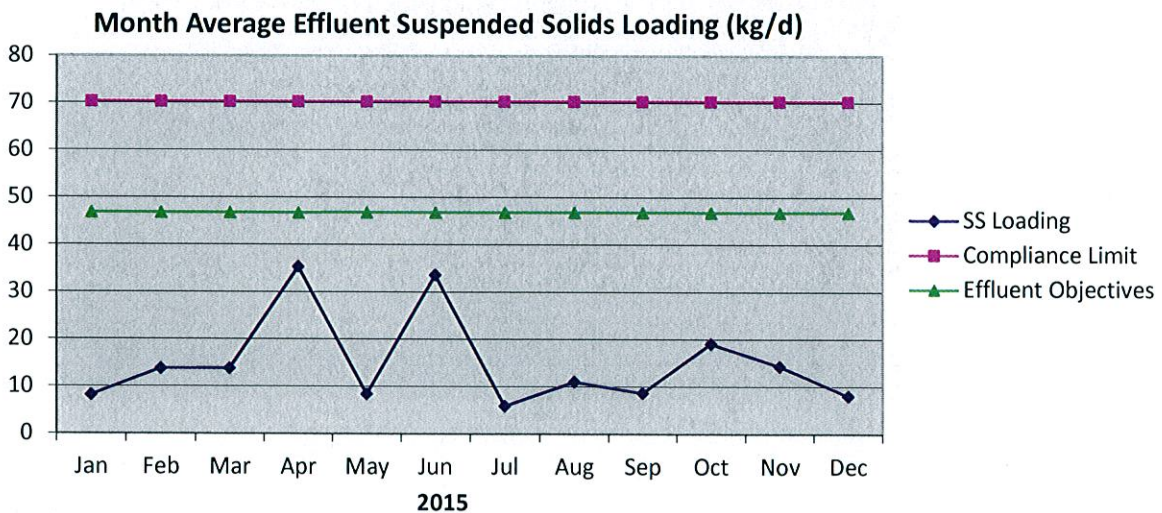
Effluent Objectives: The WWTP effluent met the effluent objective for cBOD loadings.

Effluent Suspended Solids



Compliance Limit: The WWTP effluent did not meet the compliance limits for suspended solids effluent concentration.

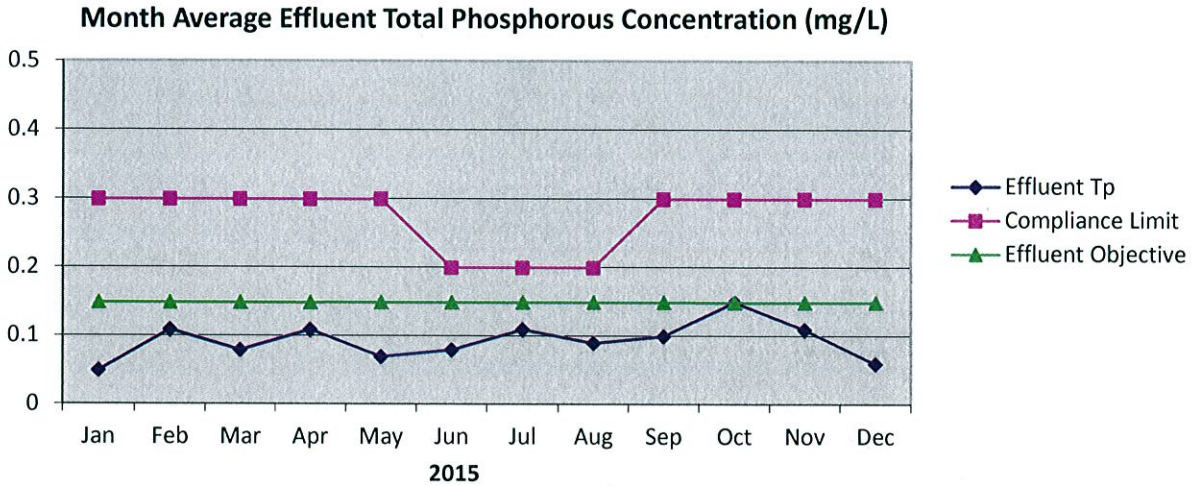
Effluent Objectives: The WWTP effluent did not meet the effluent objective for suspended solids concentration in June and October.



Compliance Limits: The WWTP effluent met the compliance limit for total suspended solids loading.

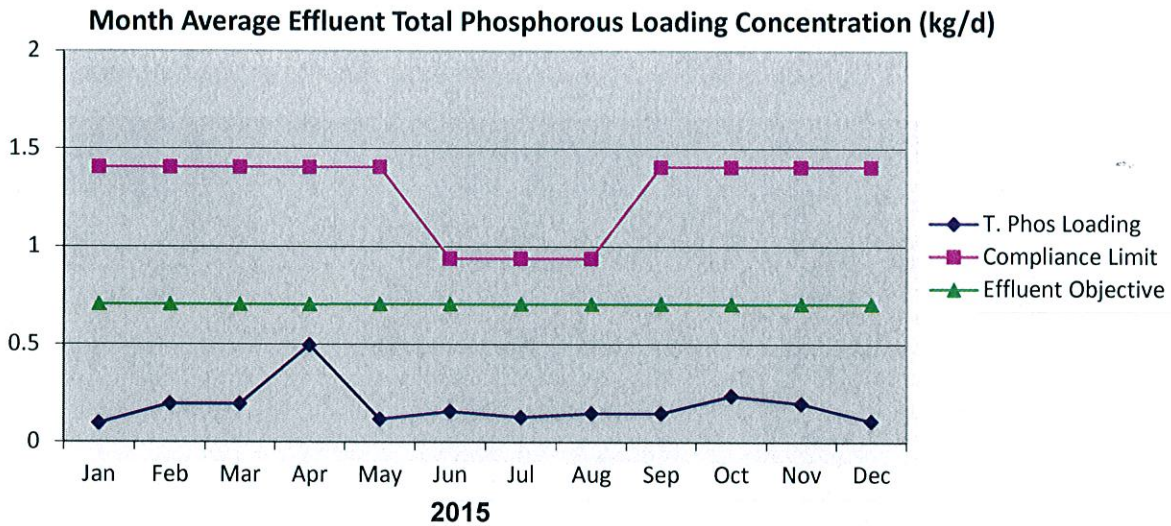
Effluent Objectives: The WWTP effluent met the total suspended solids loading requirement.

Effluent Phosphorous



Compliance Limits: The WWTP effluent met the Total Phosphorous treatment compliance limits.

Effluent Objectives: The WWTP effluent met the objective however in October the month average was equal to the objective.

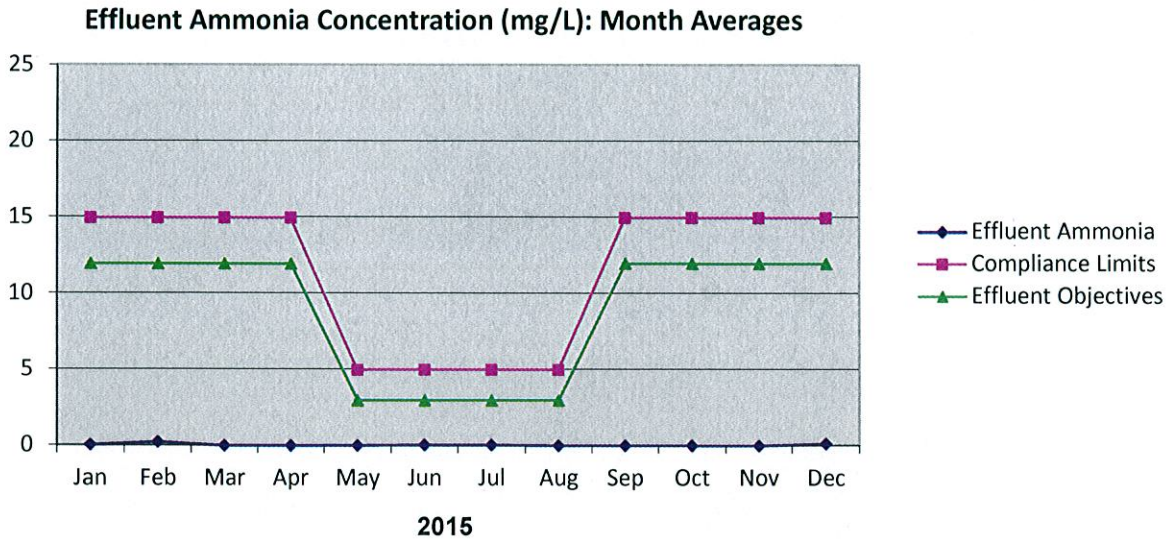


Compliance Limit: The WWTP effluent met the Total Phosphorous effluent loading compliance limit.

Effluent Objective: The WWTP effluent met the Total Phosphorous effluent loading objective limit.

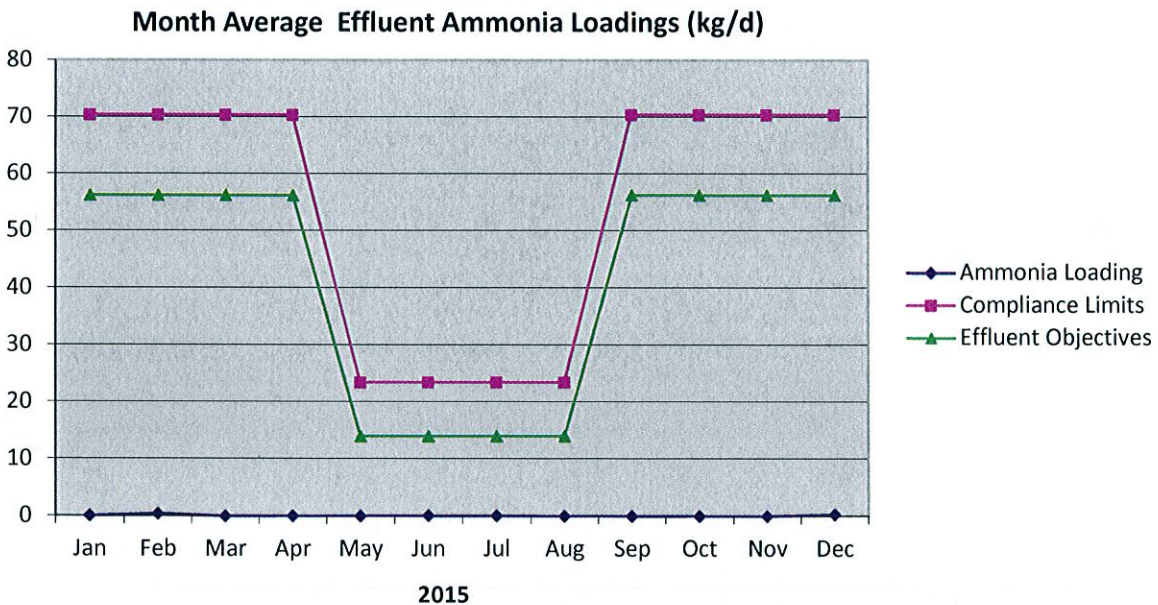
Please refer to section (b) below regarding a description of the operating problems encountered for phosphorous.

Effluent Ammonia



Compliance Limit: The WWTP effluent met the total ammonia concentration compliance requirements.

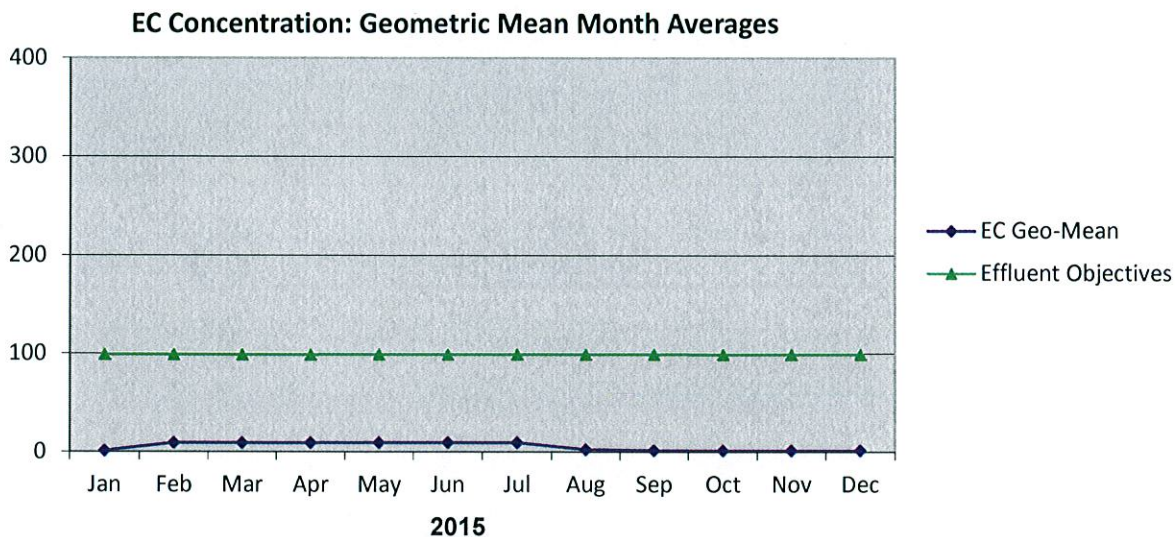
Effluent Objective: The WWTP effluent met the total ammonia concentration objectives.



Compliance Limit: The WWTP effluent met the total ammonia loading concentration compliance requirements.

Effluent Objective: The WWTP effluent met the total ammonia loading concentration objectives.

Effluent Bacteriological Quality (Escherichia coli)



Compliance Limit: There is no compliance limit for this parameter.

Effluent Objective: The WWTP effluent met the bacteriological concentration objectives.

Operating Problems Encountered and Corrective Actions Taken

2015 01 08: Gemmill's Bay SPS Overflow: Electrical failure of sewage pumps (Lead, lag and standby) due to a power interruption / surge at the Gemmill's Bay sewage pumping station, caused a raw sewage overflow event.

2015 06: Total Suspended Solids non-compliance: Laboratory results for samples collected June 3rd, 10th, 16th, 23rd & 30th, 2015 were 32, <33, 9, 2 & 4 mg/L respectively. In June 2015, unbeknownst to OCWA, the Ottawa lab contracted to do laboratory analysis began outsourcing some of the analysis work an out-of-the-province lab.

The methodology used by an Edmonton AB laboratory reported a result of <33 mg/L. Unfortunately, reporting a result as '<' makes it difficult to obtain an accurately month average. Using 33 mg/L value for calculating the average effluent concentration the facility achieved 16 mg/L (a noncompliant month average) for the month of June 2015.

OCWA changed laboratories following this incident and samples are now being analyzed by Caduceon Environmental Laboratories.

2015 08 22: a seal flushing line on the ATAD tank had been inadvertently left open. This additional seal water overfilled the tank and resulted in partially digested sludge/foam being spilled out of the hatch on the building roof and the ground around the building. Vacuum truck services were acquired to clean up the spill. The contents were discharged into Lagoon Cell "A" (Peak attenuation pond). Approximately one (1) m3 of digested sludge/foam had been released.

2015 10 – total suspend solids exceeded the effluent objectives while the total phosphorus concentration equaled the treatment objective. The increase in effluent concentration of both these parameters is attributed to alum dosage optimization work being undertaken by the plant operator. Alum is dosed at three locations within the treatment process. Early in October one of the three alum pumps was repaired and returned to service. Having the third pump back in service presents a challenge to balance the alum dosage while optimizing the treatment process. Operators succeeded at finding the proper balance and were able to optimize the treatment process.

Maintenance Summary: OCWA

Date	Item
	Parts Bin Materials. In the event of an emergency repair after hours, the plant should be equipped with some materials for repairs as per budget plan. Stock required PVC, bushings, fittings, nuts and bolts. Capital paper work completed. Waiting for client approval.
03/15/2015	ATAD Foam Sensor - Unit measuring foam level has failed. Thermal processing has acknowledged an issue with the foam sensor and recommends a different unit. -
02/19/2015	Turbo Blower Control Display. Unit Defective due to failed 24 VDC power supply. A new external power module was installed.
01/08/2015	Boiler System - Boilers would not run. No heat in building. Richer Commercial Heating
04/20/2015	Boilers 1, 2 & 3 Exhaust Piping. Wrong piping installed. Not to code as found on PM. Richer Commercial Heating Pipe replaced and inspections completed by technicians
03/26/2015	Ultraviolet Disinfection - system has four burnt out. Five will cause a system alarm.
06/25/2015	Glycol Pump for Boiler #2 - Pump has failed and requires replacement. done by technician
05/12/2015	Make up Air unit #1 - HVAC unit on roof supplying fresh air and heat into headworks. Unit has not been running properly. Troubleshooting was completed to verify electrical functions. Unit would not operate due to a natural gas issue. Need a technician to troubleshoot. had tech on site to trouble shoot and adjust, operating and working well
10/22/2015	Tertiary Filters A,B,C,D & Repair
	Parkson PVC Air Lift Pump - H2 Flow
05/01/2015	Trojan UV 3000 System - H2 Flow Equipment
09/30/2015	SCADA System Troubleshooting
07/03/2015	RAS Pumps 01, 02 & 03. During the PM of the RAS pumps it was noted that the pumps seals have been breached and water is getting into the oil. Purchased & installed new seals, gaskets and O rings.
08/18/2015	ATAD Foam Sensor - Replace the second of the two that had failed. Purchased and installed 4 foam sensors, modified 3 flanges and wooden flange, lots of parts

Date	Item
06/15/2015	Polymer Sludge Thickening - Solenoid on the carry water line has a damaged ceramic disk internally. This is allowing water to flow through the unit while off/closed. Stock solenoid used and reordered unit 254.25
	Final Effluent Sensor net print w/o Oct 30 2015
06/25/2015	Spill Containment System for Polymer Drums
06/02/2015	Spill Containment System for Polymer Drums
10/22/2015	Parts Inventory
07/17/2015	Chlorine Effluent Pump & Panel
08/14/2015	Final Effluent PH Probe failed. Unit assessed by instrumentation tech as not serviceable.
07/28/2015	AC Unit in Fault & will not operate.
	Sand Filter Air Lift Repairs
	Outside Light replacement.
	Alum Pump VFD
	Well #3 remove and replace parging and caulking as per JLR report.
08/22/2015	Plant overflow of ATAD
10/01/2015	Ball valves installed to seal water lines
09/30/2015	Clarifier M-615-Motor installed and tested new motor
	Motor for Alum Pump #1
10/06/2015	SCADA System Trends. The server logging data and trends froze. Emergency Repair
	6" Backflow Preventer - Filter Area has failed
12/15/2015	ATAD Solenoid
	Boiler #2 Leaking
12/31/2015	Compressors 1 & 2 air dryer not functioning.

Maintenance Summary: Municipality of Mississippi Mills Collection System

Collection System Details

- Estimated Population Served = 5,610 (based on 2.3ppu x residential accounts);
- Length of Collection System = 36.5 km
- 2,439 Residential Accounts, 320 Non- Residential Accounts (Commercial/Industrial/Institutional);

Maintenance and Operations (Collection)

- Sewer Cleaning and CCTV Assessments – Northwest Quadrant (approximately 7km)
- System repairs – sewers mainlines and services;
- New sanitary sewers commissioned in Mill Run Phase 1C Subdivision (Honeyborne Street), and Riverfront Phase 3 (Robert Hill Street, Merrithew Street and Spring Street);

- Commissioning of new pumpstation – Riverfront Estates Phase III (Robert Hill Drive at Spring Street)
- Installed 965m of structural sewer liners to combat infiltration in mainline sewers ranging in size from 200mm to 300mm in diameter;
- Reportable Spill: Spring Street SPS (29 Jan 2015). Failed transition coupling located between the main station and the valve chamber to the north. The event was reported to SAC-MOECC (#4214-9T8P3A) and remediation completed.
- Reportable Spill: Collection system overflow at a manhole upstream from the Christian St. SPS. It was estimated less than one (1) m3 of wastewater overflowed onto the boulevard around the manhole structure. An Ottawa contractor cleared the blockage and the Municipality completed the remediation work. The spill was reported to SAC-MOECC (#7241-9VNLSD).

Planning Initiatives

- Initiated detailed design work for future sewer replacements on Union Street South and Church Street (Ainley Group);
- Initiated Municipal Class EA study for replacements of infrastructure in the Almonte downtown core including water and sewer (Parsons);

Quality Assurance or Control Measures

For the first part of the year all sample analysis for compliance reporting were shipped to and analyzed by Exova Laboratories of Canada. In July 2015, OCWA started using Caduceon Environmental Laboratories. Both labs are accredited.

Quality Control & Compliance with Provincial Regulations

OCWA uses internal compliance auditing techniques by teams from within the organization but not from within the facility work team. OCWA operates the Mississippi Mills Wastewater Treatment Plant in accordance with provincial regulations. Here is how we do it:

- Use of Accredited Labs. Analytical tests to monitor your water quality are conducted by a laboratory audited by the Canadian Association for Environmental Analytical Laboratories (CAEAL) and accredited by the Standards Council of Canada (SCC). Accreditation ensures that the laboratory has acceptable laboratory protocols and test methods in place. It also requires the laboratory to provide evidence and assurances of the proficiency of the analyst(s) performing the test methods.
- Operation by Licensed Operators. The wastewater treatment plant is operated and maintained by the Ontario Clean Water Agency's competent and licensed staff. The mandatory licensing program for operators of wastewater facilities is regulated under the Ontario Water Resources Act (OWRA) Regulation 129/04. Licensing means that an individual meets the education and experience requirements and has successfully passed the certification exam.

- Sampling and Analytical requirements. OCWA follows a sampling and analysis schedule required by the ECA.
- Adherence to Ministry Guidelines and Procedures. To ensure the protection of the Public's health and operational excellence, OCWA adheres to the guidelines and procedures developed by the Ministry of Environment

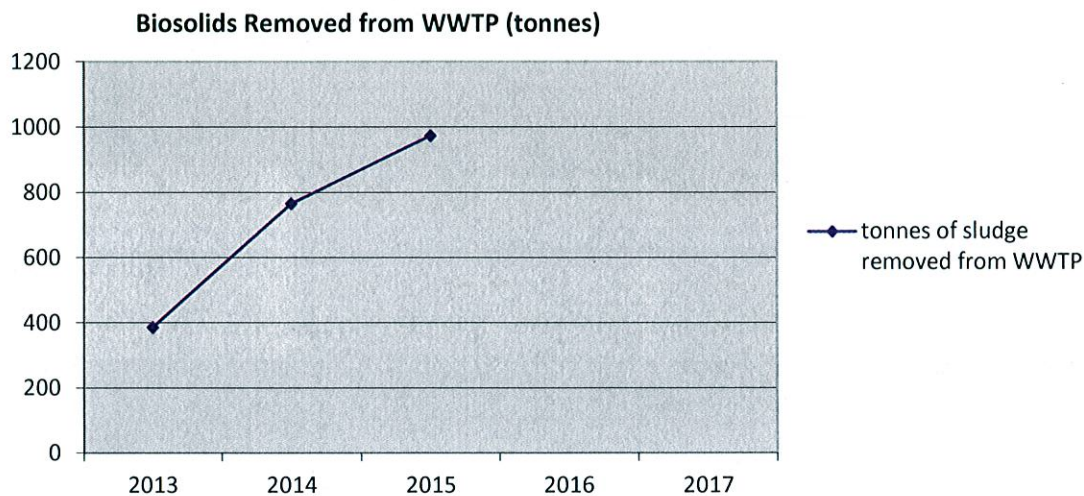
Calibration

Ensuring the annual calibration of the flow meters is the responsibilities of OCWA's Instrumentation Technician. Attached is a copy of the annual calibration report for review.

Biosolids

A total of 974.75 tonnes of biosolids were removed from the plant and applied to agricultural land in 2015. The WWTP is anticipating an increase in the amount of biosolids processed in 2016.

See the attached Biosolids Land Application 2015 Summary Reports.



Complaints

The operating authority did not receive any complaints for the wastewater treatment system. Please refer to the Maintenance section – Municipality of Mississippi Mills.

Septage

The Mississippi Mills WWTP Septage Received:
In 2014, 1329.18 m³ of septage were received
In 2015, 1231.95 m³ of septage were received

List of Acronyms

ATAD – Autothermal Thermophilic Aerobic Digesters
BOD - Biochemical Oxygen Demand
cBOD - carbonaceous Biochemical Oxygen Demand
DM - Daphnia Magna
MOECC – Ministry of Environment and Climate Change
RBT - Rainbow Trout
SAC – Spills Action Centre
SCADA – System Control and Data Acquisition
SPS – Sewage Pumping Station
SS - Suspended Solids
TSS - Total Suspended Solids
TKN - Total Kjeldahl Nitrogen
Tp & T. Phos – Total Phosphorus
WWTP – Wastewater Treatment Plant

List of Attachments

- PARs: WWTP Performance Assessment Report
- Customized Report: WWTP: Effluent pH, Temperature and Unionized Ammonia
- Customized Report: WWTP Acute Lethality: Daphnia magna (DM) and Rainbow Trout (RBT)
- Bypass / Overflow Daily Report: WWTP
- Meter Calibration Reports
- Biosolids Land Application 2014 Summary Report

END

Performance Assessment Report

From 1/1/2015 to 12/31/2015

5678 MISSISSIPPI MILLS WASTEWATER TREATMENT FACILITY 110000873

	1 / 2015	2 / 2015	3 / 2015	4 / 2015	5 / 2015	6 / 2015	7 / 2015	8 / 2015	9 / 2015	10 / 2015	11 / 2015	12 / 2015	←Total→	←Avg→	←Max→	←Criteria→
Flows																
Raw Flow: Total m3/d	67,297.19	67,452.54	86,394.09	153,622.71	62,246.51	70,678.93	95,612.03	74,322.00	61,785.00	55,816.30	58,384.90	66,642.94	884,055.14			
Raw Flow: Avg m3/d	2,170.88	2,409.42	2,870.78	5,120.75	2,077.95	2,255.96	1,826.19	2,387.48	2,059.50	1,800.53	1,952.83	2,148.77	2,426.80			
Raw Flow: Max m3/d	2,798.14	2,797.54	4,030.66	10,765.20	2,573.60	4,000.72	2,094.53	4,202.00	5,560.00	5,346.85	2,564.59	3,537.87	10,765.20			
Eff Flow: Total m3/d	51,476.59	50,302.31	72,229.93	137,484.29	55,802.36	63,219.28	36,972.60	45,958.90	43,611.30	49,605.51	52,447.93	63,021.79	728,832.93			
Eff Flow: Avg m3/d	1,660.54	1,796.52	2,330.00	4,582.81	1,790.40	2,107.31	1,192.66	1,708.35	1,453.71	1,600.18	1,748.26	2,032.96	2,000.31			
Eff Flow: Max m3/d	2,744.56	2,190.21	3,162.75	9,478.26	2,465.22	3,587.75	1,689.50	3,851.50	2,687.40	4,788.45	2,350.82	3,257.09	9,478.26			
Carbonaceous Biochemical Oxygen Demand: CBOD																
Raw: # of samples of cBOD5	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	52.00			
Eff: Avg cBOD5 mg/L	1.25	1.50	1.20	1.25	1.00	3.20	1.25	3.00	3.00	3.00	3.00	3.00	3.00	<	2.14	3.20
Eff: # of samples of cBOD5	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	52.00			
Loading: cBOD5 kg/d	2.08	2.89	2.80	5.73	1.79	6.74	1.49	5.13	4.96	4.80	5.24	6.10	4.08	<	4.08	6.74
Percent Removal: cBOD5 %	99.12	98.83	98.87	97.57	99.23	96.75	98.99	98.10	97.70	98.46	97.98	98.05	99.23			
Biochemical Oxygen Demand: BOD5																
Raw: # of samples of BOD5	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	52.00			
Eff: Avg BOD5 mg/L	1.50	1.75	1.20	1.00	1.00	3.20	1.25	3.50	3.00	3.00	3.00	3.40	2.32	<	4.00	25.00
Loading: BOD5 kg/d	2.49	3.14	2.80	4.58	1.79	6.74	1.49	5.98	4.96	4.80	6.99	6.91	4.34	<	6.99	6.99
Percent Removal: BOD5 %	99.10	98.52	99.02	98.63	99.37	97.66	98.99	98.60	98.06	98.66	98.01	98.14	99.37			
Total Suspended Solids: TSS																
Raw: Avg TSS mg/L	205.50	184.75	168.00	95.50	218.50	225.00	97.00	323.00	181.60	188.00	192.00	222.40	191.85			323.00
Raw: # of samples of TSS	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	52.00			
Eff: Avg TSS mg/L	5.00	7.75	6.00	7.75	4.75	16.00	5.00	6.50	6.00	12.00	8.25	4.00	7.42	<	16.00	15.00
Eff: # of samples of TSS	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	52.00			
Loading: TSS kg/d	8.30	13.92	13.98	35.52	8.50	33.72	5.96	11.10	8.72	19.20	14.42	8.13	15.12	<	35.52	35.52
Percent Removal: TSS %	97.57	95.81	96.43	91.88	97.83	95.92	94.85	97.99	96.70	93.62	95.70	98.20	98.20			
Total Phosphorus: TP																
Raw: Avg TP mg/L	5.49	4.46	3.54	1.78	4.74	5.75	5.23	8.12	4.60	5.30	4.65	5.19	4.90			8.12
Raw: # of samples of TP	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	52.00			
Eff: Avg TP mg/L	0.06	0.11	0.08	0.11	0.07	0.08	0.11	0.09	0.10	0.15	0.11	0.06	0.09	<	0.15	0.20

Ontario Clean Water Agency
Time Series Info Report
From: 01/01/2015 to 31/12/2015

5678
110000873
MISSISSIPPI MILLS WASTEWATER TREATMENT FACILITY
Municipality: Municipality of Mississippi Mills
Class 3 Wastewater Treatment
Mississippi River
14100.0 m3/day

Facility Org Number:
Facility Works Number:
Facility Name:
Facility Owner:
Facility Classification:
Receiver:
Service Population:
Total Design Capacity:

	01/2015	02/2015	03/2015	04/2015	05/2015	06/2015	07/2015	08/2015	09/2015	10/2015	11/2015	12/2015	Total	Avg	Max	Min
Final Effluent/ Temperature - °C																
Count IH	15	15	17	16	16	16	16	17	15	14	15	16	188			
Max IH	8.8	6.8	7.8	10.2	17.3	18.5	22.8	22	22	17.5	14.8	12.6			22.8	
Mean IH	6.967	5.307	6.806	7.863	15.325	17.463	21.138	20.829	20.02	16.113	13.402	11.631		13.576		
Min IH	5.3	4	5.9	5.7	10.6	16.6	19.3	19.6	18.6	14.3	11.8	8.9				4
Final Effluent/ pH - ---																
Count IH	15	15	17	16	16	16	16	17	15	14	15	16	188			
Max IH	7.54	7.61	7.63	7.59	7.35	7.38	7.24	7.3	7.56	7.38	7.35	7.45			7.63	
Mean IH	7.359	7.454	7.339	7.461	7.144	7.164	7.044	7.124	7.183	7.181	7.189	7.204		7.238		
Min IH	7.25	7.31	7.21	7.4	6.92	6.91	6.89	6.94	7.05	7.01	7.07	7.1				6.89
Final Effluent/ Total Ammonia Nitrogen: NH3 + NH4* as N - mg/L																
Count Lab	4	4	5	4	4	5	4	4	5	4	4	5	52			
Max Lab	0.18	0.37	0.02	0.02	0.02	0.05	0.05	0.01	0.01	0.02	0.01	0.73		0.73		
Mean Lab	0.068	0.26	0.02	0.02	0.02	0.05	0.05	0.01	0.01	0.013	0.01	0.154		0.057		
Min Lab	0.02	0.14	0.02	0.02	0.02	0.05	0.05	0.01	0.01	0.01	0.01	0.01		0.01		0.01

**Record of Bypassing/Overflows Daily Report
Ontario Clean Water Agency**

Facility Name: **MISSISSIPPI MILLS WASTEWATER TREATMENT FACILITY**
 Facility Works Nu **110000873**
 Facility Owner: **Title Holder: Municipality**
 Facility Classification: **Class 3 Wastewater Treatment**
 Receiver: **Mississippi River**
 Service Population:
 Total Design Capacity: **14100.0 m3/day**
 Period Being Reported: **01/2015 12/2015**

Station Name: **Primary Bypass (Overflow)**

Date (mm/dd/yyyy)	Start Time (hhmm)	Stop Time (hhmm)	Duration (hr)	Volume (m3)	Disinfection Provided	Reason	BOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	E.Coli (cfu/100mL)
1/8/2015	2:46	2:56	1.5	unknown	Yes	3	60	71	2.15	790

PrBy = Primary Bypass: the discharge of raw sewage is subject to no treatment except grit removal and/or chlorination

Event: means an action or occurrence, at a given location within the Sewage Treatment Plant that causes a Plant Bypass or Plant Overflow. An Event ends when there is no recurrence of a Bypass or Overflow in the 12-hour period following the last Bypass or Overflow. Two Events are

Combined Sewer System: a sewage collection system which conveys sanitary sewage (domestic, commercial and industrial wastewaters) and stormwater runoff through a single-pipe system to a sewage treatment plant. Combined sewer systems which have been partially separated and in which roof leaders and/or foundation drains contribute stormwater inflow to the sewer system conveying sanitary flows are still defined as combined sewer systems in the ministry Procedure F-

REASON:

- 0 = Other
- 1 = Precipitation
- 2 = Snow Melt/Freshet
- 3 = Equipment/Mechanical Failure
- 4 = Equipment Maintenance
- 5 = Infiltration/Sewer Problems
- 6 = Power Failure
- 7 = Exceed Design Capacity
- 8 = Pipe Failure (break/leak/plugged)
- 9 = Process Upsets



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

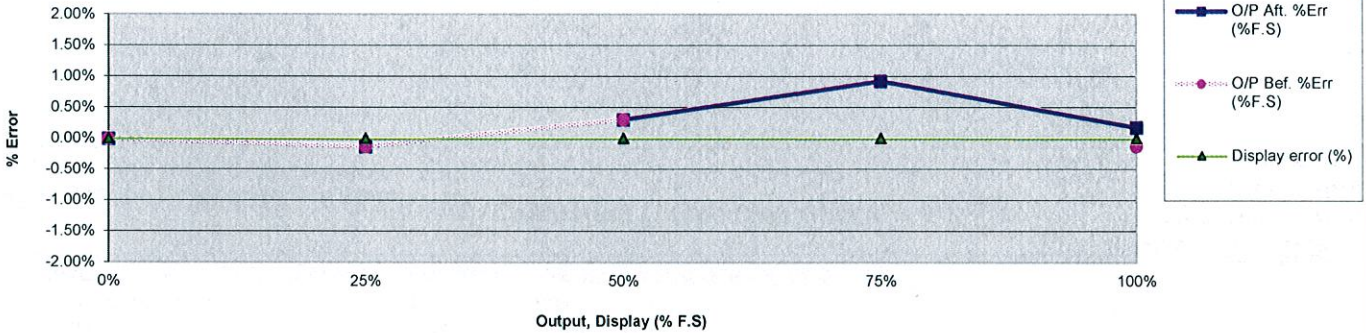
Calibration / Inspection Check

Ottawa Valley Hub
 122 Patterson Crescent
 Carleton Place, ON, K7C 4P3
 Tel: 613 257 4990 Fax:613 257 5727

Project: MISSISSIPPI MILLS WWTP	Description: METER FLOW LAGOON EFFLUENT	Technician: <u>Tom K.</u> Signature: _____ Date: <u>23/4/15</u>
Equipment ID: 0000190024	Make: MILL	
Model#: OCMIII	Type: Parshall Flume	
Serial#: 31955459	Project Org.: 5678	
INT.DIA: 12"	Work Order Ref.: _____	
Cal. FS: _____ liter/s	Range: 0-21554.57 m ³ /d	
Customer FS: _____ liter/s	Sensor Factors: _____	

No.	V. Setting (m/sec)	P(psi)	Head (cm)	Head (m/w.c)	Flow (m ³ /D)	CAL. Standard	Display Before	Display After	Display error (%)	O/P. Theo (mAdc)	O/P. Before CAL (mAdc)	O/P. After CAL (mAdc)	O/P Bef. %Err (%F.S)	O/P Aft. %Err (%F.S)
1			0.00		0.00					4.00	4.00	4.00	0.00%	0.00%
2			20.92		5388					8.00	7.98	7.98	-0.12%	-0.12%
3			32.98		10777					12.00	12.05	12.05	0.31%	0.31%
4			43.05		16165					16.00	16.15	16.15		0.94%
5			51.20		21554					20.00	20.03	20.03	-0.12%	0.19%

Calibration Characteristic



Comments:



Mississippi Mills - Sites Applied with Biosolids 2015

Date 2015	Farmer/ Landowner	NASM#	Lot	Con	Township	Field #	Application Method	Total Dry Tonnes (t)	Area Spread (ha)
May 21-22	Don Cochrane - Clayton	20811	21	7	Ramsay	1	Incorporated	486.2	12.45
Oct 22-23	Don Cochrane- Home	20811	23	7	Ramsay	1	Incorporated	488.75	13.36
TOTAL								974.95	25.81

Town of Mississippi Mills Landbank

Farmer	Site #	Farm Name	Lot	Con	Township	Area (ha)	Expiry Date
Don, Cathy & Adam Cochrane	20811	Clayton Rd.	21	7	Ramsay	37.2	Dec 31 2016
		Gavin Giles	5	7	Pakenham	22	
		Home Farm	23	7	Ramsay	38.16	
		John Steele - Bennie Rd	25	7	Ramsay	15.2	
		John Steele - Home	22	7	Ramsay	30.4	
		Lyle Reid North	4	7	Pakenham	16	
		Lyle Reid South	4	7	Pakenham	11.2	
		Peter Cochran Conc 7	23	6	Ramsay	26.8	
		Peter Cochran Home	20	6	Ramsay	27.44	
		Sharon Reid	3	7	Pakenham	15.2	
TOTAL						239.6	

Twelve Month Average: January 2015 - December 2015
Mississippi Mills

Metals	Maximum Acceptable Concentration (mg/kg)	2015 Average
As	170	2.227
Cd	34	0.595
Co	340	1.727
Cr	2800	16.682
Cu	1700	381
Hg	11	0.377
Mo	94	2.864
Ni	420	10.136
Pb	1100	43.136
Se	34	1.727
Zn	4200	308.364
E. Coli	Maximum Acceptable Concentration (CFU/g)	
	2,000,000	360
Total P (%)		2.40
Ammonia+Ammonium (ppm)		3,220
Nitrate+Nitrites (ppm)		778
TKN (%)		3.65
Potassium (%)		0.076
Solids (%)		17.7

Mississippi Mills - Monthly Haulage 2015

Month	dry tonnes (t)	% of Total Haulage
January	0	0.0
February	0	0.0
March	0	0.0
April	0	0.0
May	486.2	49.9
June	0	0.0
July	0	0.0
August	0	0.0
September	0	0.0
October	488.75	50.1
November	0	0.0
December	0	0.0
Total:	974.95	100