

PUBLIC WORKS, ENGINEERING AND WASTEWATER TREATMENT

Wastewater Treatment Facility

Berlin's Pollution Control Facility processed 765.71 million gallons of sanitary sewer flows last year; in addition, we accepted and treated almost 287,615 gallons of septage waste from outlying communities not on their own sewer systems (i.e., septic tanks). In the process, we produced 1509.28 tons of dried municipal sludge which we trucked to the AVRDD landfill for disposal. The treatment process removed 93.8% of the BOD (Biochemical Oxygen Demand) and 96.6% of the TSS (Total Suspended Solids) which came in with the sanitary sewer flows. Average monthly power usage at the Main Plant decreased minimally to 108.9 KW/day, reflecting lower flows through the plant.

Maintenance has kept up with our pumping needs, and we emphasize anticipating problems before they strike. We continue to learn how to use the new instrumentation we acquired in the Phase I rebuild, and look forward to the Phase II improvements once financing is in place.



Work on Inflow and Infiltration (I&I) must be made a priority to reduce the water load

that the sewer system and the treatment plant carry. As a simple way to think about it, the amount of water Berlin Water Works supplies to the City daily should be the amount of water Berlin Pollution Control Facility treats. In the same time period (FY2009) BWW produced 511.3 million gallons of water for City use; BPCF on the other hand treated 765.7 million gallons or 50% more than BWW produced!

Some sources for the extra water we treat are: roof drains that flow into the sewer system, broken manholes and sewer lines that allow groundwater to infiltrate the sewers, and "combined" sewers that catch surface runoff on paved areas and direct this flow into the sewer pipes.

Phase II upgrade to the Waste Water Treatment is in progress with (Wright-Pierce) the Engineering Consultants looking at what will be needed to incorporate the new federal prison into the waste water plant. The contract to add sewer service to the prison was signed in late June 2009.

Solid Waste

The East Milan Road Landfill closure was substantially completed in October of 1996. Closure of the landfill launched the 39 year post-closure monitoring program. Groundwater quality and methane gas production is being monitored in accordance with the program.

Public Works Services

The Public Works Department provides a number of services to the citizens of Berlin. They include: the maintenance of over 60 miles of streets and many more miles of sidewalks that need to be swept, patched and overlaid with pavement. We also provide snow removal, street striping, street

marking, and the fabrication and installation



of street and traffic signs. We construct retaining walls, install guard rails and guard fence. We provide citizens with weekly garbage removal. We maintain sewer and storm water collection systems. We provide equipment maintenance for all of the Public Works, Fire, Recreation, Health, Police and Engineering Departments as well as the Berlin Municipal Airport. We maintain gas and fuel distribution. We also provide and maintain 146 sand and salt barrels for winter use by the public.

The Public Works Department collects paper, glass, plastics, tin, aluminum and cardboard for recycling. We periodically seal concrete sidewalks, retaining walls and bridge abutments. Members of the Department also provided utility information and project inspection for water and sewer capital improvement projects.

Transportation

Street Markings. Center lines, edge lines, railroad crossings and crosswalks were painted as they are every year. The cost of this work was approximately \$8,050.00. The work included approximately 216,458 linear feet of striping and 14 railroad crossings. The PWD crew paints 130 crosswalks throughout the City, all the Stop Bars, yellow No Parking Zones and Handicap Parking areas.

Projects Completed in the 2008/2009 Season:

- Hillside Avenue Sidewalk was completed at a cost of \$170,000.00
- One-half mile of Western Avenue was completely reconstructed from Mink to Ash Street for \$200,000.
- A new Dump Truck was built from a 1987 Government Fire Truck with 9000 miles on it for \$40,000.
- Two Waste Oil Burners were purchased and installed for the Public Works Garage for \$11,000.
- NH Route 110 Phase I was completed in cooperation with the State
- Two new 2009 Ford 150 4x4's were purchased for supervisors for \$34,546
- A 2002 F150 4x4 was purchased from Government surplus in excellent condition with 15,000 miles for \$10,000.

Sidewalks and Curbs

Park Street and Willard Street were completed.

Joint Projects with Berlin Water Works

Joint projects completed with the Berlin Water Works included the following streets: Jolbert Street, Madigan and Willard Streets where water, storm and sewer lines were replaced and/or repaired. PWD provided the paving services for the trenches this season.

A new bridge was installed over the Dead River by Memorial Field for equipment access for new high pressure loop tie-in.

Respectfully Submitted,

Michael Perreault, Public Works Director
Henry Noel, Waste Water Superintendent

PUBLIC WORKS CALLS FOR SERVICE

SERVICE - INCIDENTS - MATERIAL

Frozen sewer service calls	0	
Frozen drain service calls	2	
Frozen main drain lines	0	
Frozen culverts	0	
Frozen trench lines	2	
Frozen catch basins	15	
Main sewer lines jet cleaned	20	
Main sewer line calls	4	
Sewer service calls	11	
Sewer services replaced	4	66' of 4" WW repairs 18
Drain service connections	2	
Main sewer lines replaced	2	139 feet
Main drain lines replaced	5	657 feet
New sewer service connections	2	100feet
Main drain lines jetted	20	On Regular Basis
Manhole frames reset	10	
Manholes rebuilt	1	Enman Hill
Manholes repaired	10	4-WW Dept.
Catch basin frames reset	10	
Catch basins rebuilt	0	
Catch basins repaired	20	
New catch basins installed	4	
Salt for winter use		1,687 tons
Sand for winter sand		2,684tons



Ice Cutting Jeep

<http://beyondbrownpaper.plymouth.edu/item/467>