



## SEATTLE, WASHINGTON DESIGN-BUILD-OPERATE CH2M HILL

Prior to 2004, Seattle Public Utilities (SPU) was one of the few major water utilities in the United States that did not completely filter its water. SPU's source water was generally pristine and only required fluoride, chlorine, and corrosion control treatment. In light of changing water regulations, SPU utilized the design-build-operate (DBO) delivery methodology for construction of its new \$79 million 180-MGD water treatment facility.

In April 2001, SPU selected CH2M HILL as the prime contractor to design, build, and operate the new facility. CH2M HILL currently provides operations and maintenance (O&M) services under a 25-year contract resulting in a full DBO project value of \$109 million. The new facility has two independent treatment trains, each providing ozone generation, injection, contact, residual quenching and destruction systems, and UV disinfection.

The project included construction of a new intake and raw water pump station that extends 450 feet into Lake Youngs from the shoreline. Existing transmission pipelines were relined and used as highly efficient ozone contactors, thus avoiding costs and site impacts associated with construction of conventional ozone contactors.

Other facility components include two 10-million-gallon clearwells for treated water storage, and flow metering and control stations designed for an ultimate capacity of 270 MGD.



One of the unique requirements of the project was that it meet LEED criteria, eventually receiving a rating of Gold. LEED is a building rating system developed by the U.S. Green Building Council to promote the design of facilities that are economically and environmentally viable through the use of sound design practices and the use of sustainable materials. The Cedar Treatment Facility is designed to be cost effective and durable based on the 25-year life of the contract. In addition, the design for site layout minimizes impacts to surrounding sensitive areas and wetlands.

The project was recognized by the Washington Industrial Safety and Health Administration (WISHA) as the first-ever recipient in the State of Washington of the Voluntary Protection Program (VPP) Star award for construction. The VPP Star award is the government's highest award of recognition available to companies for health and safety excellence. The Cedar project also won the National DBIA Design-Build Excellence Award in November 2005.

