

# **Water Pollution Control Plant Monthly Report**



## **March, 2011**

### **OVERVIEW AND HIGHLIGHTS**

During the month of March plant staff worked on various projects. Since the 1978 construction that upgraded the WPCP to secondary treatment, the aeration piping located in and around the aeration tanks has performed very well. During the month of March, plant maintenance staff replaced all the gaskets in the aeration piping. Major leaks had developed due to the dry rotting of the gaskets. The replacement of these gaskets and seals will improve our energy efficiency of delivering air to the aeration diffusers. Methane gas lines were replaced in the upper control room of the digester due to the corrosion of the piping. Plant operational staff painted in the tertiary building in March, specifically the tertiary screw area. New conduit was installed to the No. 2 Grit Chamber to accommodate the flushing of the grit chamber prior to pumping. This flushing helps to prevent plugging during high flow grit pumping. Maintenance staff repaired the conveyor system that transfers sludge pressed on the belt filter press to the dump truck. Plant staff along with the Public Works staff cleaned and vacuumed the Fern Drive Pump station in March.

Plant staff attended the Northeast Section Ohio Water Environment Association spring meeting in Twinsburg, OH on March 31, 2011. Contact hours of training were awarded to the plant staff in attendance. The contact hours go towards the renewal of the wastewater operator's license, renewed every two years.

### **WPCP MONTHLY STAFF MEETING AND DISCUSSION**

1. WPCP Construction
  - a) The week of April 11, 2011 David Morgan will be here to update the aeration control system with the new butterfly valves.
2. Annual Report – WPCP staff will working on our 2010 Annual Report.
3. Aeration Zone Gasket Replacement – Maintenance has replaced all the air line gaskets on the aeration tank catwalks. If you hear a leak, please make out a maintenance work order request.
4. Pump Station Communication – We will be performing some work at the pump stations to accommodate the new wireless communication system. The new system will replace the existing phone line communications and save us money associated with the existing system.
5. Vitality Health Program – Has everyone signed up for the Vitality Program and what has been your experience?
6. May Mowing Schedule – The utility departments have been asked to provide one employee per day in the month of May to mow public properties. We will develop a schedule to meet this request.

### **MARCH EVENTS AND MEETINGS**

1. On March 9, 2011 the WPCP staff had 6<sup>th</sup> grade students from the Huntington Elementary School tour the WPCP. Joe Elliott, Operation Supervisor toured the plant with the students and explained the operations of the WPCP.
2. The Utilities Department Supervisors met with the City Manager, Rita McMahon to discuss the operations at the three utilities, electric, water and wastewater on March 2, 2011.
3. The Community Engagement Committee met on March 3, 2011 at the Police Departments Conference room to discuss the upcoming meeting on April 7, 2011. The meeting will be hosted by the "Union Community Church and Pastor Coffee. A presentation will be made by the Lake County Drug Enforcement division.
4. Attended the "Improving Painesville's Image and Environment Committee" meeting on March 14, 2011 at City Hall.
5. The WPCP hosted a Wellness Meeting Update on March 15, 2011 for WPCP staff.

6. Randy Bruback met with Andy Unetic, Finance Director in March to discuss future capital funding and effects on the sewer rates for city residents.
7. The entire WPCP staff registered for the "Vitality Program", sponsored by the City of Painesville Wellness Program in the month of March, 2011.
8. On March 28, 2011 Randy Bruback attended a "Improving Painesville's Image" committee meeting at Harvey High School.
9. Joe Jackson, Maintenance Supervisor and Randy Bruback met with the Beta Group to discuss the new installation of wireless communication equipment at the sewage pump stations. The new installation will eliminate phone fees utilized by the current system of communications.

#### ***GOALS AND ACCOMPLISHMENTS***

1. Met with the Beta Group to work on the new installation of wireless communications at the sewage pump stations. This project will tie together our new pump station control systems with radios installed at the pump stations, communicating with the radio located at the power plant. That signal in turn will be transmitted back to the WPCP via installed fiber.
2. Through the Wellness Program started by the City of Painesville, the WPCP staff have all signed up for the Vitality Program. The Vitality Program has given the city employees an opportunity to improve their physical health through various programs and reduce costs to the employees for their health insurance premiums.

**Mission Statement**

**The mission of the Water Pollution Control Plant is to provide the most effective customer oriented wastewater collection and treatment to the citizens of Painesville.**



**Grand River  
Painesville, OH**

**Results**

	<b><u>This Month</u></b>	<b><u>Last Month</u></b>
Avg. Daily Flow	6.05 MGD	3.39 MGD
Flow Treated	187.6 Mill. Gal.	94.99 Mill. Gal.
Raw PO	1.55 Mg/L	4.38 Mg/L
Final PO	0.12 Mg/L	0.24 Mg/L
% Removed	92.3 %	94.5 %
PO to River	0.094 Tons	0.095 Tons
Raw C-BOD	66 Mg/L	161 Mg/L
Final C-BOD	1 Mg/L	2 Mg/L
% Removed	98.5 %	98.8 %
C-BOD to River	0.78 Tons	0.79 Tons
Raw Suspended Solids	123 Mg/L	281 Mg/L
Final Suspended Solids	2 Mg/L	2 Mg/L
% Removed	98.4 %	99.3 %
Suspended Solids to River	1.56 Tons	0.79 Tons

**Meters**

The Total Plant Flow meter was calibrated weekly, and found to be correct. The Lubrizol meter is checked weekly. The Total Plant Flow meter recorded 187.6 million gallons flow. The Lubrizol meter recorded 11,193,100 gallons flow.

**Detritors**

3.46 tons of grit was removed during the month.

**Comminutors**

1.39 tons of screenings was removed during the month.

**Chemical Treatment**

2237.4 pounds of alum was required at a cost of \$3,150.00 for the removal of 2237.4 pounds of phosphorus. Cost of phosphorus removal for the month was \$1.41/pound.

**Primary Clarifiers**

The primary clarifiers operated satisfactorily during the month, removing 337,947 gallons of raw sludge containing 5.4% solids.

**Anaerobic Digesters**

The primary digesters operated satisfactorily during the month, transferring 577,814 gallons of raw sludge for pressing containing 3.3 % solids.

### **Secondary Treatment**

The secondary clarifiers operated satisfactorily during the month.

### **Tertiary Treatment**

The tertiary filters operated satisfactorily during the month.

### **Liquid Sludge**

The filter press processed 625,694 gallons of liquid sludge producing 243.3 tons of wet cake including 47,880 gallons of water plant sludge containing 4.9% solids or 58.74 tons of dry solids. 1,218 pounds of polymer were used at a cost of \$1,264.28. Cost of disposal at the Lake County Landfill was \$7,635.30.

### **Digester and Greenhouse Heating**

The anaerobic digesters consumed 34,047 cubic ft. of generated methane and 160,099 cubic ft. of purchased gas.

### **Pump Stations**

Erie Street pumps recorded 284.51 hours and pumped 1,707,060 gallons of wastewater.

Fern Drive pumps recorded 45.88 hours and pumped 605,616 gallons of wastewater.

Poplar Lane pump recorded 138.25 hours and pumped 4,562,250 gallons of wastewater.

Jackson Street pump recorded 121.63 hours and pumped 2,225,829 gallons of wastewater.

Recreation Park pump recorded 311.79 hours and pumped 5,612,220 gallons of wastewater.

Sanford Street pump recorded 149.46 hours and pumped 2,241,900 gallons of wastewater.

Valley View pumps recorded 36.51 hours and pumped 394,308 gallons of wastewater.

Brookstone flow meter recorded 1,028,760 gallons of sewer flow.

The Seven (7) pump stations pumped 17,349,183 gallons of wastewater and 40 man-hours were required in maintenance.

Respectfully Submitted,



Randy Bruback  
Superintendent  
Water Pollution Control Plant