Wyoming Michigan

April through June, 2010

Utilities Department

Quarterly Report

Water Treatment Plant—Carbon Feed and Transformer Facility

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. $2.9 Million Dollars

Water Treatment Plant Expansion Phase IB

May– the Operations control room was nearly complete as communication equipment, computers, and SCADA displays began to be installed. The operator's new location is one floor above the old control room. Sound deadening windows, overlooking the high service pump room provide a much quieter working environment for up to 2 plant operators (per shift) who are able to monitor and control plant processes from this room.

Operators expect to vacate the old operator suite and move in to this new control room toward the end of July.

April— Upstairs/Downstairs

The conference room in the North Treatment Facility (above) and the administrative offices (below) take shape. These rooms are located along the glass fronted curve of the two-story addition to the North Treatment Facility.

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Photo Gallery Drinking Water Plant Construction

North Treatment Facility (NTF)

April: final site preparations began for driveway and curb installations.

May: cabinet and counters staged for installation in the laboratory.

June: City of Holland maintenance staff toured the NTF.

May: gallery above the main lobby.

May: main floor office space.

June: painting completed in the lunch room, prior to terrazo flooring and ceiling installations.

Raw Water Main - Pipe Tie-In and Valve Placement

In April, General Contractor Pioneer, and subcontractor, Dykema Excavating, worked with city staff to coordinate another planned disruption of water production. The first shut-down for this project lasted approximately five hours as electrical service connections were made at the carbon/electrical transformer facility last fall. This time, the water production shut-down was to facilitate the placement of new valves and pipes from the existing 60" raw water pipeline to the new 66" raw water pipeline.

Plant staff again worked with wholesale customer communities and other community partners to ensure an adequate (as well as alternate) water supply to all customers for the duration of this phase of the raw water main construction project.

From start-to-finish, the plant was shut down for 39 hours before usable water flowed through the new connections. Below is a timeline describing the pipe and valve installation.

Prior to the plant shut-down, the new 66" valve and base were placed in position.

5:30 a.m.	Low service pumps were turned off, and plant staff began draining the 60" pipeline.
7:30 a.m.	Dykema started cutting into 60" pipe.
12:40 p.m.	The 60" pipe opened halfway as Dykema actively de-watered the pipe.
1:53 pm	Dykema removed old sections of pipe.
4:00 p.m.	New 60" butterfly valve was placed.
9:30 p.m.	Last section of 60' pipe was placed.
2:00 a.m.	Last section of 66" pipe was placed.

While it was not possible to pressure-test the new connections and valves without extending the plant shut-down, the contractor delayed backfilling the new pipes and valves for three days while inspectors visually checked for water tight fittings and joints.

Cutting and dewatering old pipe.

Placing new 66" valve.

Removing section of 60" pipe.

Final 66" pipe placement.

Placing new 66' pipe.

Final grouting at pipe joints.

GRAND VALLEY REGIONAL BIOSOLIDS AUTHORITY

Segment 1-Storage at Grand Rapids Wastewater Treatment Plant

Davis Construction, Inc.— Nearing final completion and project close-out, 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.*

The Operations Team continued to work with contractors this quarter to resolve biosolids cake pump motor issues on the Segment II project and air quality safety at the dewatering facility. An exhaust hood will be installed over the truck loading area to reduce hydrogen sulfide levels. Performance testing on the two centrifuges also continued this quarter. It was expected that a full systems test would follow in early July. CWP maintenance and operations staff also worked to troubleshoot biosolids pump issues which caused tripping and hammering on start-up. In June, the City Council approved the GVRBA annual budget figures.

On June 29, 2010, the Michigan Department of Natural Resources and Environment provided the City of Wyoming and Grattan Township officials with an official response resulting from their investigation of the biosolids application by the City of Wyoming to a farm field in the vicinity of Big Crooked Lake on June 15, 2010. Concerns of potential biosolids runoff were raised by lake area residents after a significant rain event occurred on the evening of June 15, 2010.

MDNRE officials conducted two site investigations at Big Crooked Lake on June 16 and June 22, 2010 and concluded that "adequate soil coverage was achieved; the application did not occur on slopes greater than 12%; and the minimum of a 50 foot setback from surface waters was maintained as required by statute". During the June 16th site investigation, samples were taken for fecal coliform at several locations including three locations in Big Crooked Lake and the fecal coliform results "were not exceptional and did not trigger a body contact advisory for Big Crooked Lake from the Kent County Health Department."

Although the MDNRE determined that the field was appropriately permitted and approved for safe, agronomical application of biosolids, the City of Wyoming's environmental management team implemented program modifications to the land application site selection procedures based on the experience at Big Crooked Lake.

Segment 2, Pumping station at CWP.

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

The City of Wyoming, which operates the biosolids recycling program on behalf of GVRBA, planned to meet with Township officials and residents to provide additional feedback and more information about the biosolids program.

Clean Water Plant Primary Clarifier Tank Project

Project Cost: $2.9 Million Dollars

General Contractor: Davis Construction Co.

Scope of Project:

- Install flat aluminum covers on four Primary Clarifiers and upstream flocculation channels.
- Install and modify air handling equipment to route foul air from clarifiers to the existing carbon adsorption unit.
- Corrosion protection in tanks and flocculation channels;
- Install sludge blanket level instrumentation for the primary clarifiers.
- Modifications to the existing carbon unit, including replacement of carbon and installation of de-mister.

The first of 6 truss pieces lowered in to place on a primary clarifier. The center truss is 120' long and weighs an estimated 6,000 lbs.

Closer view of the truss supports, above.

Detail of the bolts holding support to existing tank weir, below.

Shortly after receiving their official notice to proceed this spring, Davis Construction Co., mobilized their project site team and staged the construction area around the primary clarifiers. Daily project inspector from the Clean Water Plant staff, Jerry Roche, and Maintenance Supervisor, Tom Wilson worked closely with the Contractor and Operations staff to coordinate various required equipment shut-downs as work progressed from one to another of the four clarifier tanks.

Clean Water Plant

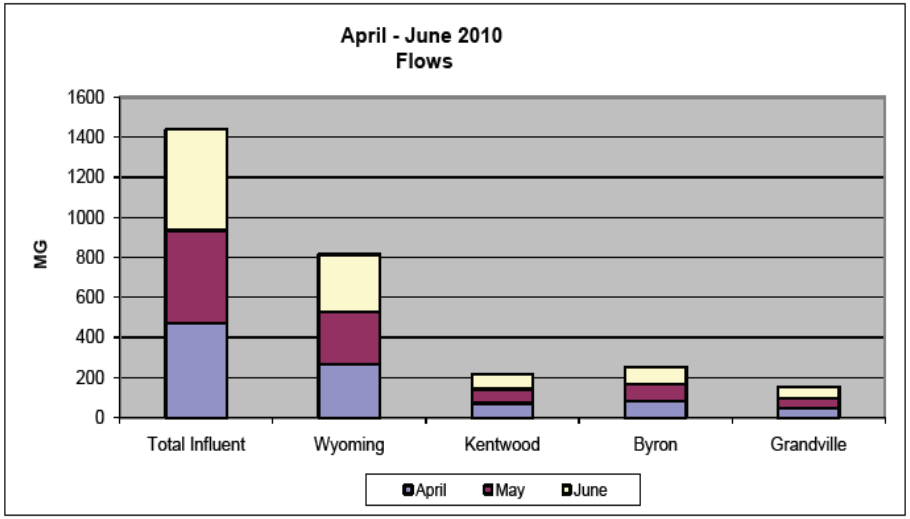
Operations and Maintenance

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

Training—Certification—Staffing

With one plant operator position to fill at both the Clean Water Plant and the Drinking Water Treatment Plant, the Utilities Department accepted applications through the quarter with interviews and final hiring decisions to be made in July.

Annual state testing for Operator license candidates were also scheduled for this spring and several of the Clean Water Plant staff prepared to take the exams this year. Myron Erickson, Lynn Kukin, Jon Burke, Scott Coduti, and Jaime Halm, if successful, will each advance in their certification level.



Average Daily Flows

15-16 MG range.

However, wet weather events like the one on the evening of June 15th , with over 4 inches of rain, increased plant flow the next morning to 24 million gallons, as communities throughout the county dealt with flooded streets.

Operations staff worked extensively with maintenance personnel troubleshooting problems with the centrifuges (at right) which ranged from low oil pressure, to belt replacement and unexplained shut-downs.

Thickening and thinning of solids in order to optimize GVRBA pumping and centrifuge needs also demanded operational changes at the plant.

Throughout the quarter, Operations staff cleaned the odor control scrubber system—a time consuming project, necessary for preventative maintenance.

Environmental Services staff continued to sample extensively, trying to determine the cause of occasional spikes of zinc levels at the plant.

They concentrated on metal finishers to discover the source.

Kent County expressed interest in broadening the department's medicinal drug disposal program county-wide and planning meetings took place in June with county health department and county public works staff.

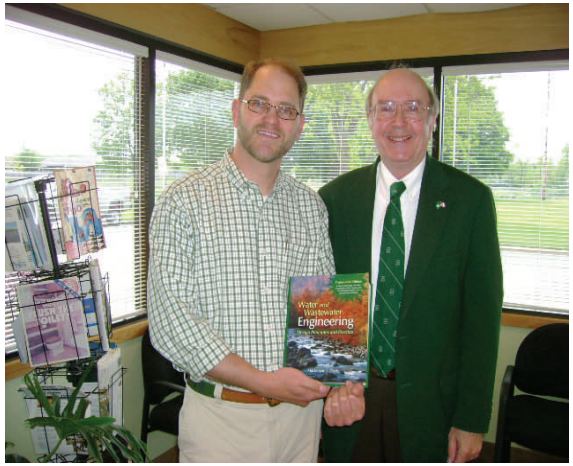
Public Outreach

Miranda Park Party, held at Lamar Park in June, drew over 3,000 park visitors. Meter Shop Foreman, Mark Kneibel and Admin. Assistant, MJ Robinson brought Utility program information and hands-on demonstrations to share with attendees.

Residents learned about cross-connection prevention, how to detect water leaks and were provided information about programs they can participate in such as Household Hazardous Waste Collection, medicinal waste disposal (WyMeDS), oil and grease reduction and efforts to keep baby wipes and other paper products out of the sewers. Educational efforts have been targeted at particular neighborhoods in Wyoming, where the non-bio-degradable paper products are causing regular clogging and blockages.

Laboratory Services

This spring, a CWP lab technician suffered a burn from heated acid while performing an analysis for total Kjeldahl nitrogen, although she was wearing all the required and appropriate personal protective equipment. Alternative gloves that offer superior protection have been identified and supplied.



Lab Services Manager, Myron Erickson, with retired Michigan State Professor, Mackenzie Davis.

Prof. Davis, a prolific author , presented Myron with an autographed copy of the newly published "Water and Wastewater Engineering" textbook. While serving on the Professional Advisory Board for the book, Myron provided "real world" advice on the design and operation of water and wastewater plants.

In April, lab staff finished development of an alternative method for conducting in-house tests on plant influent for phosphorus levels. Comparison of the new method with the existing method is on-going."

Employee Service Awards

Utilities staff were well represented at the annual city-wide employee service award ceremony at City Hall in May. Fourteen employees from the Clean Water Plant, Drinking Water Plant and the Utility Business Office were recognized for their years of service to the city, ranging from 10 years to the most senior staff person, CWP Operator, Don Uitvlugt, for 40 years with the City.

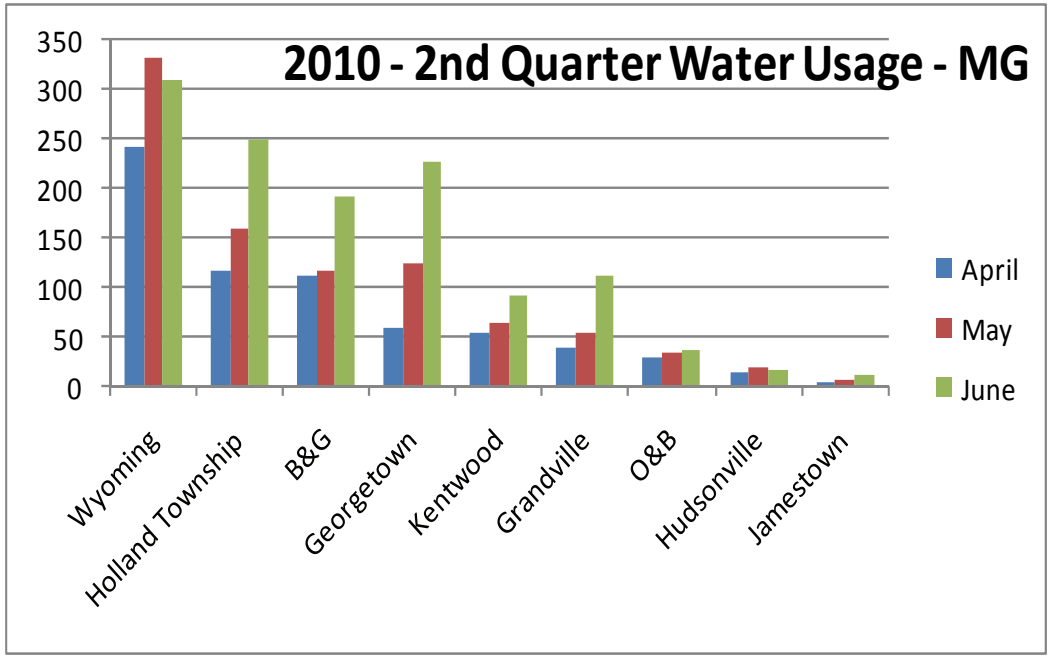
Donald K. Shine Water Treatment Plant

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.

Deputy Public Works Director, Tom Kent led water rate discussions with wholesale customers, finance and City Treasurer/Billing office staff this quarter in the final evaluation of new rate methodology and new contracts.

It was expected that contract discussions with various wholesale customers would continue through the next quarter.



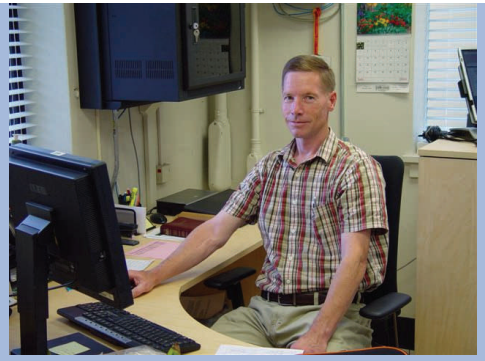
Plant Visitors

Michigan Utility Directors (also known as the"MUD" group) from around the state had an opportunity to tour the new facilities in April, following their regular meeting. Superintendent Jerry Caron hosted the MUD meeting for attendees who represented community water suppliers from Charlevoix to Battle Creek.

City of Wyoming Finance Department staff also toured the water plant facilities in June, as they began working on the classification of assets for accounting purposes.

Old Carbon Building - pictured at left, was scheduled for demolition this quarter. The new carbon facility located on Lakeshore Drive, will replace the functionality of this structure. However, until that system is up and running this fall, the plant will be unable to feed carbon. Plant staff were prepared to answer customer calls regarding seasonal taste and odor issues, should they arise.

Meter Shop & Cross-Connection Team



Cross Connection Inspector,

Tom Engelsma

Cross-Connection Inspection Activity:

	Last 1/4	This 1/4
Onsite Surveys	202	230
Non-compliance sites	19	42
Corrected sites	13	34
Notices Sent	50	1031
Test forms rcvd	42	1450

City Billing and Treasury office staff made progress this quarter with data conversion for new quarterly utility bills. With the implementation of the New World finance systems, city-wide, customers were to receive alerts regarding changes to the billing cycles. The office was prepared to work out interim billing arrangements with customers due to these changes.

Left to right: Brian Wolf, Tom Engelsma, Steve Pucilowski, Josh Koetser and Jason Bartram (Shop Foreman Mark Kneibel was the photographer).

Meter Replacement and Installs

	MRP	INST
April	176	5
May	98	18
June	81	13

Summer intern, Josh Koetsier, pictured at left with GPS equipment. In an on-going project for the department, Josh worked to update the centralized database of all the city stop box and shut-off valve locations. This information is then available to field staff using computer tablets.

New Sensus Omni meter on the test bench.

Ramblewood Apartment Meter Installations

The largest apartment complex in the City of Wyoming, Ramblewood Apartments houses over 3,500 residents. This sprawling rental community is located on both the north and south sides of 44th Street, and includes 1700 apartment units in nearly 80 separate buildings. Built in the early 1970's, the water pipes serving these buildings were metered from outdoor, underground pits, which have deteriorated over the years. Location of these meters posed confined space hazards to meter service crews who had to access the pits for meter reading and periodic maintenance and repair of the meters.

Meter Shop Foreman, Mark Kneibel worked with Ramblewood administration to relocate and replace old meters with new Sensus Omni model meters which will reduce service calls and allow the rental property company to better monitor water usage in the individual apartment buildings. The new meters are being placed in safe, easily accessible locations within each building, which will allow Ramblewood to pinpoint water leaks and accurately record and track water usage in each building.

Since the meter upgrade project started in January of this year, 17 meter pits were eliminated and a total of 30 new meters installed inside the apartment buildings. This phase of the project will be completed by August and the South Ramblewood phase of meter replacements is scheduled to begin in September or October.

The City contracted with Godwin Plumbing and Action Plumbing for meter installations. Ramblewood Apartments will be responsible for the abandonment of the old meter pits.

The map below shows the North Ramblewood Apartment complex area within the City of Wyoming. Meter replacements were completed in the areas highlighted in yellow. The final sections to be replaced are circled in black. Meter replacements in South Ramblewood (not shown) will take place this fall.