

OPERATIONS – WATER/SEWER

The Operations – Water/Sewer Division is responsible for the operation and maintenance of the Village water and sewer systems, and the storm water conveyance system. The Village has 8,053 residential and 485 commercial services, for a total of 8,538 utility billing addresses, of which approximately 150 are for properties outside of the Village limits. Duties include: monitoring of distribution and storage of potable water and associated regulatory reporting requirements, repair of water mains, valves, hydrants, customer water service lines and valve boxes located in the public right-of-way, hydrant flow testing, water valve exercising, water meter installation, repair and testing, water quality testing, water and sewer utility structure repairs, sanitary sewer lift station maintenance, sanitary and storm sewer system cleaning and televising. Additional duties include responding to resident requests for service and assistance.

Water Production, Pumping, Storage, and Distribution System

- Two pressure adjusting stations located where Glen Ellyn receives Lake Michigan water from the DuPage Water Commission.
- Two 1,000,000 gallon ground storage reservoirs and two elevated storage tanks of 500,000 and 750,000 gallon capacity.
- Two stand-by ground water wells and two water pumping stations.
- 147.58 miles of water mains; 1,265 fire hydrants; 1,368 water main line valves; and 8,717 water meters.
- Supervisory Control and Data Acquisition (SCADA) monitoring and control system.

Sanitary Sewer System

- 85 miles of sanitary sewer mains.
- 4 sanitary sewer lift stations.
- Approximately 2,000 manholes.

Storm Sewer System

- 70 miles of storm sewer mains.
- 3,165 storm sewer inlets and catch basins.
- 1,200 storm sewer manholes.

Division Accomplishments for FY10/11

1. Performed a complete rehabilitation of Well #5. Problems were identified in this back-up well during yearly inspections and repairs were made in order to keep the well as a viable and approved option for emergency situations.
2. Performed extensive bacteria speciation tests and packer testing of well #6 in an effort to determine if the casing pipe can be relined to a depth of 250 feet to effectively stop the inflow

of surface water into the well. At the time of this printing, based on the test results that we have to date, it appears that well #6 can be rehabbed. If not, we will consider abandonment of well #6 and the construction of a new well.

3. Drained, cleaned and inspected the interior of Cottage Avenue Water Tower.
4. Installed baffling devices to air vents on Newton Reservoir and Wilson Reservoir to reduce the chance of tampering with our reservoir water supply through the vent system.
5. On the water distribution system we pulled 30 routine bacteria samples monthly for a total of 360 samples annually, 84 new construction bacteria samples annually, 24 water main break samples annually, and performed quarterly sampling of the water distribution system to test for disinfection by products. On the two emergency back-up wells we perform monthly bacteria samples. Quarterly we test for volatile organic compounds, synthetic organic compounds, inorganic chemicals, nitrates/nitrites and radionuclides.
6. Installed a keyless entry security system at all Water Production Facilities.
7. Responded to 81 sanitary sewer back up calls on residential lines and cleared 9 back ups on Village owned sanitary mains.
8. In FY2010/2011 OPERATIONS – WATER/SEWER completed 298 work orders.
9. Met all state and federal drinking water regulatory requirements.
10. Contracted the video taping of approximately two miles of sanitary sewer main and prioritized the maintenance and reconstruction needs of these mains.
11. Pressure cleaned 16.32 miles of sanitary main. This exceeds our goal by 5.32 miles.
12. Vacuumed 379 of the Village's 3,165 catch basins and cleaned 1 mile of storm sewer.
13. Repaired 24 main breaks, 8 hydrants replaced, 9 hydrant repairs, 1 water valve replaced, 6 valves rehabbed, 8 water line repairs, 70 B-box repairs, 4 sanitary sewer repairs, 2 storm sewer repairs, 9 clean out repairs, 83 construction sites and 52 structures restored.
14. Updated Water Atlas, flushed and lubed all 1,265 hydrants, ISO flow tested 253 hydrants.
15. Sand blasted and painted 20% of the 1,265 hydrants in the first year of a 5 year program.
16. Marked sanitary sewer, storm sewer and water main locates for 4,507 JULIE requests.
17. In an effort to improve fire protection and reduce water main breaks, 4,342 feet of old 4 inch water main and 2,624 feet of old 6 inch water main was retired during FY2010/2011 construction projects. New water main installed during the FY2010/2011 construction projects includes 375 feet of six inch water main, 5,533 feet of eight inch water main and 2,432 feet of 12 inch water main. An additional 150 feet of twelve inch water main was

installed on the Butterfield Road Water Main Extension Project. COD West Campus Water Main Project accounted for an additional 53 feet of six inch water main, 20 feet of eight inch water main and 877 feet of twelve inch water main.

18. Division training includes classes in wastewater collection systems, water production plant operations, and management classes at Michigan Professional Service Institute.
19. Tested and calibrated 85 water meters that are 2 inch and larger in diameter. Bench tested 75 retired meters and found them to be within the allowable range of 98.5% to 101.5% accurate. Installed 70 new meters, 80 radio-read systems, and 150 new touch pad portals. Performed 50 leak checks, 24 low pressure and 450 sump pump inspections.

Division Goals for FY11/12

1. Bring to fruition the upgrade of the Public Water Supply Production and Distribution computer automated SCADA system.
2. Recoat the exterior and interior of the Newton Avenue Elevated Tower water storage tank. Fit interior of tank with mixer to stop ice build up in the winter and prevent water stratification and bio film build up during the summer. Put Newton Avenue Elevated Tower on a long term maintenance program to ensure quality maintenance for the life of the tower.
3. Sand blast and paint 20% Of the 1,265 fire hydrants within the water distribution system. This would be year two of a five year program.
4. Continue the ongoing research to identify the sources of clear water inflow in to the sanitary sewer collection system and develop viable plans to mitigate this inflow.
5. Drain, clean and inspect Newton and Wilson reservoirs.
6. Redesign and install a new disinfection system for the entire water production facility that includes both our DWC pressure adjusting stations and our emergency stand by wells.
7. GPS and exercise all 1,368 Water Distribution System main line valves.
8. Clean 11 miles of sanitary sewer, 1 mile of storm sewer and 450 catch basins.
9. Televis 2 miles of sanitary sewer main and prioritize the maintenance and reconstruction needs of these mains.
10. Continue cross training Operations Division staff on water distribution and sanitary collection system operations and maintenance.
11. Continue training to meet FEMA / NIMS requirements, and to train with DuPage Department of Homeland Security as scheduled.