

Borough of Chatham

Annual Report

2008

**Madison-Chatham Joint
Meeting**

**MADISON-CHATHAM JOINT MEETING
SUPERINTENDENT'S
2008 ANNUAL REPORT
JANUARY 2009**

DEAR MEMBERS:

Happy New Year!!! 2008 has come to an end. John Zink, the manufacturer, finally fixed the Waste Gas Burner, a carry over from 2007. We are now able to run it in automatic. I have been able to run the facility in an efficient, cost effective, and environmentally sound manner. The operation of the facility in 2008 has met all permit limits and requirements.

There are several new Capital Projects that will be accomplished in 2009. They are the cleaning of the secondary digester, control chamber #1 isolation valve, and asset management. Some other projects of interest are, the continuation of the Total Phosphorus Trial, and two Energy Audits, one by the state and one by the county.

I have attached two pages of the plant operation data summary for 2008. 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 24,000 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.

The only capital projects being carried over from 2008 is the Bisulfite Analyzer and SHF HVAC Replacements. The Desk and Computer Replacement is a carry over from 2007. I have also discussed some other issues or goals that I have established.

WASTE GAS BURNER:

The waste gas burner is 100% complete, including the repair of the design flaw.

CLARIFIER VALVES REPLACEMENT:

This project is 100% complete.

FACILITY SECURITY:

This is a budgeted capital line item. This project is 99% complete.

SLUDGE HANDLING FACILITY HVAC EVALUATION/REPLACEMENT:

This is a budgeted capital line item. We are currently waiting for the delivery and installation of the roof top air-handling unit. This should be accomplished within the next few weeks. The next step is the replacement of the other boiler and an interior HVAC unit.

SLUDGE HANDLING FACILITY PUMP REPLACEMENT:

This is a budgeted capital line item. This project is 100% complete.

COMPUTER & FURNITURE REPLACEMENTS:

This is a budgeted capital line item. The computers were purchased and installed. The next step is the replacement of the desks. This is a carry over from 2007. And, since the MCJM will be the location of all 2009 meetings, some furniture might need to be purchased. We will investigate obtaining some of the furniture from Hartley Dodge in Madison.

OTHER ISSUES:

We have counted the **Canadian geese** nests at the facility. As of April 2008, we had 6 nests with a total of 35 eggs, which were addled. Addling includes oiling, shaking, or puncturing. The Madison-Chatham Joint Meeting has a permit issued by US Fish & Wildlife allowing us to addle goose eggs.

I was asked again to help out with the **NJWEA Annual Conference Program Committee**. Last year I was a co-moderator. This year, I have been promoted to head moderator. I am responsible for making sure our session's time slots are filled with speakers, introducing the speakers, and moderating the session, as needed.

We had great success in advertising for the **vacant operator's position**. The operator, Istvan "Steve" Apati, began work at MCJM on June 19, 2008. Mr. Apati was put into the rotation in July and was granted full-time status at the MCJM January 2009 Annual Meeting.

We are meeting with the NJEIT/NJDEP to discuss some **Economic Stimulus money** that might be available for wastewater projects. A meeting has been scheduled with the director, Stanley Cach, of NJEIT for Monday, January 26, 2009. Two representatives of CDM, Jennifer, and myself will also be in attendance. At present, we do not know how the money is being offered; whether it be 0% interest loan, grant money, partial grant money, or a low interest loan. Another possibility is principal forgiveness, where a certain percentage of the principal would not have to be paid back.

Mr. **Frank Fabrizio** has been attending the Advanced Wastewater I class since Fall 2008. Mr. Fabrizio passed Part I and is currently enrolled in Part II. Mr. Fabrizio

will sit for the S-2 Wastewater License exam, upon successful completion of Part II, in May 2009.

I have completed the **Leadership Development** program, held by the Rutgers Center for Management Development. The Leadership Development Program has a certificate option that requires 12 workshops within a three-year period. In the fall of 2009, I will be registering for the Certified Public Works Management program.

We have received good results from our **Total Phosphorus Trial** conducted from November to December. The only negative aspect is that we will have to change the polymer we use on our gravity belt thickeners in SHF. The current polymer, with the addition of the phosphorus-reducing chemical, is not able to thicken the sludge.

There was an **oil spill in Madison** that caused local fire departments, county HAZMAT, and state NJDEP officials to respond to Madison and the treatment facility. It was determined that a home heating oil tank ruptured and got into the Madison sanitary sewer system via a crack. That crack has since been repaired with a sewer lining. The NJDEP hotline was called and the MCJM did not suffer any consequences, except for odors; and no permit parameters were violated.

The Joint Meeting will have to submit to the NJDEP a **80% Capacity Assurance Report (CAP)**, since three consecutive three month rolling flow averages exceeded our 80% capacity. This is a NJPDES Permit requirement. 80% of 3.5 MGD is 2.8 MGD. We will also be required to submit quarterly WQM007 forms to the state. Many sewerage authorities are currently doing this. I have attached our 2008 rolling averages. The first time it occurred, not shown, was from 12/07 to 2/08. It was 2.817 MGD, which is 80.5%.

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. I will work with any operator and assist them where needed to accomplish this task.

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**

2008 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	2.437	1.7	177	2.4	98.6	172	1.8	98.9	0.2	3.4	11.3	10.0
February	3.121	6.8	162	2.5	98.3	115	1.1	99.0	0.3	2.8	10.9	80.0
March	2.965	5.5	206	3.2	97.1	188	1.3	99.3	0.1	2.6	11.3	10.0
April	2.319	0.0	195	3.0	98.5	209	2.1	99.0	0.1	4.1	10.8	10.0
May	2.519	4.8	194	2.9	98.5	257	2.5	99.0	0.2	3.9	10.2	20.0
June	2.189	4.0	200	2.6	98.6	303	2.9	99.1	0.3	4.5	7.3	2.0
July	2.063	5.2	240	3.4	98.5	309	2.8	99.1	0.2	4.3	7.7	2.0
August	2.010	1.4	149	4.9	95.1	167	3.2	98.1	0.1	4.3	8.7	9.0
September	2.375	7.7	222	4.9	97.8	259	3.2	98.8	0.3	4.1	7.7	59.0
October	2.212	4.2	197	2.6	98.6	181	1.3	99.3	0.2	4.0	9.0	6.0
November	2.351	3.4	155	3.8	97.5	268	1.4	99.5	0.1	1.7	10.0	10.0
December	3.720	7.1	138	2.1	98.4	206	3.3	98.4	0.1	1.4	10.6	2.0
Total	N/A	51.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average	2.523	4.3	186	3.2	98.0	220	2.2	99.0	0.2	3.4	9.6	18
Permit Limits	3.5	NONE	NONE	8	Min 85	NONE	30	Min 85	2.0 Sum 7.0 Wint	4.4 Sum 4.0 Wint	Min 6	200

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

2008 OPERATIONS DATA - SLUDGE

Month	GPD of Sludge Pumped to Primary Digester	Equivalent Dry Tons of Sludge Pumped per Day	Sludge Removed From Plant Per Month - C.Y.	Methane Gas Produced Per Month - C.F.
January	16,336	1.8	220	645,400
February	16,785	2.0	140	682,910
March	17,273	2.1	200	871,570
April	18,304	2.0	180	881,360
May	18,596	2.0	200	818,970
June	18,771	1.6	200	787,480
July	17,806	1.6	220	757,840
August	17,042	1.6	180	586,430
September	16,436	1.5	220	710,520
October	16,303	1.8	220	700,170
November	15,571	1.5	160	546,830
December	16,511	1.7	180	543,200
Total	N/A	N/A	2320	8,532,680
Average	17,145	1.8	193	711,057

2008 OPERATIONS DATA - 80% CAP

Month	Plant Flow (MGD)	3 Mo. Avg (MGD)	3 Mo. Avg (%)	3 Mo. Avg (Mo.)
January	2.437	2.841	81.2%	Jan - Mar
February	3.121	2.802	80.0%	Feb - Apr
March	2.965	2.601	74.3%	Mar - May
April	2.319	2.342	66.9%	Apr - Jun
May	2.519	2.257	64.5%	May - Jul
June	2.189	2.087	59.6%	Jun - Aug
July	2.063	2.149	61.4%	Jul - Sep
August	2.010	2.199	62.8%	Aug - Oct
September	2.375	2.313	66.1%	Sep - Nov
October	2.212	2.525	72.2%	Oct - Dec
November	2.351			Nov - Jan
December	3.013			Dec - Feb
Total	N/A			
Average	2.465			
Design Limits	3.5			