

Finished Water

A PHOTOGRAPHIC PROFILE



Eric Levine monitors operations at the new Hutchinson plant. About 75 percent of the plant's water is treated through membrane technology.

BLENDED TREATMENT PROCESS ACHIEVES SMOOTH OPERATION

Faced with concerns about water quality, treatment capacity, regulatory requirements, and an aging facility, the city of [Hutchinson, Minn.](#), spent several years assessing how a new water treatment facility could best treat water from its 400-ft deep wells. Besides needing additional capacity, the treatment plant needed to reduce iron and manganese levels; adjust pH to reduce alkalinity and hardness, thereby decreasing copper corrosion; and reduce ammonia levels to prevent nitrification and excessive chlorine demand. Copper corrosion was causing the treatment plant to consistently exceed federal action levels for copper. However, taking action against copper corrosion wasn't feasible without

first reducing the water's hardness and alkalinity.

All of these factors were considered in the design of Hutchinson's new facility. Its 6.5-mgd capacity represents a 44 percent increase over the old plant's 4.5-mgd capacity, but the plant will continue to be staffed by three employees.

PROJECT SPECIFICS

Project Name: Hutchinson Water Treatment Plant

Owner and Operator: City of Hutchinson, Minn.

Designer: Earth Tech

Completion Date: June 2007

Project Cost: \$14 million

Water Source: Glacial drift wells

Capacity: 6.5 mgd

Features: Reverse osmosis membranes, biological filtration, CO₂ stripper, chemical feed, and 1.5-mgd reservoir

Technology: The Hutchinson Water Treatment Plant uses membrane technology to soften the water and reduce ammonia; biological filtration to reduce iron and manganese; and ammonia to meet treatment requirements within its site constraints. Treated water from the biological pressure filters, which use nonpathogenic organisms to remove iron, manganese, and ammonia, is blended with the membrane permeate. The blended water's pH is increased to control corrosion. Disinfection and fluoridation complete the treatment process.

PHOTOGRAPHS: CITY OF HUTCHINSON, MINN.