

Cedar Commentary

Published by Cedar Corporation, 604 Wilson Avenue, Menomonie, Wisconsin 54751

Aging Water System Operating Costs

can be reduced by prudent planning and new technologies.

According to the U.S. Geological Service, 67 percent of Wisconsin's total population is served by public water systems. In 2000, customers of these public water systems withdrew an estimated 623 million gallons of water per day. Most of us take for granted this safe and reliable supply of water, thanks to the outstanding management provided by local owners and operators.

Since much of the core infrastructure for public water systems was constructed in the 1940's and 50's, repair and maintenance costs are an increasing concern for municipalities. However, prudent planning and the use of new technologies can help reduce the cost of owning and operating a public water system.

Establishing a regular cycle of having pumps pulled and inspected based on use, and including the expected cost in a capital improvements planning process, is one example of cost-effective planning, which more communities are beginning to do. Multiple wells can be scheduled on a rotating basis to spread the cost over time. Without regular inspections of pumps, motors, and major components, catastrophic failures are more likely to occur without warning, resulting in emergency repairs or replacements that don't allow time for planning budgets or competitive bidding.

One of the great technologies available for pumping systems is the variable frequency drive (VFD) for pump motors commonly used in water booster systems, water well pump applications, water treatment facilities, and wastewater operations. A VFD is capable of adjusting the "speed" of an electric motor, which reduces energy costs and prolongs the life of the equipment.

Cedar Corporation recently assisted the City of Menomonie with repairs to Well No. 6. Water Treatment Facility. The check valve on the well discharge pipe and on the well column pipe failed, causing what is referred to as "water hammer" in the piping, which caused subsequent damage to the pump and motor. Water hammer is an increase in fluid pressure in a pipeline when water in motion is suddenly forced to stop, causing a sudden velocity decrease. If not corrected, major damage can occur. After the well pump was removed and a temporary pump installed, Cedar worked with the well pump contractor to investigate whether it would be more cost effective to repair or replace the pump and motor. Cedar, as well as the pump contractor, determined that replacement was less expensive and recommended a VFD be installed on the new motor.

If you would like information on how Cedar Corporation can assist your community with an upcoming water system project or Capital Improvements Planning, contact Russ Kiviniemi, P.E., Civil Group Director, or Jeff Nussbaum, P.E., Project Manager, at 1-800-472-7372.



Shown above are before and after photos of repairs to another well in Menomonie -- Well No. 3 Water Treatment Facility. Engineering services included troubleshooting, design, specifications, and soliciting quotes for the replacement of valves that control the filtration and backwash cycle flow in the water treatment filters that reduce iron, manganese, and radium in the drinking water.

Maintenance included replacement of all 20 wafer style valves, actuators, solenoids and actuator arms, electronic controls and wiring, replacement of the primary logic controller for the backwash cycle for the valves, and other appurtenances; removal of existing tank and piping insulation throughout the building in order to inspect the exterior tanks, sandblasting preparation of tanks and piping, and installation of new paint on the tanks and piping; removal and replacement of existing filter media inside the filters as well as inspection of filter tanks.

All engineering and construction work was completed on an emergency basis due to peak summer water supply demands and the coinciding failure of check valves on Well No. 6, as described in the adjacent article.

River Falls Fire Response Area Study

will help maintain quality of service and keep property insurance costs down.

The City of River Falls Commissioned a Study of the Fire Response Area

Area for both the City of River Falls and the River Falls Rural Fire Association. The Association includes the City of River Falls and the Towns of Kinnickinnic, River Falls, Troy, Pleasant Valley, and Clifton. The service area covers a population of approximately 25,000 and 147 square miles.

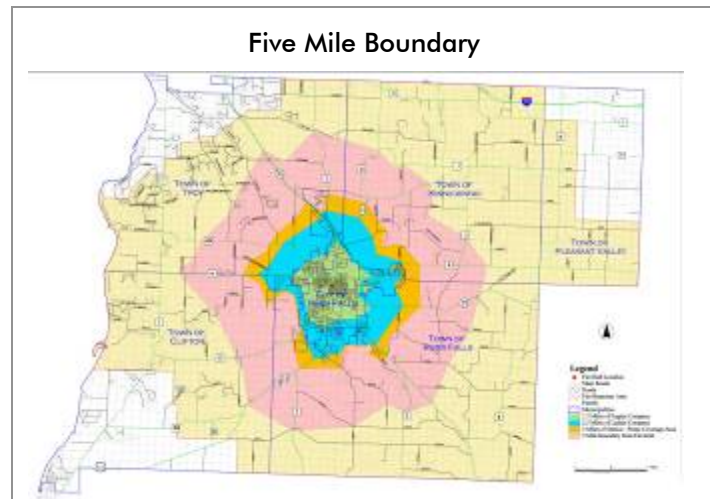
One of the primary concerns for the City and the Rural Fire Association is the Insurance Service Organization (ISO) classification for the area's fire protection services.

ISO collects information on municipal fire-protection efforts in communities throughout the United States on a regular basis. ISO then assigns a Public Protection Classification from 1 to 10. Class 1 represents exemplary public protection, and Class 10 indicates that the area's fire-suppression program doesn't meet ISO's minimum criteria. Insurance companies use ISO information to price insurance policies and establish deductibles for individual homes and businesses. Assuming all other factors are equal, the price of property insurance in a community with a good ISO rating is lower than in a community with a poor ISO rating.

The last ISO review of the River Falls area fire protection efforts occurred in 1997. At that time the area within 5 miles from the River Falls Fire Station received a Class 3 rating, which is the highest rating that can be achieved with a volunteer fire department. The City anticipates the next ISO review will occur within five years. Without the necessary fire protection improvements, the new ISO rating could be downgraded, resulting in increased property insurance costs.



The River Falls Fire Station last underwent expansion in 1968 and has no room for further expansion at its current location. The Fire Response Area Study will provide a variety of scenarios to help the City and the Fire Association determine the need and consider the placement of future fire equipment and facilities.



The current ISO Class 3 rating applies to properties located within five linear road miles from the River Falls Fire Station (not beyond the pink shaded area of the map).

The primary purpose of the River Falls Fire Response Area Study is to help determine the best locations of facilities and equipment for fire protection services in order to maintain a Class 3 ISO rating within the five-mile boundary and improve the ISO rating for properties outside the five-mile boundary. To accomplish this, the Study analyzes the following data:

- past and current population
- projected population
- development patterns
- current and future land use
- transportation routes and patterns
- natural resources
- environmental limitations
- existing fire stations and equipment
- response times
- facility response calls
- water supplies, storage, flow, pressure
- water utilities

The Study looks at the existing conditions and projected growth patterns over a 20-year period, how existing conditions and anticipated growth will affect the ability of the River Falls Fire Department and Rural Fire Association to provide fire protection, and what effect it will have on residents in the service area.

With the population on a steady rise, it is important to plan for fire services that will benefit the entire service area and identify those areas with the greatest potential for growth and development.

For more information about the River Falls Fire Response Area Study, or a similar study for your community, contact Wendy Sander, AICP, Planning Group Director, or Josh Miller, Planner, at 1-800-472-7372.

Cedar Corporation prepared numerous maps and data tables for the Fire Response Area Study to help develop the most appropriate options for locating future facilities.

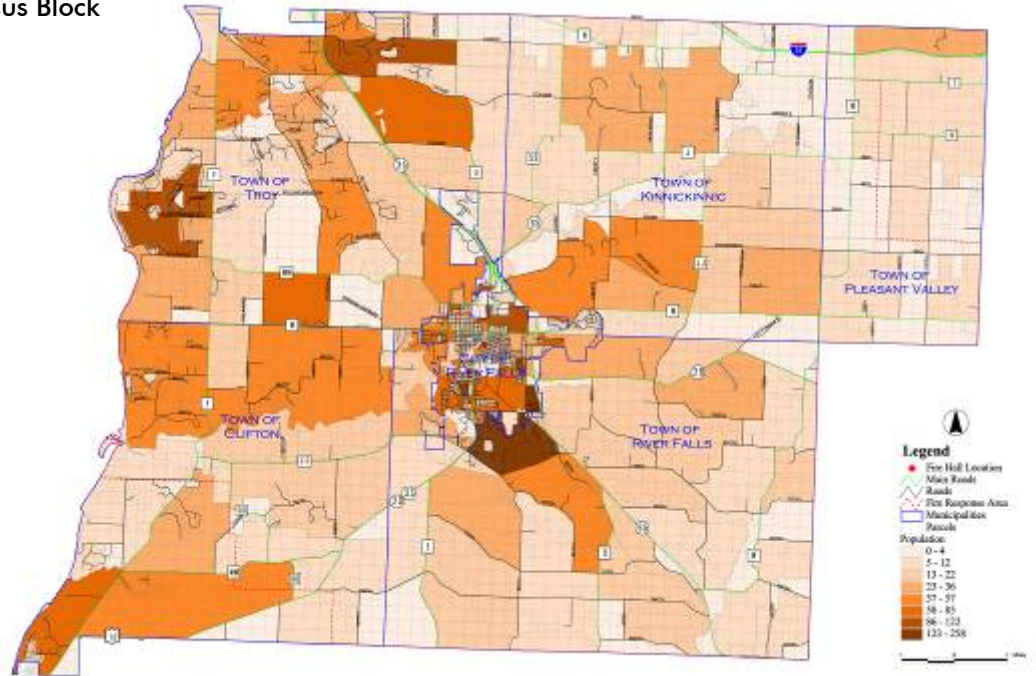
The adjacent maps are two examples, one showing population per census block and the other showing response times from the River Falls Fire Station.

The area's close proximity to the Minneapolis/St. Paul Metropolitan Area has had a significant effect on population growth. Population in the City of River Falls and the Town of Clifton have more than doubled since 1960, and the Town of Troy has experienced a 400% increase.

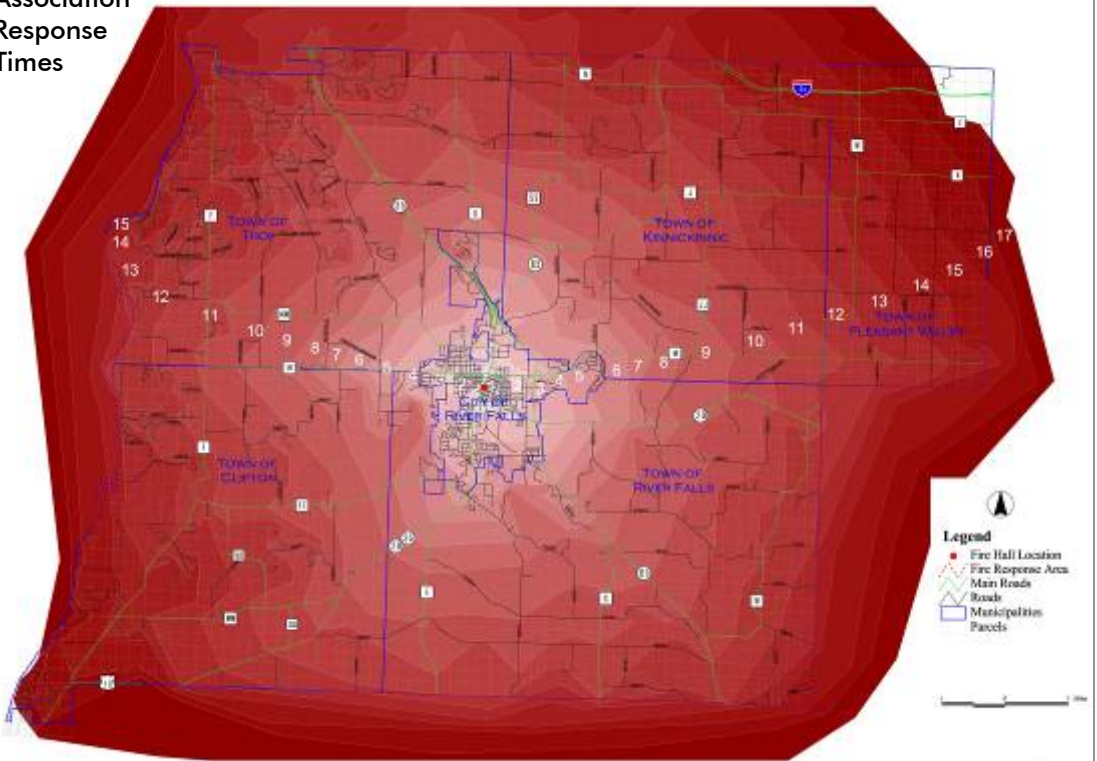
The map showing Fire Association response times identifies the estimated response time in minutes for emergency calls, with consideration of speed limits and natural obstacles such as rivers and steep slopes.

By mapping areas of growth trends, future land use, and population trends, areas can be identified that may require higher levels of service in the future. Mapping existing fire response calls also identifies areas that currently require higher levels of service and which may continue to require those levels of service in the future.

Population per Census Block



River Falls Rural Fire Association Response Times



CDBG Housing Grant Program

*helps spruce up communities
and improve housing stock.*

Bill Olson, Clayton Village Clerk, recently had friends visiting from out of town who remarked how well-kept the homes are in Clayton. Bill credited the CDBG Housing Grant Program for many of the rehab projects. However, when a \$300,000 CDBG grant was awarded to the Village in 2006, homeowners initially were hesitant to take advantage of it. According to Bill, "Our Housing Committee members and Cedar Corporation worked really well as a team to make sure people heard about the program, and eventually all the grant funds were loaned out."

Although the CDBG Housing Program has been around for decades, there are still hundreds of towns, villages, and cities in Wisconsin that have never applied for a grant, or have applied but not received funding. To encourage more communities to apply and re-apply, Cedar Corporation prepares the 3-page preliminary application for interested area communities. The Division of Housing & Community Development then randomly selects from the applicant pool and assigns a distress score to determine who can submit final applications, which Cedar Corporation also prepares.

In 2008, however, the Wisconsin Department of Commerce decided to use the CDBG Housing funds to help flood victims in the southern part of the State, so no grants were awarded. Communities that previously received grants will have access to their Revolving Loan Fund (RLF) to help low- and moderate-income households fix up their homes.

Cedar Corporation has administered CDBG Housing Revolving Loan Funds since 1990 and currently administers 22 RLF's on an as-needed basis. Many of these communities have been using Cedar's CDBG RLF assistance for more than 10 years. Now that RLF's fall under the Department of Commerce guidelines for lead-safe rules and require a Certified Lead Sampling Technician for most rehab projects, many municipalities have decided to use a professional RLF administrator to run their programs. For those communities who run their own RLF program, Cedar Corporation offers the services of a Certified Lead Sampling Technician.

We anticipate the CDBG Housing Grant Program will be back on track in 2009, with pre-applications out in the Spring. If you would like your community added to our list for CDBG Housing Grant assistance, or would like information about our Revolving Loan Fund services or lead sampling services, please contact Wendy Sander, AICP, Planning Group Director, at 1-800-472-7372.



Before and after photos of a home rehabbed with CDBG housing grant funds administered by Cedar Corporation.



604 Wilson Avenue
Menomonie, WI 54751
800-472-7372
715-235-9081
fax 715-235-2727
www.cedarcorp.com