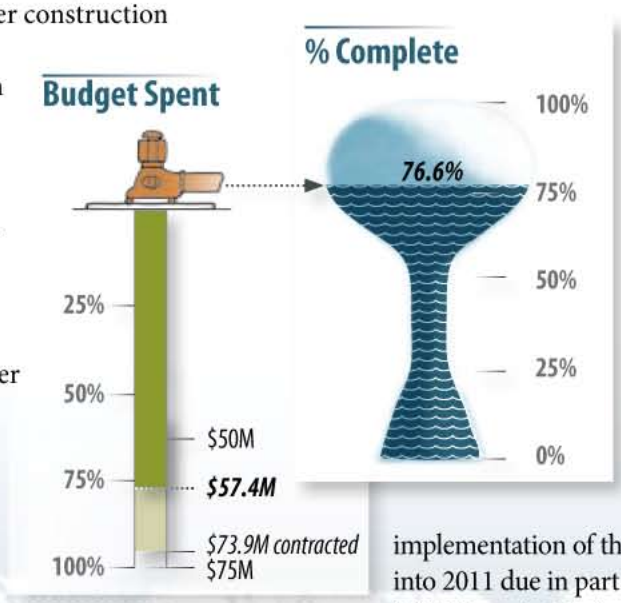
THE CITY OF ROCKFORD ILLINOIS, USA

# Water System Improvement Project

## Project Expenditures and Progress

Major construction and start-up activities related to the City of Rockford's Water System Improvement Program are continuing. During the first half of 2010, the City dedicated its first radium removal water treatment facility and began testing of two additional radium removal systems. Iron removal treatment facilities are under construction at two sites, while contracts for construction of the final two radium removal facilities are anticipated to be signed during the third quarter. Crews are also working to complete construction of the Dawson Avenue Water Main and install a total of 10 new zone control valves that will enable the City to better manage service pressures throughout its water distribution system. Restoration and final clean-up activities are in progress at other sites where major construction is complete.



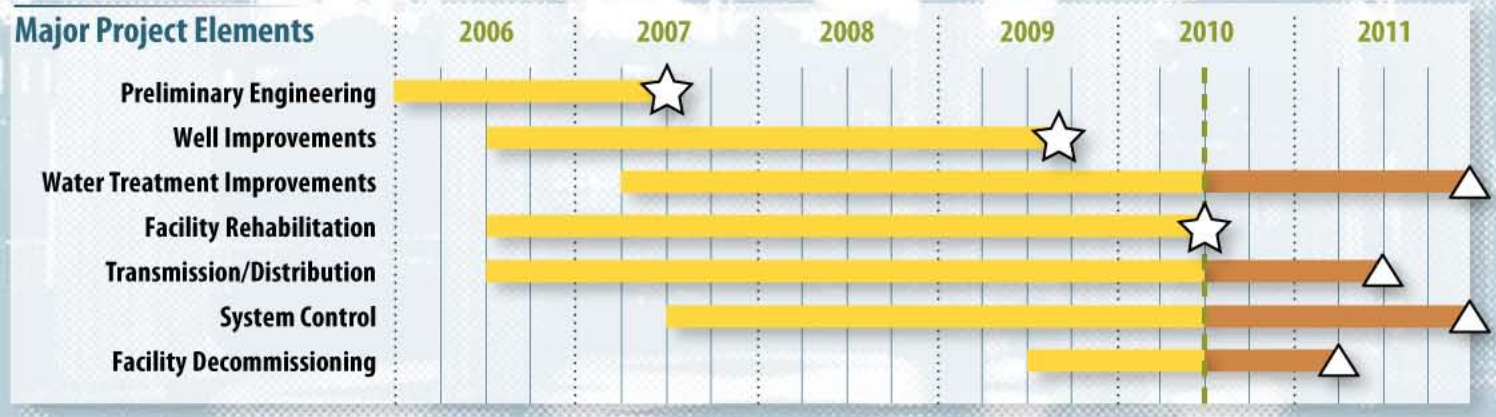

Additional funding awards from the IEPA during the 2nd quarter 2010 brought the state support for this project to more than $44.2 million. New awards in 2010 total $6.5 million, including more than $1.4 million in principal forgiveness.

As of early June 2010, the City has signed contracts for approximately $73.9 million worth of studies, designs, and construction related to the water system improvement project. This total represents approximately 98.5% of the overall project budget of $75 million. Actual expenditures recorded through early June 2010 total $57.4 million, or about 76.6% of the budget. Progress reports developed for the individual projects indicate that work related to the overall improvement project is about 76.6% complete.

## Project Milestone Schedule

Rockford, together with its construction contractors and consultant team, continues to make strong progress toward completion of major elements of the water system improvement program. Major facility rehabilitation and transmission/distribution components of the project will be completed this year along with implementation of the new West Pressure Zone. Work related to the construction of new treatment facilities, implementation of the East High Pressure Zone, and full implementation of the City's new control system will extend into 2011 due in part to delays in the start of the Well 10 and Well 36 projects being funded through the State Revolving Loan Fund. As individual projects are completed, residents of Rockford will continue to see incremental improvements in the quality and pressure of the water they receive.

Details related to the status and anticipated completion dates for these and other individual projects are presented in the tables on pages 2 and 3 of this report.



# 2nd Quarter 2010 **Project Status**

## *Individual Project Status*

A detailed listing of the location, schedule and status of improvements planned for individual facilities, water mains, or the overall water system, is provided in these tables.

Color-coded cells in the last column of the table indicate overall project status using a green (Good), yellow (OK, but some issues), or red (Problems) format.

### Project Status – June 2010

| Project | Ward | Planned Construction | Rehabilitation | | | | Progress | | | | Status |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Wells | Treatment | Facility Rehab | Abandon | Planning | Design | Construction | Complete | |
| **Facility Rehabilitation / Improvements** | | | | | | | | | | | |
| Treatment Equipment | -- | 2008-2011 | | X | | | ✓ | ✓ | ✓ | | |
| S01 : 525 Stanley Street | 13 | 2007-2008 | X | | X | | ✓ | ✓ | ✓ | ✓ | |
| U03 : 1404 River Bluff Blvd. | 12 | 2008-2009 | X | | X | | ✓ | ✓ | ✓ | ✓ | |
| U04 : 801 Marchesano Dr. | 5 | 2010 | | | | X | ✓ | | | | |
| U05 : 2526 Pelham Rd. | 3 | 2009-2011 | | X | X | | ✓ | ✓ | ✓ | | |
| U06 : 2604 19th Ave. | 8 | 2008-2009 | X | | X | | ✓ | ✓ | ✓ | ✓ | |
| U09 : 2708 Crosby St. | 10 | -- | | | | | ✓ | | | ✓ | |
| U10 : 4316 Newburg Rd. | 14 | 2008-2011 | | X | X | | ✓ | ✓ | ✓ | | |
| U11 : 1218 7th Ave. | 11 | 2010 | | | | X | ✓ | | | | |
| U12 : 1022 Benton St. | 3 | 2010 | | | | X | ✓ | | | | |
| U13 : 4625 Skyline Dr. | 10 | 2009-2011 | X | X | X | | ✓ | ✓ | ✓ | | |
| U15 : 3030 Chestnut St. | 13 | 2010 | | | | X | ✓ | ✓ | ✓ | ✓ | |
| U16 : 4550 Harrison St | 14 | 2010 | | | | X | ✓ | | | | |
| U17 : 3700 Brookview Rd. | 3 | -- | | | | | ✓ | | | ✓ | |
| U18 : 1409 S. Johnson Ave. | 5 | 2008-2009 | | | X | | ✓ | ✓ | ✓ | ✓ | |
| U20 : 2434 N.Central Ave. | 9 | 2010 | | | | X | ✓ | | | | |
| U21 : 703 Daisyfield Rd. | 13 | 2008-2009 | X | | X | | ✓ | ✓ | ✓ | ✓ | |
| U22 : 5110 Auburn St. | 13 | 2008-2009 | | | X | | ✓ | ✓ | ✓ | ✓ | |
| U23 : 1206 Elmwood Rd. | 12 | -- | | | | | ✓ | | | ✓ | |
| U24 : 6475 Cessna Dr. | 6 | 2008-2009 | X | | X | | ✓ | ✓ | ✓ | ✓ | |
| U25 : 5602 Spring Creek Rd. | 4 | 2009 | | | | | ✓ | ✓ | ✓ | ✓ | |
| U26 : 5500 E. State St. | 10 | 2009 | | | | | ✓ | ✓ | ✓ | ✓ | |
| U27 : 5834 Guilford Rd. | 1 | 2010 | | | | X | ✓ | | | | |
| U28 : 5400 Belt Line Rd. | 6 | -- | | | | | ✓ | | | ✓ | |
| U29 : 4750 Pepper Dr. | 4 | 2008-2009 | X | X | X | | ✓ | ✓ | ✓ | ✓ | |
| U30 : 3725 Trainer Rd. | 4 | 2008-2009 | X | X | X | | ✓ | ✓ | ✓ | ✓ | |
| U31 : 1780 Bell School Rd. | 1 | 2008-2009 | X | X | X | | ✓ | ✓ | ✓ | ✓ | |
| U33 : 930 Arthur Ave. | 1 | 2010 | | | | X | ✓ | | | | |
| U34 : 3945 Dawes Rd. | 5 | 2009-2010 | X | | X | | ✓ | ✓ | ✓ | ✓ | |
| U35 : 2944 Bildahl St. | 6 | 2010 | | | | | ✓ | | | ✓ | |
| U36 : 4141 Samuelson Rd. | 6 | 2009-2011 | | X | X | | ✓ | ✓ | ✓ | | |
| U37 : 2100 Huffman Blvd. | 9 | 2008-2009 | | | X | | ✓ | ✓ | ✓ | ✓ | |
| U39 : 7423 Spring Brook Rd. | 4 | -- | | | | | ✓ | | | ✓ | |
| U40 : 738 Lyford Rd. | 1 | 2008-2009 | | X | X | | ✓ | ✓ | ✓ | ✓ | |
| U42 : 6733 Newburg Rd. | 1 | 2008-2009 | X | X | X | | ✓ | ✓ | ✓ | ✓ | |
| U43 : 3447 Publishers Dr. | 14 | 2008-2009 | | X | X | | ✓ | ✓ | ✓ | ✓ | |
| U44 : 5250 Owen Center Rd. | 9 | 2008-2009 | | | X | | ✓ | ✓ | ✓ | ✓ | |
| SCADA | -- | 2008-2010 | | | | | ✓ | ✓ | ✓ | ✓ | |

| Project | Ward |
|---|---|
| **Preliminary Engineering** | |
| **Well Rehabilitation** | |
| **Pilot Test Program** | |
| **Zone Boundary Improvements** | |
| **Water Main Improvements** | |
| W-1 : Harrison Street East | 8 |
| W-2 : Airport Loop | 6 |
| W-3 : Auburn Street | 7/9 |
| W-4 : Aldeen | 10 |
| W-5 : Alpine Meadows | 4 |
| W-6 : American Road | 14 |
| W-7 : Dawson Avenue | 2/3 |
| W-8 : 20th Street | 8/11 |
| W-9 : Green Street | 13 |
| W-10 : 22nd Street | 8 |
| W-11 : Ekberg Pine Manor Park | 6/14 |
| W-12 : 35th Street | 14 |
| EXW : Porter Road | 9 |

# 2nd Quarter 2010 **Highlights**

## *Group 3 Treatment Facilities Construction*

Construction of the Group 3 Treatment Facilities began in October of 2009 and consists of iron and manganese removal at Wells 5 and 13. The Well 5 project consists of construction of an iron and manganese removal plant, new ground level reservoir, and booster station. This reservoir will be used to blend water from the two existing wells located on the site before delivery to the water distribution system. The Well 13 project consists of a water treatment plant for removal of iron and manganese, along with a booster station, and will utilize the existing ground level reservoir. Scandroli Construction of Rockford is the general contractor on this project. The project is scheduled for completion in the spring of 2011.

Well 5/5a Filter Vessel and Reservoir

Well 29

Well 30

Well 29 Dedication

## *Dawson Avenue Water Main*

The 2-year Dawson Avenue Water Main Project is nearing completion. To date, all of the approximate 9300 feet of water main has been installed along 18 blocks of residential streets, including new service connections and sewer replacement. Pavement repair and resurfacing are complete. Final restoration of landscaping is expected to be completed during the fall planting season.

| Planned Construction | Progress: Planning | Design | Construction | Complete | Status |
|---|---|---|---|---|---|
| 2005-2007 | ✓ | ✓ | ✓ | ✓ | |
| 2006-2007 | ✓ | ✓ | ✓ | ✓ | |
| 2006-2007 | ✓ | ✓ | ✓ | ✓ | |
| 2007-2011 | ✓ | ✓ | ✓ | | |
| | | | | | |
| 2007 | ✓ | ✓ | ✓ | ✓ | |
| 2007-2008 | ✓ | ✓ | ✓ | ✓ | |
| 2008-2009 | ✓ | ✓ | ✓ | ✓ | |
| 2008-2009 | ✓ | ✓ | ✓ | ✓ | |
| 2009-2010 | ✓ | ✓ | ✓ | ✓ | |
| 2008-2009 | ✓ | ✓ | ✓ | ✓ | |
| 2008-2010 | ✓ | ✓ | ✓ | | |
| 2008-2009 | ✓ | ✓ | | | |
| 2008-2009 | ✓ | ✓ | ✓ | ✓ | |
| 2008-2009 | ✓ | ✓ | | | |
| 2008-2009 | ✓ | ✓ | ✓ | ✓ | |
| 2008-2009 | ✓ | ✓ | ✓ | ✓ | |
| 2008-2009 | ✓ | ✓ | ✓ | ✓ | |

## *Group 2 Treatment Facilities Construction*

The Group 2 Treatment Facilities Construction project is nearing completion. The project includes work at Wells 29, 30, and 43. Well 29 has been placed into service. The contractor, Williams Brothers Construction, of Peoria, Illinois, is in the final phases of completing minor work items at Wells 30 and 43, while these facilities are proceeding through the commissioning phase of the project.

The activation of these facilities represents a major milestone in the Water Improvement Project. These facilities are the first treatment plants in Rockford to utilize hydrated manganese oxides (HMO) to remove naturally occurring radium, in addition to iron and manganese, from the ground water. The previous treatment plants were designed to remove only iron and manganese from the water, with the capability to modify the process in the future should radium removal become necessary. Water quality testing data collected to date has shown that the treatment process is meeting design requirements and removing over 90 percent of the radium from the raw well water.

A dedication ceremony was held on June 3, 2010 at the Well 29 site. A large gathering of neighborhood residents were in attendance and had the opportunity to tour the facility and see the radium removal equipment.

Well 29 HMO Equipment

# 2nd Quarter 2010 **Highlights** (cont.)

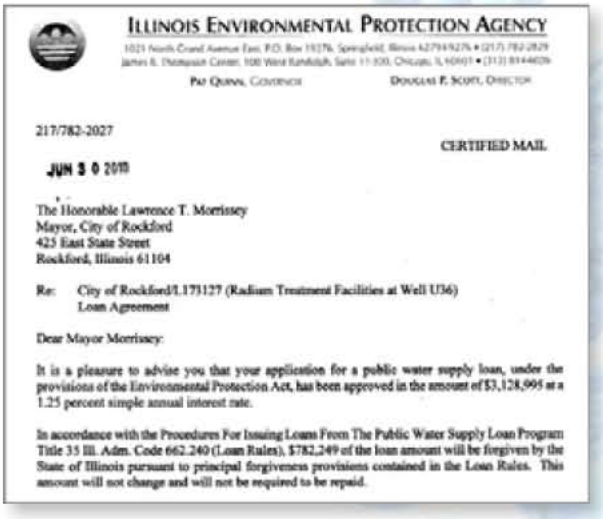
## Zone Control Valves

An integral part of the City's Water System Improvement Project is the installation of ten Zone Control Valve (ZCV) stations throughout the system. These valves will allow the City to increase service pressure in parts of the system while allowing treated water supply to be shared across the planned pressure zone boundaries. Six stations have been installed, and four more are scheduled to be installed by September 2010. Two new pressure zones will be created once the ZCV's are installed. The first new pressure zone is planned for implementation in the western portion of the system during the fourth quarter of 2010. The new eastern pressure zone is scheduled to be implemented during the first quarter of 2011 weather permitting.

Zone Control Valves and Inside Components

## IEPA Loan Progress

In June 2010, the City of Rockford obtained a third round of funding totaling $6,482,819 from the Illinois Environmental Protection Agency (IEPA) Public Water Supply State Loan Program. Of this amount, $1,620,706 of



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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PAT QUINN, GOVERNOR — DOUGLAS P. SCOTT, DIRECTOR

217/782-2027

CERTIFIED MAIL

JUN 3 0 2010

The Honorable Lawrence T. Morrissey
Mayor, City of Rockford
425 East State Street
Rockford, Illinois 61104

Re: City of Rockford/L173127 (Radium Treatment Facilities at Well U36)
Loan Agreement

Dear Mayor Morrissey:

It is a pleasure to advise you that your application for a public water supply loan, under the provisions of the Environmental Protection Act, has been approved in the amount of $3,128,995 at a 1.25 percent simple annual interest rate.

In accordance with the Procedures For Issuing Loans From The Public Water Supply Loan Program Title 35 Ill. Adm. Code 662.240 (Loan Rules), $782,249 of the loan amount will be forgiven by the State of Illinois pursuant to principal forgiveness provisions contained in the Loan Rules. This amount will not change and will not be required to be repaid.

the principal will be forgiven and will not be required to be repaid by the City. The remaining balance will be financed at an interest rate of 1.25% over the 20-year life of the loan, providing the City considerable savings compared to traditional municipal bonds. These loans are to fund the well and pump station rehabilitation and radium treatment facilities at Well 36 ($3.1M), the addition of radium treatment facilities to on-going rehabilitation work at Well 10 ($2.6M), and the balance of the cost for the Dawson Avenue Water Main Replacement Project that exceeded the annual funding limits in 2009 ($0.7M). Work at Well 36 is scheduled to begin in August 2010, while work on the other two projects continues toward completion.

## Unit Well 10 Radium Removal Treatment Plant

The bid for the addition of a radium removal plant at the Well 10 site on Newburg Rd has been awarded to Scandroli Construction Company. The project will consist of the addition of a radium removal filter, chemical feed facilities, and a backwash storage tank. Work is expected to start in August 2010 and should take about one year to complete. The new treatment plant is a continuation of major renovation work at Well 10 which has included structural improvements, new electrical and control equipment, well rehabilitation, and the demolition and replacement of the 5 million gallon reservoir.

*For more information* on specific projects, please contact:
Tim Holdeman • Rockford Water Division Superintendent (815) 987-5738• Tim.Holdeman@rockfordil.gov

Prepared by: MWH.