

Borough of Chatham

Annual Report

2010

**Madison-Chatham Joint
Meeting**

**MADISON-CHATHAM JOINT MEETING
SUPERINTENDENT'S
2009 ANNUAL REPORT
JANUARY 2011**

DEAR MEMBERS:

Happy New Year!!! 2010 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 2010 has met all permit limits and requirements.

Two new capital projects are being budgeted for 2011. The first is replacement of a polymer system that was installed in 1988. The second is completing the energy audit recommendations. The energy audit recommendations must be completed by September 30, 2011, in order for us to keep the 100% reimbursed money for the cost of the audit.

The project titled Facility Improvements 2009, where the Joint Meeting has received funding through ARRA, with 50% principle forgiveness, is supposed to be completed in February. Included in this project are two capital projects from 2009, the cleaning of the secondary digester and the control chamber #1 isolation valve, as well as, demolition of an abandoned underground digester, installation of a new digester mixing system (classified as a green project), installation of a phosphorus treatment system, cleaning of digester #1, and replacement of digester piping and valves.

I have attached two pages of the plant operation data summary for 2010. The data reflects the facility's operation efficiency and our permit limits. The facility averages almost two tons of dry solids daily. Also, the process produces an average of approximately 21,000 cubic feet of methane gas daily. 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 are also used to provide diffused air for the aeration tanks, saving electricity by not running the electric blowers.

There are some carryovers with Capital Projects from previous years. They are the admin building control panel update (which went out to bid on January 13, 2011), replacement of heat exchanger #2, replacement of two thickened sludge pumps, asset management, SHF HVAC Replacements, and Desk Replacements. I have also discussed some other issues or goals that I have established.

SLUDGE HANDLING FACILITY HVAC EVALUATION/REPLACEMENT:

This is a budgeted capital line item. The replacements of the HVAC components are taking longer than anticipated due to other projects and being short handed.

COMPUTER & FURNITURE REPLACEMENTS:

This is a budgeted capital line item. The replacement of the desks is taking longer than anticipated due to other projects.

ASSET MANAGEMENT

This is a budgeted capital project. The completion of the asset management is taking longer than anticipated due to other projects and being short handed. There are just a few items that I need to get for the engineer to complete this project. I have put this to the top of my to do list, and have begun to gather this info for the engineer.

ENERGY AUDIT

The final report has been received and a request for reimbursement of the energy audit cost has been made to TRC Energy Services. One of the budgeted capital projects for this year is to implement some of the recommendations. MCJM has until September 30, 2011 to submit proof to TRC in order to keep the entire incentive.

FACILITY IMPROVEMENTS 2009

The project is underway. The contractor Spectraserv has been on-site daily. Spectraserv is 48% complete with the substantially complete date at February 22, 2011. CDM does not feel the contractor will complete the project on time. If they feel they will not, Spectraserv will need to make a formal request to both CDM and the NJDEP for an extension. The extension could be granted based on reasons beyond their control, i.e., the weather, or it might not be granted. If Spectraserv fails to complete the job on time, there is a \$200/day liquidated damage charge.

CONTROL PANEL UPDATE

The Notice to Bidders was advertised on January 13, 2011. We will receive bids on February 2, 2011.

HEAT EXCHANGER #2

This has been temporarily put on hold due to other issues. The replacement of this unit is not an immediate concern.

THICKENED FEED PUMP REPLACEMENT

This has been temporarily put on hold due to other issues. The replacement of this unit is not an immediate concern.

OTHER ISSUES:

We have counted the **Canadian geese** nests at the facility. As of April 7, 2010, we have 3 nests with a total of 18 eggs, which were addled. Addling includes oiling, shaking, or puncturing. The low count of nest and eggs are probably related to the rain and high river that might have washed some of the nests/eggs away.

Mr. **Frank Fabrizio** returned from FMLA leave on December 21, 2010. Mr. Fabrizio has been fulfilling all the requirements of his return agreement. Mr. Fabrizio jumped right back into the swing of things and within 4 weeks is all caught up.

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. Both Mr. Fabrizio and Mr. Lasher are taking advantage of this opportunity.

Mr. **William Lasher** passed his advanced collection class in December 2010. Mr. Lasher is still enrolled in the introduction to water and wastewater class, which will end in May 2011. Upon completion of the introductory class, Mr. Lasher will be able to take both the S-1 and C-1 license exams.

The Joint Meeting, as well as three other treatment facilities, has litigation pending against the NJDEP regarding **seasonal phosphorus limits** vs. year round phosphorus limits. There will be huge monetary savings, if the court sides with us. No decision has been made. We are anticipating a decision early this year.

Our **NJDPEs permit** expired on January 31, 2010. We have received the final permit, with a new date of permit of January 1, 2011. The new permit will expire December 31, 2015. No issues will need to be appealed. We are currently taking data to have one of the permit parameters removed.

Our **NJPDES Groundwater permit** expired on April 30, 2009. We have not been issued a new permit and are currently working under the expired permit.

We will begin sampling for data review to determine if the **lagoon** can be removed from the treatment process. Tim Bradley, of Omni Environmental, will be coordinating all necessary data and making a professional and environmental decision if this can be done.

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**

2010 OPERATIONS DATA

Month	Plant Flow (MGD)	Precip. 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	2.334	4.3	142	4.8	96.6	145	13.3	90.8	0.2	3.5	11.0	<10
February	2.499	5.7	109	2.9	97.3	111	7.3	93.4	0.2	3.3	11.0	<10
March	3.745	17.5	112	4.1	96.3	86	13.3	84.5	0.2	2.1	9	<10
April	2.507	3.6	133	1.8	98.6	155	4.2	97.3	0.4	3.3	8.0	<10
May	2.212	3.9	134	2.8	97.9	164	5.6	96.6	0.5	4.0	7	<10
June	2.064	2.6	146	3.3	97.7	165	4.7	97.2	0.4	4.1	7	<10
July	1.987	4.2	106	3.5	96.7	131	4.1	96.9	0.3	4.3	8	<10
August	1.981	5.6	139	1.6	98.8	174	3.0	98.3	0.2	4	6	<10
September	2.118	5.4	141	2.6	98.2	141	5.1	96.4	0.2	3.5	8	<10
October	2.247	7.6	144	1.7	98.8	142	2.6	98.2	0.2	2.8	8.0	<10
November	2.045	2.8	137	2.6	98.1	121	2.9	97.6	0.2	3.2	9.0	<10
December	2.315	7.7	162	1.9	98.8	84	3.8	95.5	0.2	3.1	8	<10
Total	N/A	70.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	2.338	5.9	134	2.8	97.8	135	5.8	95.2	0.3	3.4	8.3	0
Permit Limits	3.5	NONE	NONE	8	Min 85	NONE	30	Min 85	2.0 Sum 7.0	4.4 Sum 4.0	Min 6	200

Notes: Summer is defined as May 1 - Oct 31, Winter is Nov 1 - April 30

2010 OPERATIONS DATA - SLUDGE

Month	GPD of Sludge Pumped to Primary Digester	Sludge Removed From Plant Per Month - C.Y.	Sludge Removed From Plant Per Month - GAL.	Methane Gas Produced Per Month - C.F.
January	14,238	200.0	0	608,592
February	16,580	160.0	0	506,920
March	14,753	140.0	231,500	697,748
April	16,394	180.0	29,000	802,037
May	16,336	200.0	0	762,276
June	16,336	220	0	572,697
July	12,069	200	0	579,473
August	13,864	220	0	594,829
September	14,844	180	0	526,002
October	14,929	160	0	714,960
November	14,363	220	0	579,894
December	15,938	280.0	0	558,534
Total	N/A	2360	260,500	7,503,962
Average	15,054	196.7	21,708	625,330