



## CITY OF WASHINGTON, ILLINOIS City Council Agenda Communication

**Meeting Date:** Monday June 5<sup>th</sup>, 2023

**Prepared By:** Brian Rittenhouse – Public Works Director

**Agenda Item:** WTP #1 PLC Upgrades Purchase Authorization.

**Explanation:** Programmable Logic Controllers (PLCs) provide the automation required to operate the City’s Water & Wastewater Systems. These PLCs have a limited lifespan (typically 10-15 years) that is affected by their physical environment, the manufacturer’s product lifecycle, and the availability of systems integrator support. As a PLC approaches its end-of-life, it becomes more expensive to maintain, especially in a situation where the PLC has failed, a direct replacement is unavailable, and/or the systems integrator doesn't have the correct tools, software, or experience to facilitate the replacement. When a PLC fails, the System Operator will have to manually control and monitor the process until the automation has been restored.

The PLC in WTP #1 is an Allen-Bradley SLC 5/05, and it has served the City very well. However, the processor has reached an “active mature” status, which means that it is fully supported but will be made obsolete by the manufacture in the near future, and a newer product exists and would gain value by migrating. Many of the SLC I/O modules have already reached the “end-of-life” status and have been discontinued at the end of 2022, which means that the parts will no longer be available. Given the critical nature of this control system, a proactive upgrade approach would ensure reliable plant operation.

Concentric Quoted \$85,690.00 for the Following Recommendations. This includes upgrades to include the WTP #1 Chlorine improvements and electrical work that was not accounted for during the Budgeting Process.

### **Recommendations**

Remove & replace the A-B SLC 5/05 at WTP #1 with the latest A-B CompactLogix 5380 PLC (including new I/O modules). The existing PLC panel will be reused, but some internal components (power supplies) should be upgraded as well.

**Fiscal Impact:** Request \$85,690.00. \$75,000.00 was budgeted for the PLC Upgrades. There are sufficient funds to cover the electrical overage for these Upgrades.

**Recommendation:** Staff recommends contracting Concentric Integration to complete the WTP #1 PLC Upgrades. This was an identified project in the SCADA Master Plan that was brought before Committee of the Whole in December of 2022. It was Recommended as a CIP Project. Lead times on some components are estimated to be 6 months.

**Action Requested:** Authorization to contract Concentric Integration to complete the WTP #1 PLC Upgrades in a not-to-exceed amount of \$85,690.00.