

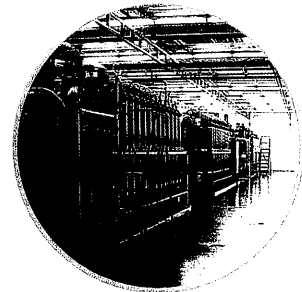
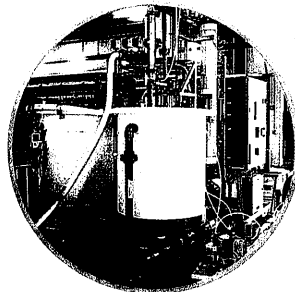
CITY OF APPLETON, WISCONSIN

Plant Cold Water Capacity Study

June 11, 2007



Proposal



Executive Summary

CDM's project team brings nationally recognized membrane, water quality and water treatment plant experience and expertise. Using this experience, CDM will ensure that the City receives a final product that is technically superior, cost conscious, maintainable, and meets or exceeds your current and future expectations for this facility.

Description of Firm

CDM is a full-service consulting, engineering, construction and operations firm, founded in 1947 with a major focus on drinking water services. With an office in Milwaukee since 1975, we have grown to nearly 4000 staff in 100 offices worldwide and now provide a full range of water supply and treatment services, with special expertise in membrane technologies.

We have assisted clients in membrane treatment alternatives for over 30 years and designed the first large municipal microfiltration system in the United States. We have successfully designed/started-up more than 50 membrane projects in the Midwest alone, including cold temperature surface water projects in Racine, Manitowoc and Rend Lake, IL.

We bring hands-on experience in effectively utilizing Lake Winnebago source water from our design work and treatability studies for Oshkosh that has enabled them to maintain high-quality water at the capacity their customers demand.

Project Team

CDM's strengths lie in our staff members' specialized expertise with membrane technologies and challenging surface waters. Table 2-1 in Section 2 highlights the strengths of

our project team members and offers the City the following:

- Proven project manager with award winning project experience and specific membrane expertise, including the membrane plant for the Racine Water Utility
- Local water quality experts with proven success treating Wisconsin surface water
- Membrane experts with cold temperature membrane treatment experience including research at the University of Illinois
- Working knowledge of Koch Membrane Systems
- A strong working relationship with WDNR.



Our staff members have already met with the City of Appleton to discuss this project and gain a full understanding of what is needed to reach the City's goals.

Project Understanding

Our project approach focuses on clearly defining the City's objectives, understanding the current and long term capacity

problems at the plant, and comprehensively and cost-effectively evaluating various operation and treatment solutions to provide the City with the required capacity to meet its needs.

We see five challenges that must be overcome to achieve the City's short term and long range goals:

- Working efficiently within the relatively short time frame to design and implement a solution to provide the required cold water treatment capacity
- Recognizing that the solution for the City will require a combination of pretreatment improvements *plus* a significant investment in new membrane skids

- Providing a “custom” solution for the City that accommodates the current plant processes and treatment technologies as well as the unique water quality characteristics of Lake Winnebago
- Incorporating reliability into any long term solution for the City, and
- Utilizing cost-effective engineering and out-of-the-box thinking to deliver a successful project.

The goals for a successful approach are to enable the City of Appleton to reliably, cost-effectively and quickly identify strategies for increasing its cold-water treatment capacity and improving treatment system operation. The CDM team proposes an approach that will reach these objectives, providing customized engineering solutions, in a systematic and timely manner that includes the following major divisions of activities:

- Task 1: Investigations to reduce fouling and improve membrane performance
- Task 2: Investigations of alternative facility improvements
- Task 3: Engineering assessment of recommended facility improvements

Benefits to Appleton

By selecting the CDM team, the City of Appleton will receive a set of recommendations to enhance the capacity of its membrane system to reach the City’s 18 mgd goal during the winter months. Through the combination of responsive service, local membrane expertise, unmatched experience treating Wisconsin lake waters, KMS experience and water quality specialists, the City of Appleton membrane system will generate more capacity, remain cost-efficient, and improve treatment process reliability. Through our understanding of both membranes and water quality CDM will provide the City a membrane

system that meets its required objectives for cost, schedule, capacity and reliability.

Schedule

We have provided a project schedule that meets the required March 2008 completion timeframe. However, we anticipate that we and the City may identify potential early-out projects that can be implemented to provide additional capacity as soon as is practical. CDM stands ready to work with the City to identify and implement any appropriate cost-effective early-out projects approved by the City.