TO: Lawrence J. Morrissey, Mayor
Members of City Council

FROM: William Bittner, Director of Public Works

SUBJECT: Water System Rehabilitation Plan

DATE: January 16, 2007

This is to provide an update on the progress of our water system upgrade. It is intended to review activity since the last report. It is not a comprehensive review of the entire project. If you have any questions or would like more information, please let me know.

The City Council has approved several engineering agreements and contracts for services related to the project. Activities will increase in the upcoming months. As the project includes a variety of improvements at a number of locations, there will be a significant number of contracts for Council consideration.

Attached to this report are the following:

1.) A summary of contract commitments and expenditures to date.
2.) A preliminary construction schedule for the treatment units and well rehabilitation.
3.) An updated budget estimate as compared to the one presented in the original 2005 plan.
4.) A copy of the July 2006, status report.

$ The City Council gave final approval of the project in January of 2006 when it authorized the bonds and implemented a phased in water rate increase to fund the project. The second step of the rate increase (12%) is now in effect. As indicated in the budget, it is anticipated $30 million of bonds will be issued in the summer of 2007.

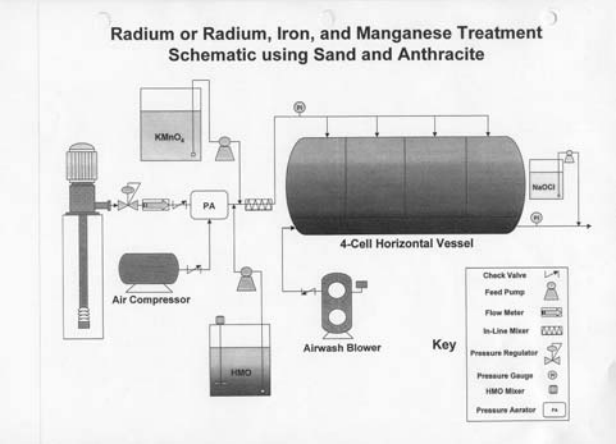
The engineering team continues to meet monthly to coordinate every increasing project activity. City staff members work with individual members of the team on a regular basis to address specific project details. The primary focus has been the completion of studies and determination of design requirements to move forward on the new treatment plants and pumping station rehabilitation. The project continues to evolve as we develop more information. The attached budget update shows current cost estimates as compared to the original estimates developed in 2005.

McMahon Associates is completing the final design for the Stanley Street Pumping Station. It is anticipated that construction will begin in June of 2007. The new station will house 5 vertical turbine pumps which will draw from the adjacent 5 million-gallon reservoirs. Since the station is a critical component of the central pressure zone water service, a diesel standby power generator will be incorporated into the facility.

The new station will be located on the existing Stanley Street. The Code and Regulations Committee has reviewed the proposed vacation.

As is our normal practice, the final vacation will be before City Council when the details on relocation of the utilities are complete.

The Council has awarded the contract for the construction of a new well at the site (Well #45). Drilling is expected to start by the end of February. The new well allows the abandonment of existing wells that are suspect because of VOC contamination.



Pilot studies for the water treatment plants have been completed at two sites. The third is expected to be complete in 60 days. The studies are being carried out by three suppliers of package treatment plants to determine the design parameters. Results of the three locations will be used to complete the final design for all 10 treatment units. The results to date are generally what was anticipated regarding the effectiveness of the treatment processes.

Once the pilot studies are complete, we will proceed to the final design. The treatment equipment will be purchased as pre-package units from one of the three pre-qualified vendors. Having all plants similar will simplify operation and maintenance.

A preliminary well rehab and treatment plan construction schedule is attached. Coordination of the work will be difficult as only a limited number of wells can be out of service at one time.

MWH has completed an analysis of emergency power needs. We have determined that standby power should be made available at 5 critical locations. This will allow for a minimal level of water service during an extended region-wide power blackout. The analysis reviewed our outage history, the ComEd electrical grid and our interconnection to that grid. In general, our redundancy is provided by the distributed location of our wells. A localized power outage only affects a small number of wells. We are able to provide reasonable service by pumping water from other areas of the City.

Design of the new system controls (SCADA) is underway. McMahon Associates is completing

the design of the monitoring and electronic control elements, working with the computer modeling information developed by MWH. It is anticipated that the 18 primary pumping facilities will be fully automated. Operator intervention should only be needed to address special situations and facility maintenance.

Well rehabilitations are scheduled at 11 of the 18 primary pumping sites. Work at two additional sites was already underway in our normal maintenance operation. The City Council has awarded two contracts for the rehabilitations. It is anticipated the work on individual wells will continue through the Spring.

Wells are a consumable commodity and degenerate over time. From time to time, rehabilitations are completed to rejuvenate the pumping capability. The process generally includes a base line capacity test, inspection of the hole using televising equipment and then using a variety of methods to address any deficiencies found. Problems can include plugging of the strata, filling the hole with sand and wear of mechanical equipment. The response to the treatment provides some indication of the future useful life of the well. Well rehabs are generally done as maintenance when the capacity begins to decline. With significant investment planned at a number of wells, we want to be comfortable that the expected performance of the well is worth the investment.