

**MADISON-CHATHAM JOINT MEETING
SUPERINTENDENT'S ANNUAL REPORT
JANUARY 2012**

DEAR MEMBERS:

Happy New Year!!! 2011 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 2011 has met all permit limits and requirements.

Two new capital projects for 2012, are using funds that were earmarked for projects that we were able to include in the Facility Improvements 2009 project. The first is replacement of a various pumps and controls that were installed in 1988. The second is completing a change order for the control panel, that was installed in 2011.

I have attached two pages of the plant operation data summary for 2011. The data reflects the facility's operation efficiency and our permit limits. The facility produces an average of approximately 15,000 cubic feet of methane gas daily. This amount is down from last year's 21,000 cubic feet, due to the digesters being cleaned and emptied and the plant losing the ability to store and use methane gas. 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.

Two Capital Projects, polymer system replacement and the energy improvements, are being carried over from previous years. I have also discussed some other projects and issues.

SLUDGE HANDLING FACILITY HVAC EVALUATION/REPLACEMENT:

This is a budgeted capital line item. The boiler has been installed and is in the process of being connected.

ASSET MANAGEMENT

This is a budgeted capital project. I've reviewed the draft report from CDM Smith. Some minor corrections need to occur and than we will receive a final report.

ENERGY AUDIT

This is a budgeted capital line item. The improvements will be done in house and completed by September 30, 2012. I am in the process of ordering equipment and working on lighting improvements.

FACILITY IMPROVEMENTS 2009

The project is 97% complete. There was some money left over, so we have received NJDEP approval to use that money to replace heat exchanger #2, thickened feed pumps, and the old wood grating on the aeration basins and chlorine contact tanks.

CONTROL PANEL UPDATE

This is a budgeted capital line item. The unit is installed and operating properly. This project is 100% complete.

HEAT EXCHANGER #2

This has been added to the Facility Improvements 2009 project.

THICKENED FEED PUMP REPLACEMENT

This has been added to the Facility Improvements 2009 project.

BELT FILTER PRESS POLYMER SYSTEM

Specifications are being drafted in-house. This is a budgeted 2011 capital project.

OTHER ISSUES:

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.

The Joint Meeting fared well with **one major rainfall event** on March 10-11. MCJM did not sustain any damage except a loss of process and overtime to the operators. Total rainfall for the two-day event was in excess of 4 inches of rain, and flows exceeding 12 MDG. An affirmative defense letter was sent to NJDEP.

The first round, of phase two, of **wastewater mercury sampling** has occurred. This occurred on March 4, 2011. The second round occurred on March 15, 2011. The first round results have already been submitted to NJDEP. The second round, of phase two, of **wastewater mercury sampling** occurred on April 15, 2011. These results have already been submitted to NJDEP. This sampling is a requirement of NJDEP to assess the effectiveness of the Amalgam Rule on the release of mercury to collection systems and the environment.

We have counted the **Canadian geese** nests at the facility. As of April 14, 2011, we had 6 nests with a total of 30 eggs, which were addled. Addling includes oiling, 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.

An affirmative defense letter was sent to NJDEP for our inability to sample our **monitoring wells** during the December – February monitoring period. This was due to either being under water or covered with snow making access impossible. Both Diane Alexander, environmental attorney, and Jim Cosgrove, Omni Environmental, assisted with the letter. MCJM returned to normal by March 29, 2011, thereby facilitating sample collection.

I attended the **NJWEA annual conference** at Bally's in Atlantic City from May 9th to the 12th. I am on the Program Committee and head moderator of my session, "Wastewater Treatment Operator's Workshop." I will be doing the same thing this year.

Since our laboratory technician has retired, I, as Lab Manager, had to perform two **proficiency tests** for MCJM to keep our lab certification. The two tests that I completed were total residual chlorine and pH. MCJM received an acceptable scoring from NJDEP.

Our **Industrial Pretreatment Report** has been completed by CDM. The deadline for this report is August 1, 2011. The report is being prepared for mailing to NJDEP. This is an annual NJPDES permit requirement.

I advertised for the **new operator position** in several papers and websites. I received many resumes. Fourteen applications were sent out. Out of the 14 applications sent out, eight people were interviewed. Out of the eight people, five were called back for a second interview, with one person declining a second interview bringing the number down to four. Frank Fabrizio assisted me with the second interviews. Out of the four interviewed, Frank and I chose one person who best fit the qualifications. I am recommending this person to the MCJM for employment.

Hurricane Irene caused the Joint Meeting less than \$8,500 worth of damage. This accounted for items that were submerged, as well as approximately \$2,500 of overtime. Some of the items that were damaged were two fixed gas sensors, four motors and two pumps, an ice maker, and a 55 gallon of oil, to name a few. Thanks to the generosity of Madison, the chairs and tables that were destroyed in the flood, were replaced with almost new furniture they obtained when some local businesses closed.

Cristian Campos, our newly hired operator, is working out very well. He learned quickly the role of the on-call operator and now is being trained in the lab and in the sludge handling building. Mr. Campos is a quick learner. October 8, 2011 marked the two month anniversary of Mr. Campos starting work at the Joint Meeting. Mr. Campos has been succeeding well in his duties as a probationary operator. I see no problem with him completing his probationary status on February 8, 2012.

The Joint Meeting, as well as three other treatment facilities, have litigation pending against the NJDEP regarding **seasonal phosphorus limits** vs. year round phosphorus limits. There will be huge monetary savings. The court has sided with us, but we are now waiting for the NJDEP commissioner's ruling, which has been extended four times already. The remand and Commissioner's deadline is March 30, 2012.

We completed two rounds of sampling, wet and dry weather, for a study to see if it is feasible to **remove the lagoon** from our treatment process. If so, there will be huge economical and process savings. We have received the draft report from Omni Environmental, but will be making some operational changes to further see if this is possible, before a final report can be issued.

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**

2011 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	14,841	180	0	462,410
February	14,604	180	0	371,279
March	13,500	200	0	284,032
April	9,642	60	0	238,099
May	15,937	80	0	17,509
June	15,292	180	0	599,660
July	15,937	200	0	514,511
August	13,443	180	0	557,747
September	14,919	140	0	668,242
October	14,919	180	0	510,584
November	14,952	160	0	530,422
December	15,280	180	0	620,727
Total	N/A	1920	0	5,375,222
Average	14,439	160	0	447,935

2011 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	2.139	6.0	188	3.7	98.0	234	5.7	97.6	0.2	3.2	11.0	10.0	
February	3.026	2.9	138	3.3	97.6	159	5.5	96.5	0.4	2.4	10.0	10.0	
March	3.053	9.1	143	2.6	98.2	212	4.6	97.8	0.6	1.7	9.0	7.0	
April	2.774	4.2	122	1.2	99.0	220	4.1	98.2	0.3	2.3	8.0	10.0	
May	2.511	5.5	145	2.8	97.8	199	5.5	96.8	0.4	3.1	7.0	50.0	
June	2.179	4.9	196	1.9	99.1	334	7.0	97.9	0.7	3.7	6.0	126.3	
July	1.996	3.2	199	4.2	97.9	214	2.7	98.7	0.5	3.8	6.0	8.8	
August	2.972	15.4	146	1.7	98.9	249	5.9	97.6	0.2	2.7	7.0	6.3	
September	2.779	8.0	205	4.6	97.8	219	4.3	98.0	0.2	2.8	7.0	15.0	
October	2.258	7.8	163	1.7	98.9	191	1.7	99.1	0.3	3.3	8.0	33.8	
November	2.574	4.7	217	4.3	98.0	341	4.2	98.8	1.3	3.5	8.0	5.8	
December	2.516	6.1	163	2.7	98.4	165	5.0	97.0	0.3	3.4	8.0	10.0	
Total	N/A	77.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Average	2.565	6.5	169	2.9	98.3	228	4.7	97.8	0.4	3.0	7.9	24	
Permit Limits	3.5	NONE	NONE	8	Min 85	NONE	30	Min 85	2.0 7.0	Sum 4.4 4.0	Sum 4.0 4.0	Min 6	200

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