

# **Water Pollution Control Plant Monthly Report**



**May, 2011**

## **OVERVIEW AND HIGHLIGHTS**

During the month of May plant personnel worked on numerous projects at the WPCP. Maintenance staff completed the removal and repair on No. 3 RAS pump. A new split seal was placed on the RAS pump and repairs were performed to the impeller. New 6 inch check valves were installed on the two pumps located at the Recreation Park pump station. The old valves were un-repairable and were not preventing the back flow of sewage into the pump station. We continued to work with the Beta Group on the new installation of radios at the sewage pump stations. The Electric Distribution department worked with Joe Jackson, Maintenance Supervisor to run communication fiber from the pump station at Sanford Street down to Skinner Avenue. Plant staff worked with the City's Parks and Cemeteries in the month of May by providing personnel on a daily basis to mow and weed trim at the parks and cemeteries. WPCP personnel spent an extra amount of time during the month pressing water plant sludge. The water plant cleaned two of their wet wells that had extra solids collected over a period of time and as a result we pressed more water plant sludge at our plant. The spring season has had an extra amount of rainfall and we have experienced many high flow events as a result. Plant personnel have done an excellent job in maintaining the plant's operations during these events.

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

1. WPCP Construction – in the near future we will be replacing the butterfly valves in the tertiary building.
2. EQ Basin Diffuser Cleaning – Thanks to everyone who helped in cleaning the EQ aeration basin. We will be contracting the cleaning of No. 1 aeration tank. We hope to begin the cleaning project in the next two weeks. We will be cleaning the diffusers when the tank is cleaned.
3. May Mowing – Thank you to all of our staff in providing mowing and grass trimming services to the Parks and Cemeteries Division.
4. Recreation Park Pump Station – due to excessive wear, we replaced the two check valves at Recreation Park Pump Station.
5. Pump Station Radio Communications – Plant maintenance and Electric Distribution have completed preliminary work towards the completion of the new radio communications at the City's Pump Stations. We have scheduled the Beta Group for next Friday, to begin the fiber pathways.
6. Tim Leonard – Tim has been promoted to the Operator II position vacated with the retirement of Russ Thompson. Congratulations Tim.
7. NESOWEA Wooster Workshop – The WPCP sent seven employees to the NESOWEA meeting in Wooster, OH on May 17, 2011. We toured the Wooster WPCP and toured the new methane to electricity facility operated by Ohio State, Wooster Campus.
8. Motivation Workshop – WPCP personnel attended a motivation workshop at Quicken Loans Arena in May. The speakers included Colin Powell, Lou Holtz, Terry Bradshaw, Rudy Guilliani, Bill Cosby and Goldie Hawn. The workshop was well attended and the staff enjoyed the speakers.
9. No. 3 RAS Pump – The no. 3 RAS pump was placed back into service in May. Thanks to all the maintenance staff who was involved in this task.
10. Dump Trucks – Reminder to all staff members who drive the sludge to the County Landfill. Do not allow landfill personnel to push you out if you get stuck. Use straps to pull out, only.
11. New Verizon Phones – we are going through 30 day test period on new Verizon phones. If you have any questions or comments, please direct them to me.

### ***MAY EVENTS AND MEETINGS***

1. On May 2, 2011 Randy Bruback met with Bill Carlson, B&N Engineers to discuss the current status of the WPCLF Construction Project at the WPCP.
2. Joe Jackson and Randy Bruback met with Harvey High School's maintenance supervisor to discuss the wiring of power to the new antenna located on the light mast at the football stadium, on May 3, 2011.
3. Rita McMahon, City Manager and Randy Bruback met on May 4, 2011 to discuss contingency funding and a new extended completion date for the WPCLF project. The new extended completion date for the WPCLF will give the City an extended period of time to complete the WRRSP project in the City.
4. On May 17, 2011 WPCP staff attended the NESOWEA annual business meeting in Wooster, OH. The staff at the WPCP in Wooster gave us a tour of their plant and later we attended a seminar hosted by the City of Wooster.
5. Randy Bruback met with other department heads and the City Manager on May 25, 2011 to discuss Emergency Preparedness in the City Courtroom.

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

1. WPCP personnel provided assistance to the Parks and Cemeteries department during the month. On a daily basis WPCP personnel reported to the Parks and Cemeteries department to mow and weed trim the parks and cemeteries. On a number of occasions we provided more than one person for their assistance.
2. Electric Distribution provided a much needed service, by installing a power source to a new proposed radio site on Casement Road.

### **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	5.42 MGD	5.48 MGD
Flow Treated	167.96 Mill. Gal.	164.36 Mill. Gal.
Raw PO	1.95 Mg/L	1.83 Mg/L
Final PO	0.16 Mg/L	0.11 Mg/L
% Removed	91.8 %	94.0 %
PO to River	0.112 Tons	0.075 Tons
Raw C-BOD	74 Mg/L	81 Mg/L
Final C-BOD	1 Mg/L	1 Mg/L
% Removed	98.6 %	98.8 %
C-BOD to River	0.70 Tons	0.69 Tons
Raw Suspended Solids	148 Mg/L	146 Mg/L
Final Suspended Solids	1 Mg/L	2 Mg/L
% Removed	99.3 %	98.6 %
Suspended Solids to River	0.70 Tons	1.37 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 167.96 million gallons flow. The Lubrizol meter recorded 7,648,300 gallons flow.

### **Detritors**

3.10 tons of grit was removed during the month.

### **Comminutors**

0.67 tons of screenings was removed during the month.

### **Chemical Treatment**

21,000 pounds of alum was required at a cost of \$3,150.00 for the removal of 2507.4 pounds of phosphorus. Cost of phosphorus removal for the month was \$1.26/pound.

### **Primary Clarifiers**

The primary clarifiers operated satisfactorily during the month, removing 541,663 gallons of raw sludge containing 4.2% solids.

### **Anaerobic Digesters**

The primary digesters operated satisfactorily during the month, transferring 733,102 gallons of raw sludge for pressing containing 3.7 % solids.

### **Secondary Treatment**

The secondary clarifiers operated satisfactorily during the month.

### **Tertiary Treatment**

The tertiary filters operated satisfactorily during the month.

### **Hypo-chlorination**

1657 pounds of salt was used in the production of 558 pounds of available CL<sub>2</sub> to meet the chlorine demand in disinfecting the final effluent. The average residual was 0.02 mg/l CL<sub>2</sub>. The maximum effluent residual was 0.068 mg/l CL<sub>2</sub> and the minimum effluent residual was 0.042 mg/l CL<sub>2</sub>. Cost of chlorination for the month was \$176.47 or \$0.316 per pound of available CL<sub>2</sub>.

### **Dechlorination**

705 pounds of sodium bisulfite was used to maintain a maximum residual chlorine of 0.030 mg/l as per our N.P.D.E.S. Permit. Cost of dechlorination for the month was \$116.33.

### **Liquid Sludge**

The filter press processed 802,417 gallons of liquid sludge producing 428.39 tons of wet cake, including 69,315 gallons of water plant sludge, containing 24.0% solids or 103.32 tons of dry solids. 1462.5 pounds of polymer were used at a cost of \$1,1518.08. Cost of disposal at the Lake County Landfill was \$13,113.30.

### **Digester and Greenhouse Heating**

The anaerobic digesters consumed 38,915 cubic ft. of generated methane and 108,819 cubic ft. of purchased gas.

### **Pump Stations**

Erie Street pumps recorded 190.77 hours and pumped 1,144,620 gallons of wastewater.

Fern Drive pumps recorded 125.55 hours and pumped 1,657,260 gallons of wastewater.

Poplar Lane pump recorded 127.85 hours and pumped 4,219,050 gallons of wastewater.

Jackson Street pump recorded 167.16 hours and pumped 3,059,028 gallons of wastewater.

Recreation Park pump recorded 232.27 hours and pumped 4,180,860 gallons of wastewater.

Sanford Street pump recorded 122.53 hours and pumped 1,837,950 gallons of wastewater.

Valley View pumps recorded 28.09 hours and pumped 303,372 gallons of wastewater.

Brookstone flow meter recorded 985,947 gallons of sewer flow.

The Seven (7) pump stations pumped 16,402,140 gallons of wastewater and 36 man-hours were required in maintenance.

Respectfully Submitted,



Randy Bruback  
Superintendent  
Water Pollution Control Plant