Wyoming Michigan

January to March, 2010

Utilities Department

Quarterly Report

Capital Projects

Drinking Water Treatment Plant

Phase IB :

$74 Million Dollar Project

Raw Water Line /Carbon Feed and Transformer Facility:

$6 Million Dollar Project

Clean Water Plant

GVRBA –Pump Station (Segment 2 of overall

$33.4 Million Dollar Project)

Primary Tank Covers

Est. $2.5 Million Dollars

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The North Facility—main lobby and office areas with window installation and support column finish work in progress.

Water Treatment Plant Expansion Phase IB

As progress was made on window installation and wall finishes on the North Treatment Facility (NTF), the South Treatment Facility (STF) process optimization continued. General contractor, Granger, turned over ownership and equipment responsibilities to the City for centrifuges, heating and cooling, chemical feed systems, plate settling basins and filters. Flocculation basins, pictured below, underwent additional testing and various system adjustments to deal with excessive foaming and the sludge collection issues. The City continued to work through punch list items with the contractor, working towards final completion of the STF.

Several times throughout the duration of the Phase IB construction project, staff have coordinated with wholesale customers to accommodate temporary plant shutdowns. These scheduled events were necessary for major pipe tie-ins. In February, the planned interconnection event was suspended, as inspectors discovered problems with the pipe on site. The interconnect was rescheduled for later in the spring.

Photo Gallery Drinking Water Plant Construction

South Treatment Facility (STF), North Treatment Facility (NTF)

February: NTF-front lobby window framework installation on the north side of the building.

February: NTF-masonry work on the exterior of new laboratory progressed slowly this quarter.

February: NTF-general delivery area.

March: Those familiar with the plant will recognize the 60's vantage glass block wall pictured above, Formerly an exterior wall, now the interior wall of a new hallway to the old clarifiers.

March: NTF—main laboratory drywall and painting.

March: NTF-view into the Operator office cubicle area.

Raw Water Main & Carbon Feed and Transformer Faclity

At left, architectural view of the finished carbon feed and transformer facility, which was designed to blend with the residential neighborhood along the lakeshore.

January: Carbon Facility masonwork.

March—Setting 66 inch butterfly valve.

Construction Schedule

March, 2010	Major 66" pipe tie-in-plant shut down.
May, 2010	Road Crossings at Lake shore Dr and at 168th Ave.
October, 2010	Estimated completion.

February—electrical duct bank .

March: —Carbon Facility, siding installation.

February– interior Carbon Facility, stacks of drywall.

GRAND VALLEY REGIONAL BIOSOLIDS AUTHORITY

Wyoming Michigan — City of Grand Rapids

As of March, 2010:

Segment 1-Storage at Grand Rapids Wastewater Treatment Plant

Davis Construction, Inc.— *Nearing final completion and project closeout, pending request for additional contract time .*

Segment 2—Wyoming Pumping Facilities

Triangle Associates, Inc.— *Substantial completion achieved 12-12-09, minor close-out items remaining.*

Segment 3—Biosolids Transfer Pipeline; Kamphuis-Completed 2009

Segment 4—Dewatering at Grand Rapids Wastewater Treatment Plant

Erhardt Construction, Co.— *Weekly meetings continue as substantial and final completion dates are still to be determined.*

Land Application Program

In January, the Authority awarded a biosolids hauling and land application contract to long-time contractor, Synagro. This contract differed significantly from past agreements in that hauling costs are "out-the-door", removing distance and fuel cost surcharges. Based on the approximate 30 million gallons of biosolids hauled to farm fields and land applied last year, this new contract would represent a savings of over $185,000 given similar volume this year.

As location and scheduling became the primary responsibility of the new contractor, Synagro scheduled several meetings with farmers this quarter to recruit new participants. The Grand Rapids Press favorably publicized the Authority's participation in the county land preservation and sale of property development rights (PDR) efforts. Kent County's Agriculture Preservation Board was accepting applications from farmers for these funds through the end of this quarter. Wyoming also held an educational meeting for farmers currently permitted in our biosolids program and who fit the criteria for a pilot farm participant. If approved, these farmers would be eligible for a $40,000 contribution to the PDR in exchange for a permanent biosolids easement.

Administration and Budget

The first annual, third party audit was completed in February, with the Authority successfully meeting all fiscal tests. Authority budget preparation for 2010-2011 revealed the need to adjust for significant additional costs for side stream loading from dewatered sludge centrate.

Project Manager, Kim Hackbardt, assumed responsibilities this quarter. While operations and equipment testing continued, management spoke with several outside groups interested in the GVRBA activities. An investment group expressed a desire to use residuals for electrical production. Additionally, the Authority was asked to consider accepting septage in quantities of upwards to 4 million gallons per year, potentially generating revenue for the Authority.

Segment 2—Pump Station

Transfer pumps were exercised and troubleshooting continued through the quarter. The three Moyno pumps were expected to send up to 570 gallons per minute to the Grand Rapids facility.

In-line samplers were to be installed in sludge lines later this quarter. Performance testing will continue into the beginning of the hauling season.

Segment 2, Pumping station at CWP

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

Segment 4 –Dewatering Facility

Centrifuge and pump optimization and testing continued through the quarter.

The operations team identified safety concerns associated with high levels of hydrogen sulfide in the truck bay. Safe loading locations for the drivers were established and long term solutions are being evaluated.

Clean Water Plant Primary Clarifier Tank Covers

Wyoming sold 11 sets of prints to interested contractors in January and received competitive pricing at the bid opening in February.

In March, Davis Construction of Grand Rapids, was awarded a bid for 2.8 million dollars to assemble and install flat covers over the four primary clarifiers, improve air handling equipment on the carbon unit, and apply protective coating to the tanks and appurtenances. The project, a final component of the long-range odor control plans at the plant, will be completed in November, 2010.

Maintenance Supervisor, Tom Wilson, is to manage the project for the City, and supervise the on-site inspection work by CWP Operator Don Uitvlugt and Maintenance -UMII, Jerry Roche.

Utility Budget and Asset Management

Budget proposals were well underway this quarter as staff submitted estimated expenses and revenue projections through the end of June and for all of fiscal year 2011. Water and sewer rate reviews and recommendations were developed by administrative staff in preparation for presentations to council. Capital reserves for both plants are expected to increase slightly in the coming fiscal year..

New fiscal year budget projections also included expected savings from improved operational and maintenance efficiencies implemented late last year and into this quarter. These included:

A goal of 80% reduction in lighting use *—Motion sensor installations saved on electrical use in un-occupied areas of the CWP and meter shop facilities.*

Ferric Chloride use to drop by 95% — *achieved by optimization of biological processes.*

Higher fuel efficiency vehicle —*Replaced Environmental Services 3/4 ton field van (15mpg to 24mpg)*

Solid waste disposal reductions - *Continued and increased recycling efforts from plant staff and community partners included , as an example, 25% reduction in landfill charges. 100% of cardboard recycled at both plants.*

Laboratory Services

Water production taste and odor issues related to centrifuge operations and sludge handling challenges at the WTP generated some calls this quarter. The centrifuge had been operating several times a week for the last 6 months. Staff expect that seasonal taste and odor issues will present special challenges as the carbon feed capabilities were suspended until the new carbon facility is operational later this year.

The Unregulated Contaminant Monitoring Rule called for increased sampling and testing of drinking water this year. A private, certified lab (specified by the EPA) in Wisconsin, performed the analysis on these samples.

Due to changes in Wyoming's industrial sewer use community, the need for analysis of organic compounds at the Clean Water Plant has decreased. The lab instrument used for this analysis will be moved to the Water Plant, following methods approval by the State.

Clean Water Plant

Operations and Maintenance

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

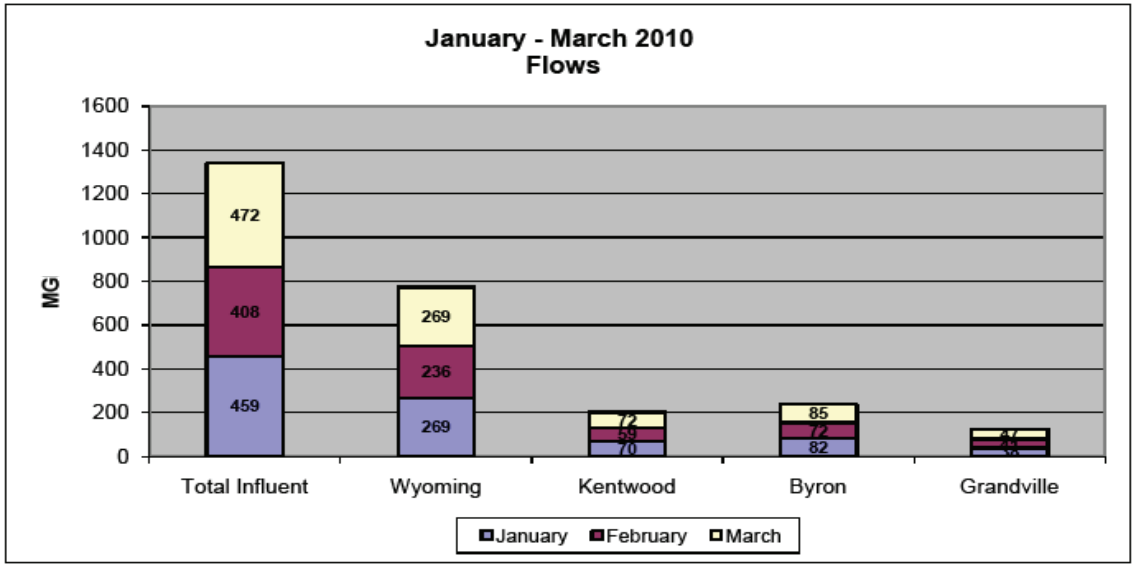
Capacity—24 million gallons per day advanced secondary treatment using extended aeration, biological phosphorus removal, and chlorine disinfection.

Collection system:

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

Lab Tech, Lynn Kukin, cross-trained in the Operations work team this quarter, conducting an effluent study. She helped coordinate a dye test in the chlorine contact chamber (at right) during the high water event in mid-March.

DNRE staff were on hand to witness the test, which was meant to demonstrate adequate dispersion of chlorine for disinfection purposes, even during flooding conditions.



Environmental Services

GVRBA Biosolids Program: The new three-year contract with Synagro to land apply biosolids differs from previous years in that the costs are considered "out the door" and do not include extra monthly charges for fuel or distances traveled. Although Synagro hauled only two months of this quarter, the city saved over $4,800 in charges compared what would have been paid out under the old contract terms.

Quarterly Biosolids totals:

hauled/land applied	4,376,100 gallons
pumped to GVRBA	15,444,145 gallons

Additionally, the City has implemented new driver verification and inspection requirements for Synagro, to ensure quality control on every truck out the door.

Soon after filing for, and receiving the National Biosolids Partnership certification for environmental management systems late last year, Clean Water Plant's Environmental Services group also applied for the **Neighborhood Partnership Award** through the Michigan Department of Natural Resources and Environment (MDNRE). This was on the recommendation of state auditors visiting the plant in March. Both the certification and neighborhood partnership will eventually help the plant achieve **Clean Corporate Citizen** status. Environmental Services staff continued to prepare and collect data for submittal to that program later this year.

Maximum Allowable Headworks Loading:

In late March, it was expected that MDNRE would approve new local discharge limits for Wyoming's industrial sewer users. These limits allow the Clean Water Plant to meet regulatory limits of our own NPDES permit, and also to protect the facility itself, worker health and safety and to allow for the beneficial re-use of biosolids.

Environmental Services Supervisor Dave Oostindie began review of ordinance language with the city attorney and a third party consultant, working toward approval and implementation of changes to these discharge limits and the city ordinance sometime later this fall. The lengthy process will require review with industrial users, public notice, council approval, and ordinance adoption by wholesale customer communities as well.

Sewer trunk line pollutant investigation:

Environmental Services staff closely monitored major sewer trunk lines this quarter, trying to determine the source of intermittent, but unusually high pH and zinc levels in the plant influent. A systematic search upstream from the plant included placement of three samplers in each of two major sewer trunk lines. Results were inconclusive as of March. Another trunk line issue the team worked on was tracing the source of personal care wipes accumulating in the Wilson Street lift station. Public education into targeted neighborhoods will hopefully decrease clogging from these non-biodegradable paper products.

A sewer back-up into Buck Creek in late February was caused by suspected tampering of a manhole in the low-lying, wooded area pictured above. Sticks, leaves and branches packed the pipe, requiring confined space entry to clear the plugged line.

Public Works and Environmental Services staff and the use of 4 Plummers Environmental vactor trucks were required over the course of nearly 4 hours to pump down the manhole and clear the debris. Staff sampled Buck Creek water extensively for fecal coliform levels.

Public Works Department planned to order lockable manhole covers to prevent future tampering, particularly in these hard to reach areas.

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.

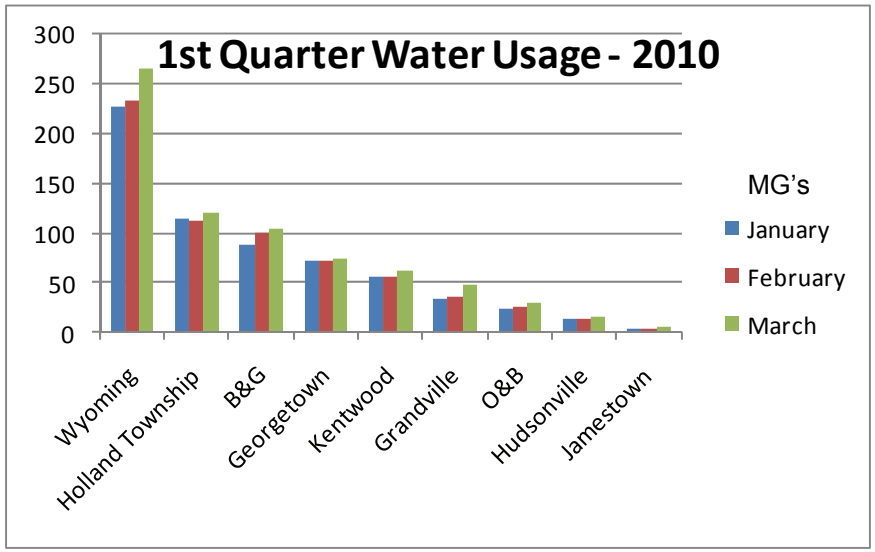
Total population served: 220,000 est.

Source of Water: Lake Michigan

Capacity—90million gallons per day (MGD) with new construction, expanded capacity to 120 MGD

30 miles of transmission pipe

Water Pumpage—Wholesale Customers



WTP Training

Operations Supervisor Mike Averill and three of his operations staff attended technical treatment sessions at the Michigan Rural Water Association conference in Traverse City.

Several treatment plant staff also attended DNRE training as well, in preparation for the spring round of certification testing.

At left, WTP Lab Tech, Jaime Halm, tutored wholesale water customer field staff on the use of the water sample bar code software. Customers who drop off water samples in the lobby at the Clean Water Plant were able to begin using the system in February. The system tracks chain of custody and creates an electronic record of the sample.

Emergency Planning

In cooperation with area agencies, Wyoming's water plant and distribution system will be the scene of a hypothetical crime when Ottawa County's Local Emergency Planning Committee's (LEPC) conducts a table-top exercise for area safety officers, health department personnel and other municipal staff. LEPC committee members worked to develop a scenario whereby a potential water system contamination event could be traced through hospitals, clinics and health department reports from medical responders who would have been treating patients presenting with stomach ailments. Water treatment Operations Supervisor Mike Averill serves on the LEPC committee. These table-top exercises serve to improve area readiness for real county emergencies.

Meter Shop / Cross-Connection

Partially as a result of more precise meter sensitivity and more reliable water reads, greater than normal complaints about high water bills came into the billing office this quarter. Meter staff responded to many of these complaints by helping residents determine whether their household fixtures leak. They also tested meters to be sure that no malfunction resulted in unusually high water readings.

Meter staff delivered just over 250 shut-off notices in March, as the billing office caught up with delinquent accounts. There had been no shut-offs since last year. Residents with over $200 in past due charges were given two weeks to make payments or other arrangements for a payment plan.

Meter Shop Foreman, Mark Kneibel, worked closely with staff at Michigan Turkey Producers concerned that a water main break in mid-March may have caused pressure and equipment glitches at the plant.

Interns are expected to return this spring to work on GPS updates and stop box locations.

Cross-Connection Inspection Activity:

	Last 1/4	This 1/4
Onsite Surveys	245	202
Non-compliance sites	8	19
Corrected sites	6	13
Notices Sent	30	50
Test forms rcvd	1	42

Wyoming Displays at Home Show

City Treasurer Andrea Boot and Utilities Admin. Aide, MJ Robinson volunteered at the Grand Rapids Home Show, staffing the Michigan Section, American Water Works Association booth. The March show, held at DeVos Convention Center provided an opportunity to present information about cross-connection prevention and other Utility programs. Information provided at the booth included flyers about cross-connection prevention, household hazardous waste collection, storm water management programs, Utility tours and water emergencies. Hands-on displays, fabricated by meter shop staff and regularly set up in City Hall, allowed attendees to learn about ways to protect their home water systems and to read their water meters.