

Monthly Operating Report
May, 2010
Concord Wastewater Treatment Facility
Operated by Woodard & Curran

Date: June 14, 2010

To: Alan Cathcart, Concord Water & Sewer Superintendent
cc: Chris Whelan, Town Manager
Richard Reine, Director Concord Public Works

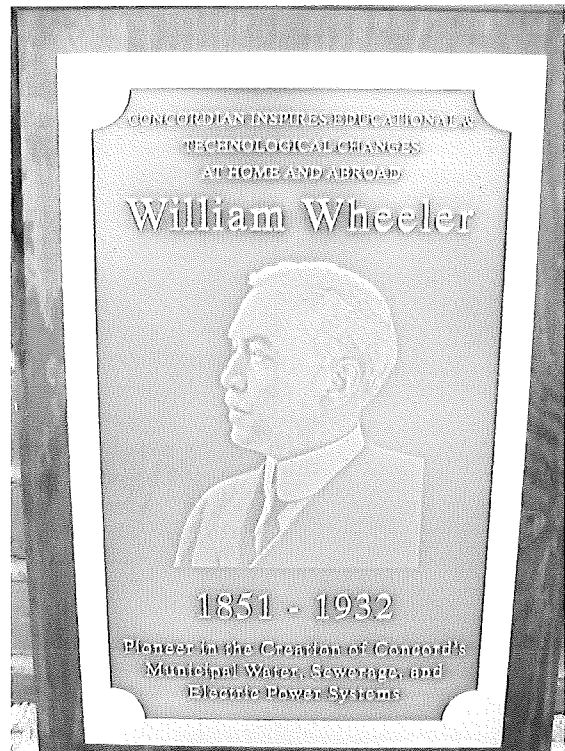
From: Michael Thompson and Staff

Key Activities This Month/Capital Program

During May all treatment processes were either operational or in ready standby. Flow through the facility in May averaged 1.02 million gallons per day (MGD) and the permit critical 12-month average flow increased to 1.16 MGD from the April 12-month average of 1.15 MGD. The 12-month average flow permit upper limit is 1.2 MGD. Even though the *monthly average flow* in May was down from the previous two months, the *12-month average flow* continued to rise. The 12-month flow calculation for May '10 discarded a comparatively low flow month (May '09) and included a higher flow month (May '10) thus this modest increase in 12-month average flow. This trend could continue if this summer's precipitation is somewhat higher than last.

More notable events or tasks accomplished in May include:

- 1.) On May 21st the facility held two events involving the community. On this beautiful Friday morning, a gathering of Wheeler family members along with Town officials and individuals involved in the recent facility upgrade were on hand to remember civic leader William Wheeler and dedicate the facility in his honor. As stated on the bronze plaque now on display at the WWTF, Mr. Wheeler was a "Pioneer in the Creation of Concord's Municipal Water, Sewerage, and Electric Power Systems".



The bronze plaque now on display at the WWTF that dedicates the facility to William Wheeler, Civil Engineer

May '10 WWTP MOR

Key Activities This Month/Capital Program

- 1.) *cont'd*: Following the facility dedication ceremony, a facility tour was offered to those interested. Shortly after that 30-minute tour, Public Works Day kicked into gear at the treatment plant. Over the course of three hours, approximately 220 Concord 8th graders and their teachers went on a 15-minute facility tour followed by a 15-minute water conservation presentation and water relay. It was a hectic, yet fun morning keeping the kids moving and engaged. We are happy to have this opportunity to bring awareness to the important role this facility plays in preserving water quality. Concord Public Works receives our compliments for organizing and pulling off such a great field trip for all these kids.

Maintenance Management

Following is a brief list of a portion of maintenance items completed in May:

- a) local welding outfit, Ledgerock Welding and Fabrication, worked for equipment manufacturer JDV, installing heavy gauge roller bands on the rotary drum sludge thickener.
- b) replaced failed squirrel cage fan in #1 air conditioner.
- c) cleaned and inspected internal condition of #2 intermediate pump and removed a portion of the skim set to tighten up clearance between impeller and wear ring.
- d) CPW personnel installed new maintenance shop tabletop and painted shop walls.

Environmental Compliance

Parameter	Monthly Avg.	Permit Limit	Notes
Flow, MGD	1.16 MGD (12month avg)	1.2 MGD	May avg. =1.02 MGD
BOD5 (mg/l)	3 mg/l	30 mg/l	99% average BOD removal in May
TSS (mg/l)	2 mg/l	30 mg/l	99 % average TSS removal in May
Coliform, Geo.Mean #/100ml	1 cfu*/100ml	200 cfu/100ml	All plate counts were zero in May
Phosphorus	0.19 mg/l	0.2 mg/l Apr. – Oct. '10	0.28 mg/l daily max. on Thu.5/6
Total Ammonia Nitrogen	1.14 mg/l	Report Only	1.30 mg/l daily max. on Tue. 5/4

*cfu =coliform forming unit or colony.

During May, the Concord WWTP performed continuous two-stage total phosphorus (TP) removal using aluminum sulfate. First stage chemical TP treatment occurred in the secondary clarifiers and second stage TP treatment took place within the CoMag® advanced treatment process. The monthly average effluent TP concentration in May is 0.19 mg/l, thereby meeting the CWWTP's summer permit limit not to exceed 0.2 mg/l TP.

Additionally, during May all effluent disinfection was performed using ultra violet light.

Alarm Activity

This section provides the Town information on events that activate the facility's alarm response system. These events occur while the plant is unmanned and while both the plant's SCADA system and *Lexington Alarm* are monitoring the facility's alarm system. This report identifies alarm activity from the start of the calendar year to the present.

Concord WWTP Off-Hours Alarm Log

Date	Time	Alarm Source	Observations/Corrective Action/Comments
01/18/10	12:50 pm	Power Failure	Brief power bump resulted in a handful of drive and panel faults. The on call operator responded on site and reset equipment without incident.
2/10	NA	None	NA
3/10	NA	None	NA
4/10	NA	None	NA
5/15	8:45am	Intrusion	An internal motion detector went off on this quiet Saturday morning but follow-up onsite inspection by both plant staff and police found no signs of a problem- i.e. false alarm.

Septage Receiving

The Concord WWTF receives septage only from in-Town sources. A total of 125,900 gallons of septage was received at the Concord WWTF in May.

WWTP Septage Receipts in gallons

	2010	2009	2008
January	32,500	10,500	22,750
February	25,750	41,250	60,300
March	171,750	83,250	55,550
April	211,500	168,250	152,300
May	125,950	150,900	135,150
June		151,450	126,450
July		138,500	117,000
August		137,750	142,400
September		203,750	219,950
October		172,400	262,900
November		155,400	165,300
December		109,600	104,050
Annual Totals:	567,450	1,523,000	1,636,000

Sludge Production

During May, 97,980 gallons of liquid sludge, equivalent to 15.76 dry tons, was transported to Upper Blackstone Water Pollution Abatement District (UBWPAD) in Millbury, Massachusetts.

WWTP Sludge Production in gallons /dry tons

	2010	2009	2008
January	89,000/15.61	107,500/16.71	112,227/20.15
February	90,000/16.81	86,000/14.13	107,124/18.35
March	90,000/15.65	99,000/17.56	98,500/17.97
April	135,000/23.57	153,000/23.94	90,000/17.98
May	97,980/15.76	170,670/24.27	107,000/19.74
June		153,000/20.83	98,500/17.76
July		126,000/20.57	117,000/20.98
August		76,376/11.81	99,000/16.51
September		126,000/21.65	98,000/16.82
October		99,000/16.03	108,000/18.54
November		99,000/16.51	80,500/12.62
December		117,000/17.79	126,000/18.46
Annual Totals:	501,980/87.40	1,421,546/223.58	1,241,851/215.88