

Utilities Department



Quarterly Report

Capital Projects

Drinking Water Treatment Plant

Phase IB :
\$74 Million Dollar Project

Raw Water Line /Carbon – Transformer Facility:
\$6 Million Dollar Project

Clean Water Plant

GVBA –Pump Station
(Segment 2 of overall \$33.4 Million Dollar Project)

Tank Covers (in design)
Est. \$2.5 Million Dollars

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The North Facility—2nd floor , above in October, and below, in November with floors and roof work . Outer pillars on the front façade are visible as well in the photo below.



Water Treatment Plant Expansion Phase IB

Month-to-month progress on the North Treatment Facility resulted in dramatic changes with floors, walls, ceiling and front façade and brickwork additions, as seen from the these photos (left). This view looks directly north into what will become the conference room along the outer glass wall of the front of the North Facility. Relatively mild winter weather to date was a boon to the construction crews.

The South Treatment Facility became fully functional with drinking water being produced through all treatment trains this quarter. General contractor and consulting engineers continued to work with plant staff on equipment start-up and optimization of plant processes. Training on equipment and review of punch lists in the South Treatment Facility also continued.

Floor plan below, shows lobby and offices on 1st floor.

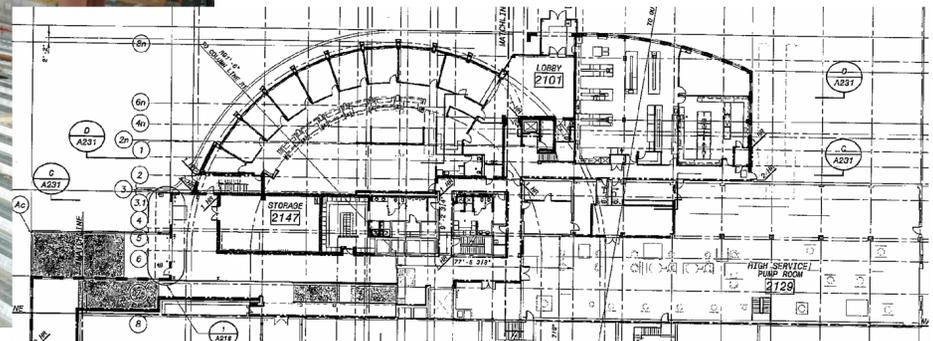


Photo Gallery Drinking Water Plant Construction

South Treatment Facility (STF), North Treatment Facility (NTF) and the Raw Water Line/Carbon Facility



NTF-Chemical feed room with new spill containment curbs, prepped for painting.



November, front of North Treatment Facility, brickwork begins on outer walls of the lab, with superstructure of main offices in background.



December, progress on floors, ceiling and finished tile work on front facade.



New filters shortly after addition of sand and anthracite, ready for testing.



An old hallway evident in transition zone into the NTF, new office area. The tan wall tile is framing the entrance to the old men's locker room across from the maintenance office.



Wall framing, electrical and HVAC work in the NTF laboratory.

Raw Water Main & Carbon Facility at Low Service



At left, architectural view of the new carbon/transformer facility, which must blend with the residential neighborhood along the lakeshore.

Construction Schedule	
March, 2010	Major 66" pipe tie-in—plant shut down
May, 2010	Est. Road Crossings at Lakeshore Dr and at 168th Avenue.
October, 2010	Est. completion



Electrical conduit run with manhole at LSPS.



October— 66" raw water pipe - easement area.



Late November—66" pipe buried and easement area staged for conduit installation.



October-Carbon Facility wall framing



November—Carbon Facility sub-grade walls complete.



December—Carbon Facility—ground level view.

In December, the independent auditing firm of KEMA-Registered Quality, Inc., verified the City of Clean Water Plant's effective biosolids environmental management system.

This audit was the culmination of a lengthy certification process through the National Biosolids Partnership's Environmental Management System Program. (NBP-EMS) . The NBP is an alliance of the National Association of Clean Water Agencies.



The City of Wyoming joined its GVRBA partner, Grand Rapids, as only the 2nd organization in the state of Michigan to have achieved this level of certification, and the 27th organization in the nation.

This means that the GVRBA has achieved a level of excellence in environmental management for biosolids, unparalleled in the State of Michigan. In particular, the CWP was noted for its overall orderliness and housekeeping; strong teamwork, ability to communicate and inform the public about biosolids and its managerial commitment and support for the use of a systems approach to biosolids management.

The City is planning a celebratory event during the summer months to commemorate this unique achievement.

Performance testing and optimization scheduled for various segments to close out \$34,000,000 project.

GRAND VALLEY REGIONAL BIOSOLIDS AUTHORITY



Segment 1, storage and odor control piping.



Segment 2, Pumping station at CWP



Lab Services Manager, Myron Erickson, holds the EMS certification plaque presented to him at the Biosolids Partnership meeting in Alexandria, Virginia.



Segments 4 and 1, Dewatering facility and storage tank at Grand Rapids Wastewater Treatment Plant.

Clean Water Plant Primary Tank Cover Project

Black & Veatch, LTD has nearly completed the design and bid specification work on the upcoming Primary Tank Covers and Odor Control project. Bidding documents should be complete just after the new year. The covers will include air handling capability to draw off offensive odors. Improvements to the existing carbon air scrubbing equipment will also be part of this estimated \$2.5 million dollar project.



Plant-wide Audit

In December, MDEQ staff conducted a plant-wide NPDES audit. This was a review of compliance sampling inspections at the Clean Water Plant, including effluent sampling, review of permitting requirements, recordkeeping and a cursory lab review and site tour. There was extensive discussion regarding averaging total residual chlorine samples. Early next quarter, evaluation results from this inspection should be forthcoming from the DEQ.

Laboratory Services

Lab staff participated in new software training this quarter. A LINKO representative spent a week at the plant to provide training and programming services for the Lab and Environmental Services staff.

New equipment installations this quarter included an UV-Vis spectrophotometer (old model shown at right).



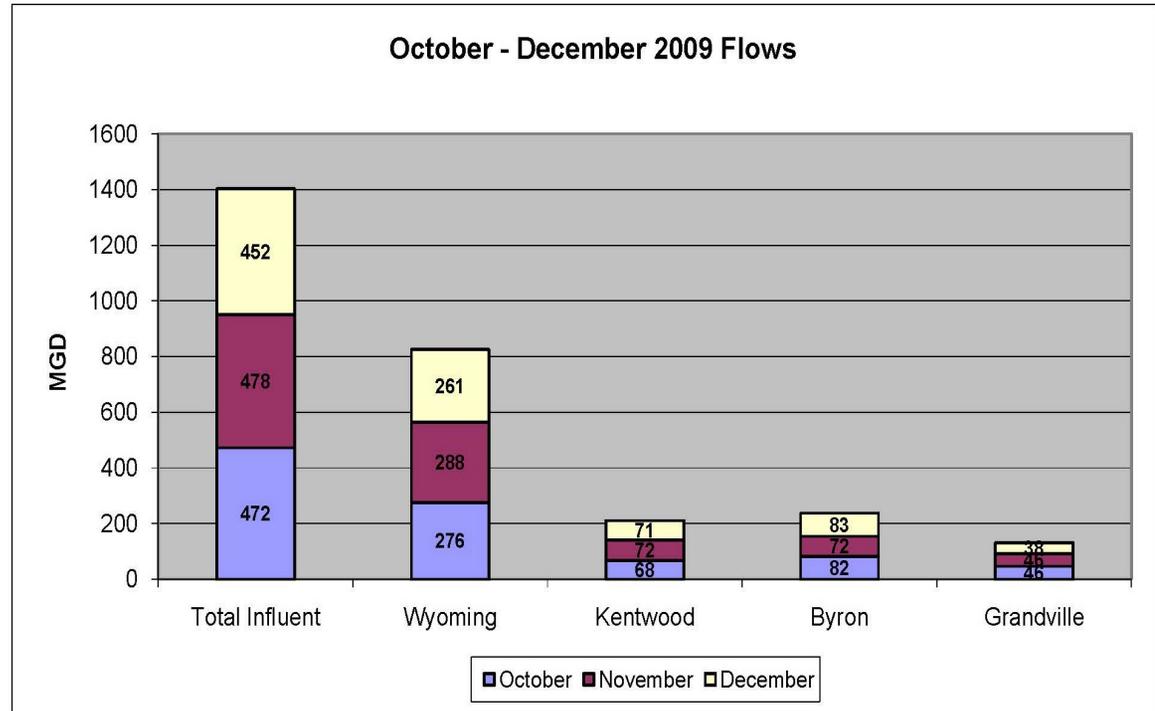
Clean Water Plant

Operations and Maintenance

Plant staff continued to learn more about the new biological treatment process. Operations found that the treatment systems ran more efficiently overall, well within discharge limits. Ammonia reduction was a major accomplishment this quarter.

The Supervisory work group met to update the Clean Water Plant's Facility Plan, projecting flows, loadings and facility needs out to the year 2020. This study should be completed by the end of next quarter.

Jessica Schoonhoven, the CWP's newest operator began working independently this quarter, which was good timing for the work group. Shift coverage required some realignment of duties as staff adjusted to the 38-hr work week and staff shortage due to illness.



Service area includes the cities of Wyoming and Grandville, Byron and Gaines Townships and parts of the City of Kentwood.

Capacity—24 million gallons per day ; advanced secondary treatment using extended aeration, and chlorine disinfection .

Collection system:

- 14 pump stations
- 1 mile of force main
- 271 miles of gravity main
- 5671 sanitary sewer manholes



Crews work to clear blockage in a sewer manhole which had been tampered with, causing a sewage overflow.

Environmental Services



The newly launched Wyoming Medicinal Disposal Service (WYMEDS), an initiative designed to reduce the amount of pharmaceutical compounds entering the wastewater system and our environment, officially kicked off this quarter.

ESS staff continued to recruit area pharmacies willing to participate as drop-off sites. Pharmacists were asked to sort and hold the medications turned in by clientele who no longer had use of or needed to discard old prescription drugs. These would then be collected for disposal at the Kent County incinerator. As needed, City of Wyoming’s Environmental Services staff and Wyoming Police personnel transport the medications from the pharmacy to the Kent County incinerator. The photo at right shows various medications collected, including a delivery of over 600 lbs. of medication (top right) from a church which had intended to collect and donate antibiotics to a third-world country. However, the medication had expired and the group was struggling to find a means of disposal.

From the outset, the response to the WYMEDS collection program demonstrated positive results in preventing pharmaceutical products from entering our water environment.

More information is now available on the City’s web site.



Pharmacies will accept:

Non-controlled DEA drugs

Prescription medication

Antibiotics/steroids

Cold/flu medication

Vitamins/herbal supplements

Pet medications

Over-the-counter medications



IPP staff worked closely with the City of Kentwood’s Department of Public Works to improve a troublesome sampling site. Protection from freezing conditions and the addition of an automated sampler completed the site upgrades (at left).



Cost of Doing Business— State Permit Fees Paid

By State law, the MDEQ is authorized to charge National Pollution Discharge Elimination system (NPDES) permit holders an annual fee based on the authorized discharge from the facility. In December, the Clean Water Plant was assessed and paid a fee of \$13,000.00 to the Michigan Department of Environmental Quality to administer and regulate this NPDES permit, which is based on a flow of 24 million gallons a day into the Grand River.

Also the GVRBA will be charged a fee for the biosolids land application program and that fee is based on dry tons processed at our facility during the year. An invoice amount of \$50,000.00 for this permit is typical and will be a shared expense of the GVRBA partners. City Council reviewed and approved payment of these fees in December.

Biosolids Program - Land Application



Kim Hackbardt left, was appointed Project Manager for the GVRBA. While he will oversee work done at each of the GVRBA facilities and with the contracted biosolids hauling contractor, Synagro, it is expected that day-to-day land acquisition and site selection duties will be transferred to the company that acquires the new contract after the first of the year.

ESS staff continued to work closely with the contractor and our public works department to clean-up and prevent biosolids spills. (photo at left, a minor spill from the plant along 28th street and onto the US-131 entrance ramp in October). These spills sometimes occur with equipment failure on the tanker trucks (valves, hoses or caps).



Donald K. Shine Water Treatment Plant

Service area includes parts of Park Township, Olive, Blendon, Holland, Georgetown, Gaines and Byron Townships, the City of Grandville and parts of Kentwood, in addition to the City of Wyoming.

Total population served: 220,000 est.

Source of Water: Lake Michigan

Capacity—90million gallons per day (MGD) with new construction, expanded capacity to 124 MGD

30 miles of transmission pipe



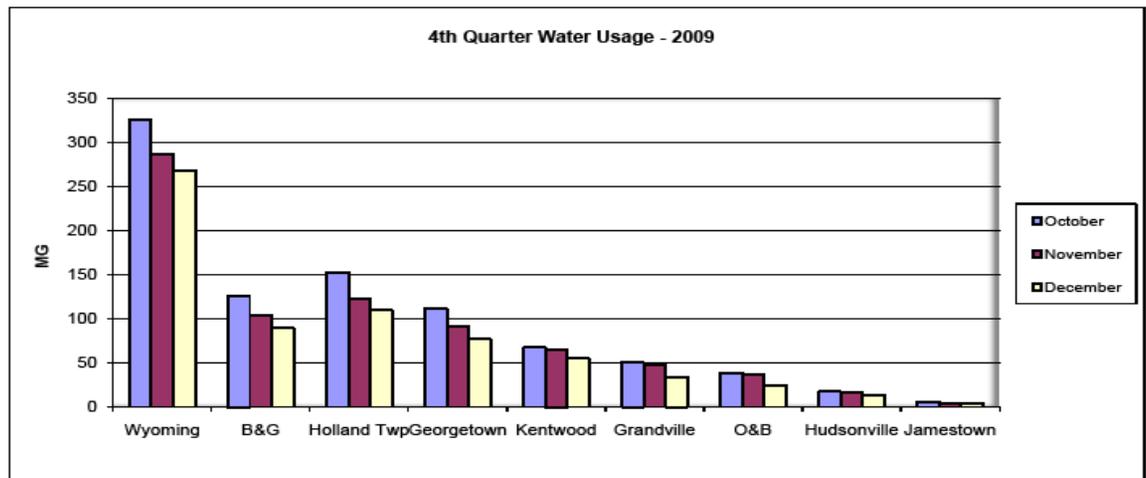
WTP optimizing plant process

As equipment installations continued through out the quarter, plant staff adjusted to the new 4 day work-week. With the addition of the new south treatment facility, the staff has more ground to cover in a shorter period of time. The plant acquired a much needed John Deere Gator to replace the old Argo vehicle, and help

Maintenance and Operations staff kept busy this quarter handling several project related spills; sodium hypochlorite in the north treatment facility and a fluoride leak in the south treatment facility. Neither leak was serious. Both work groups continued training on systems and equipment including, fire alarms, security systems, cranes and hoists

Scheduled power outages and water restrictions throughout the plant during various stages of construction and installations presented numerous challenges. In addition, seasonal maintenance and repair work on pumps continued throughout the fall months.

Water Pumpage—Wholesale Customers



Drinking Water Treatment Staff

As the City of Wyoming moved to a weekly work schedule of 38 hours, the Utility staff made adjustments to schedules to continue to provide continuous plant coverage. Shift bidding at the plant brought about a change in distribution sampling staff as well. This change along with increased sampling events this quarter, afforded an opportunity to use the Gezon Pump Station as home base for the distribution sampling staff.

The Gezon Station is in a highly visible location adjacent to the South Kent Recreation facilities and across from the Metro Hospital campus. The Utility saw benefit to creating a daily staff presence on the premises and the change improved the availability of necessary sampling equipment in the City, should there be emergency sampling need.



Gezon Pump Station

MI-AWWA Regional Meeting



In October, WTP Operations Supervisor, Mike Averill and City Engineering Services Consultant, Black & Veatch shared the podium at Michigan Section—AWWA Regional Meetings. They spoke to several hundred seminar attendees about the “Value of Interconnects and Teamwork”, based on the highly successful planning efforts to accommodate last year’s expansion project pipe tie-in event. (shown in progress at left).



Meter Shop / Cross-Connection

Service personnel acquired new Tablet PC's for use in the field. The various software applications allow staff to locate water mains, service lines and water shut-off valves (stop-boxes). The Tablets are located in the service trucks and replace the old "water books" used in the past.



The GPS stop-box locating project continued in commercial areas of Wyoming. Location and description data was checked against REGIS data and updates and corrections made on a daily basis throughout the quarter. The GPS project is scheduled to continue into the spring as weather permits.

December GPS work also included updates to data regarding sewer trunk line manholes.



Cross-Connection Inspection Activity:

	Last 1/4	This 1/4
Onsite Surveys	190	245
Non-compliance sites		8
Corrected sites		6
Notices Sent	400	30
Test forms rcvd	480	1

New Sensus water meters installed

The city solicited bids for water meters from 7 distributors in November, representing major water meter manufacturers in the industry. Etna Supply Company was awarded the bid worth approximately \$250,000.00 to provide the City with new Sensus water metering equipment for a one year period. New meter reading devices were included in this bid. Due in large part to the greater accuracy of the new meters, the office began to receive calls from customers complaining of high water bills. Verification of meter accuracy requires testing and these costs are passed on to the customer based on meter size. If the meter fails, the customer is not charged.

Meter shop staff do test meters regularly at three different velocities to simulate toilet, sink or multiple fixtures in use. To date, there have been zero incidents of a failed Sensus meters.

