CASE STUDY

Upper Trinity Regional Water District

Water Wholesaler in Dallas Fort-Worth Metro Area Upgrades to a New Generation of On-Site Hypochlorite Generation to Improve Safety and Reliability

One of three 2,000 PPD Microclor® OSHG skids

OVERVIEW

The Upper Trinity Regional Water District (UTRWD) is a conservation district created by the State of Texas in 1989 to provide water, wastewater, solid waste and storm water services to numerous towns and cities approximately 50 miles northwest of Dallas. The District was established to ensure long-term water supplies through sound planning and watershed protection over a large geographic region. The District provides services to parts of the Dallas Fort Worth Metropolitan Statistical Area, home to over seven million people. UTRWD is considered a model regional agency, known for being progressive, responsive and competitive. It provides services to more than 25 member cities and utilities based on revenue from those services, rather than taxation.

UTRWD is a water wholesaler, providing treated drinking water to its members, whose utilities, in turn, deliver the water to their many customers for residential, commercial, industrial and municipal uses. The District relies on surface water as the sole source of their drinking water, since groundwater from wells is limited in the region. The District has two surface water treatment plants, the Taylor Plant and the Tom Harpool Plant. The Thomas E. Taylor Regional Water Treatment Plant, constructed in 1997, utilizes ozone, granular activated carbon and flocculation to disinfect and remove organic matter. The plant was originally built to treat 20 million gallons per day (MGD) and later upgraded to treat 70 MGD. The Tom Harpool Regional Water Treatment Plant, constructed in 2006, utilizes membrane filters and has a capacity of 20 MGD, with the ability to expand future capacity to 240 MGD. As a wholesaler, UTRWD maintains miles of transmission lines and numerous pump stations to deliver treated water to their members.

"The Microclor® system has provided the Taylor Plant with a safe and reliable source of hypo since the system was installed. In addition, the PSI team has provided great support for the system and has always been very easy to work with."
- Tim Brazile, Water Operations Superintendent

The Taylor Plant originally upgraded their disinfection equipment to on-site hypochlorite generation (OSHG) in 2001 as part of the 70 MGD expansion. By 2008, the original OSHG system was in need of replacement. A manager from UTRWD visited Missouri American Water's St. Louis treatment facility to observe a state-of-the-art Microclor® OSHG System by Process Solutions, Incorporated. The Microclor® system showcased the latest advancements in electrochlorination system safety and ease of operations. The Microclor® OSHG features a vertical configuration of the electrolytic cells to aid in venting any hydrogen and reducing the system's footprint. Modular, multi-cell configuration allows for future capacity upgrades. Clear acrylic cell bodies support the electrode array, eliminating the need for internal baffles, reducing maintenance and future repair costs. The system produces 0.8% (8,000 ppm) hypochlorite solution, which is safe to store and resists degradation over time.

Upper Trinity's Taylor Plant with three 2,000 pound-per-day Microclor® OSGH Skids

In 2010, the UTRWD installed three 2,000 pound per day (PPD) chlorine equivalent Microclor® OSHG systems. The systems continue to provide UTRWD with a reliable supply of hypochlorite for disinfection in a manner that is less expensive and less risky than gas chlorine or liquid bulk hypochlorite delivered via truck or rail through such a heavily populated area.

To view diagrams of our processes, visit https://cleanwater1.com/technical-content

To access our full assortment of case studies, data sheets, brochures and more, visit our document library at https://documents.cleanwater1.com or scan the QR code.