

**Borough of Chatham**

**Annual Report**

**2015**

**Madison-Chatham Joint  
Meeting**

**MADISON-CHATHAM JOINT MEETING  
SUPERINTENDENT'S ANNUAL REPORT  
JANUARY 2016**

**DEAR MEMBERS:**

Happy New Year!!! 2015 has come to an end. I have been able to run the facility in an efficient, cost effective, and environmentally sound manner. The operation of the facility in 2015 has met all permit limits and requirements.

The major capital project of 2016 is the NJEIT Facility Improvements 2015 project. This project entails replacement of two primary clarifiers, concrete and railing work, replacement of two final clarifiers, rehabilitating two other final clarifiers, and replacement of the secondary digester. The stabilization pond/lagoon has been taken out of service. Several other capital projects are ongoing, such as the pump replacements and control panel upgrades.

I have attached two pages of the plant operation data summary for 2015. The data reflects the facility's operation efficiency and our permit limits. The facility produced an average of approximately 39,000 cubic feet of methane gas daily in 2015, up from 31,700 cubic feet in 2014. This is an increase of approximately 23% from 2015. The methane gas is utilized as fuel for the digester boilers and caterpillar engines. The heat generated from the boilers and engines are used solely for heating the two primary digesters. The engines power centrifugal blowers that are also used to provide diffused air for the aeration tanks, saving electricity by not running the electric blowers.

**STABILIZATION POND/LAGOON CLOSURE**

This is a budgeted capital project. The lagoon has been completely taken out of service. We are in the process of removing sludge from the lagoon. We are doing this in-house, with MCJM equipment, saving the MCJM a significant amount of money for removal and disposal costs. The dredged sludge is run through our belt filter press. Due to the cold weather, we have temporarily suspended this operation.

**PUMP REPLACEMENTS**

This is a budgeted capital project. This will be an ongoing project. We saved a considerable amount of money doing the engineering and installation ourselves. We have just two more pumps to order and install.

**CONTROL PANEL UPGRADES**

This is a budgeted capital project. The second control panel has been delivered. We are in the process of scheduling installation. We will also be saving a considerable amount of money by running the communication wires between the panels using MCJM staff. We are also exploring the option of using wireless communication in lieu of wires.

**OTHER ISSUES:**

We have counted the **Canadian geese** nests at the facility. As of April 17, 2015, we have 2 nests with a total of 9 eggs, which were addled. Addling includes oiling,

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shaking, or puncturing. Since we only addle eggs, a goose depredation permit is no longer needed. Instead we just need to register on the state website for addling.

I attended the **NJWEA annual conference** at Bally's in Atlantic City from May 11<sup>th</sup> to the 15<sup>th</sup>. I am on the Program Committee and head moderator of my session, "Wastewater Treatment Operator's Program." I was responsible for finding speakers and scheduling their presentations.

The Madison-Chatham Joint Meeting supports any operator that would like to take wastewater classes in preparation for taking any of the **wastewater licenses** available to them. Robert Klein passed the S-2 license exam in May.

The certification from the Supreme Court has been denied regarding the litigation for **seasonal phosphorus limits**. We anticipate the new limits will be issued when our new permit is issued, with a 3 to 5 year implementation schedule. We are still waiting for a draft of the new permit. We are working on an expired NJPDES permit until the new one is issued.

One employee is still out on Worker's Compensation due to an **injury** sustained at the MCJM on August 15, 2013. All employees are pulling up the slack and filling in the gap due to being short handed. The mechanic has been assisting in running the lagoon sludge dredging equipment when his schedule allows. The mechanic is also being trained in the sludge handling facility.

The **tour** of the facility with students from the Chatham High School, took place on November 16, 2015.

I would like to take this opportunity to invite any interested council members down to the plant for a tour.

**RESPECTFULLY SUBMITTED,**

**CHRISTOPHER MANAK  
SUPERINTENDENT**

2015 OPERATIONAL DATA

Month	Plant Flow (MGD)	Precip. Rain inches	Influent BOD mg/L	Effluent BOD mg/L	% Removal	Influent S.S. mg/L	Effluent S.S. mg/L	% Removal	Effluent NH3-N mg/L	Effluent TPO4 mg/L	Effluent D.O. mg/L	Fecal Coliform #/100 ml
January	2.191	4.6	252	3.7	98.5	394	4.3	98.9	0.4	2.8	6.0	8.4
February	1.878	2.3	174	2.6	98.5	183	2.5	98.6	0.3	3.6	10.0	10.0
March	2.944	6.0	151	2.3	98.5	184	3.3	98.2	0.2	2.8	8.0	14.1
April	2.202	3.8	198	2.3	98.8	222	4.2	98.1	0.2	3.3	9.0	10.0
May	1.951	1.3	169	2.7	98.4	206	5.8	97.2	0.1	4.4	7.0	9.3
June	2.200	9.3	149	2.2	98.6	195	5.5	97.2	0.2	3.6	7.0	10.0
July	1.878	1.9	141	2.0	98.6	197	7.6	96.1	0.3	4.0	7.0	7.6
August	1.830	2.9	169	1.8	98.9	298	11.8	96.1	0.1	4.2	7.0	13.4
September	1.976	4.2	158	1.6	99.0	224	9.2	95.9	0.2	4.3	7.0	9.0
October	2.051	5	186	1.7	99.1	198	6.5	96.7	0.1	3.8	8.0	7.8
November	1.977	2.7	172	2.0	98.8	206	8.3	96.0	0.5	4.0	7.0	9.3
December	2.201	5.2	204	2.9	98.6	229	11.8	94.9	0.1	3.6	8.0	9.6
<b>Total</b>	769.660	49.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Average</b>	2.107	4.1	177	2.3	98.7	228	6.7	97.0	0.2	3.7	7.6	10

Permit Limits	3.5	NONE	NONE	8	Min 85	NONE	30	Min 85	2.0 Sum 7.0	4.4 Sum 4.0	Wint 6	Min 200
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Notes: Summer is defined as May 1 - Oct 31, Winter is Nov 1 - April 30

**2015 OPERATIONS DATA - SLUDGE**

<b>Month</b>	<b>GPD of Sludge Pumped to Primary Digester</b>	<b>Sludge Removed From Plant Per Month - C.Y.</b>	<b>Sludge Removed From Plant Per Month - GAL.</b>	<b>Methane Gas Produced Per Month - C.F.</b>
January	10,178	200	0	1,238,963
February	9,341	120	0	1,307,961
March	9,341	160	0	1,468,269
April	11,140	140	0	1,539,078
May	17,465	160	0	1,584,106
June	17,873	180	0	1,225,771
July	20,696	240	0	791,624
August	20,535	240	0	892,898
September	17,374	120	0	491,847
October	14,991	180	Secondary Digester Taken out of Service	
November	16,350	140	"	
December	15,386	160	"	
<b>Total</b>	N/A	2040	0	10,540,517
<b>Average</b>	15,056	170	0	1,171,169