

## **Savings Through Serviceability**



**City of Elgin Water Treatment Plant** 

The City of Elgin began serving its residents as a community water supplier in the late 1880's using the Fox River as the source of drinking water. In the 1900's, waterborne diseases became prevalent in the Fox River so alternate sources of drinking water were needed. In 1901, the city drilled their first deep well at the Slade Avenue site, followed by three additional wells, tapping into the Cambrian-Ordovician Aquifer which lies under much of northern Illinois. In 1936 a treatment facility to treat well water was built due to the city's growing population. By 1940 the facility produced an average of 2.29 MGD. This was the city's only source of treated water until 1963 when the Airlite Street Water Treatment Plant was built. By 1965 the city was providing an average of 5.46 MGD.

As the surrounding communities grew, their demand for natural resources, such as water, also grew which put a strain on the Aquifer. By 1970, Elgin was taking an average of 7 MGD from the aquifer. As the aquifer levels were dropping at alarming rates, Elgin needed to plan for the future as it was costing more in electricity costs to pump the water to the surface. As a result, Elgin began exploring alternate sources of raw water. By now, the water quality of the Fox River was on the upswing due to the ecological awareness brought to the forefront. In 1979, Elgin decided to build a new treatment facility that could process Fox River water at a rate of 16 MGD. The Riverside Treatment Facility was completed in 1982 which sat across from the Slade Avenue Treatment Facility. In 1990, the Slade Avenue plant was razed and in 1997, the Water Department broke ground on its \$17.5 million expansion to the Riverside Water Treatment Plant, doubling the plant's capacity to 32 MGD.

## AT MATC Your Value Experts

The Elgin Water Department's mission is to have quality products that provide ease of maintenance for their water plants. They encountered a lesson on ease of maintenance at their Riverside Water Plant where Val-Matic's American-BFV<sup>®</sup> Butterfly Valves have been installed for over 20 years. Over time, the resilient seat on one of the 36" butterfly valves had worn down causting some minor leakage through the valve. A Val-Matic Field Technician was requested to remove the existing resilient seat and replace with a new Val-Matic seat. One of the trademark features of the American-BFV<sup>®</sup> Butterfly Valve is ease of serviceability. The shaft seal incorporates V-type packing which is easily replaced in the





field without removal from the line. Replacement and adjustment of the resilient seat is easily performed with a torque wrench, as compared to epoxy filled seats that require special equipment and materials or



American-BFV<sup>®</sup> Butterfly Valve

bonded seats that cannot be replaced or adjusted in the field. The unique Tri-Loc<sup>™</sup> seat retention system assures seat integrity by securing the seat through three different mechanical methods to assure long-term dependable service, see Figure 1. The City of Elgin was able to perform this maintenance in just one day without having to remove the Butterfly Valve from the line. This offered them little disruption and has now given many years of service and additional cost savings.

Val-Matic Valve & Mfg. Corp. incorporates the latest in valve technology to assure a high-quality valve that will provide a long service life. Additional features of the American-BFV<sup>®</sup> Butterfly Valve include a ductile iron disc for added strength and stainless steel tangential taper pins

designed to provide strength and rigidity. The American-BFV<sup>®</sup> Butterfly Valve will withstand flow rates and pressure transients beyond the maximum AWWA pressure rating. All American-BFV<sup>®</sup> Butterfly Valves are de-

signed utilizing advanced valve technology, quality materials and proof of design testing to verify pressure integrity, leak tightness and operation that complies with the American Water Works Association (AWWA) Standards C504 and C516. In addition, Val-Matic Valve & Mfg. Corp. is certified to ISO 9001-2015 standards.

For more information regarding the American-BFV<sup>®</sup> Butterfly Valve, please visit www.valmatic.com.

