

## **TOWN OF WINDSOR AGENDA REPORT**

**Joint Windsor Town Council, Windsor Redevelopment Successor Agency and Windsor Water District Meeting Date:** July 19, 2023

**To:** Mayor and Town Council  
**From:** Garrett Broughton, Senior Civil Engineer  
**Subject:** Approve a Purchase Agreement with Trojan Technologies for the Water Reclamation Facility Ultraviolet Disinfection System

### **Recommendation to Council:**

Approve a purchase agreement with Trojan Technologies (Trojan) for ultraviolet (UV) disinfection system equipment including startup and State permitting assistance in the amount of \$1,480,586 and authorize the Town Manager to execute said agreement and additional amendments up to 15% of the original agreement amount, for a total not to exceed \$1,702,673.90.

### **Strategic Plan Element:**

The recommended action supports the goal of Infrastructure. Goal Statement: Through a lens of sustainability and innovation, invest in the Town's infrastructure and public facilities to meet the needs of future generations.

### **Background:**

The Water Reclamation Facility's UV system was installed in 2001 and has reached the end of its useful life, as demonstrated by: (a) System replacement parts are no longer produced by the manufacturer and are in short supply for future reorders, and (b) System control failures due to the aging electrical parts are causing Operations staff to run the system in an overly conservative mode. Replacement of the system is needed before compounded future failures cannot be remedied through conservative operations.

On December 7, 2022, Council approved an amendment to the Professional Services Agreement with the engineering team of Brelje & Race Consulting Engineers and Woodard & Curran to complete the design of a replacement for the Water Reclamation Facility's UV disinfection system.

Three suitable open channel UV systems, including a new in-kind replacement of the current system, were considered by the team, and quotes were obtained from all three manufacturers. The evaluation concluded that while the overall construction costs of the UV systems were comparable, the main differentiators were ease of construction and a decrease in required operations and maintenance. The selected Trojan system requires fewer lamps for replacing and cleaning; and the lamp banks (up to 18 in total) will no longer need to be completely hoisted from the channels and conveyed via bridge crane across the facility to a special wash tank for cleaning. Instead, the Trojan UV system is equipped with built-in mechanisms that elevate the lamps out of the UV channels, without a crane, allowing the lamps to be cleaned or replaced in place. The evaluation process included obtaining references from two facilities in California and a staff trip to another municipal facility. The technical memorandum describing the alternatives analysis is included as Attachment 2.

**Discussion:**

Staff intends to issue the construction bid documents for the UV replacement project in the winter of 2023 and install the two new systems (one per each channel) during the summer and fall of 2024 when projected flow into WRF is typically at a minimum. To maintain this timeline, the UV equipment must be on-site when the contractor is ready for installation.

Recently quoted long lead times (greater than 6-months) for the production and delivery of electronic products, including new UV system components, pose a threat to completing the project in the needed timeframe. Staff recognized the necessity to start the submittal and manufacturing processes early; therefore, staff requests approval of a purchase agreement with Trojan Technologies to begin these phases in 2023, such that the system will be ready for installation by the contractor during the late spring of 2024.

Staff have been working with Trojan and the engineering team to shape the terms of the purchase agreement which is included as Attachment 3. The full price of the agreement totals \$1,480,586. The payment milestones and their percentages of the full contract price negotiated with Trojan are outlined below:

- Completed and approved engineering submittals - 20 percent: \$296,117.20
- Downpayment to start manufacturing - 5 percent: \$74,029.30
- Delivery of Approved UV System equipment: - 60 percent: \$888,351.60
- Channel A completed testing and acceptance - 5 percent: \$74,029.30
- Channel B completed testing and acceptance- 5 percent: \$74,029.30
- Bioassay report approved by State - 5 percent: \$74,029.30

Under this pre-purchase plan, the Town is responsible for paying Trojan 20 percent of the overall cost for completed and approved engineering submittals as well as a 5 percent downpayment for beginning manufacturing ahead of the contractor bidding period. Together this totals \$370,146.50.

After the construction bid period has ended, the awarded contractor will assume the agreement with Trojan and the remaining payment milestones which include: UV system delivery, system testing and acceptance, and the required report for permitting with the State Division of Drinking Water. Together, these final payments amount to \$1,110,439.50. After the UV system operations are approved by Trojan, the Town, and the State, the Town will reassume ownership of the UV (from the contractor) including the remaining equipment warranties.

Should the Town fail to obtain a qualified contractor through the bidding process during the winter of 2023, the purchase agreement would still rest with the Town. In that circumstance the manufacturing process may be abandoned with prorated payments owed to Trojan, or the Town can opt to purchase the system outright and accept delivery of the system to the WRF while continuing to pursue a construction agreement.

Staff is requesting authorization from Council to potentially amend the agreement, up to an additional 15 percent over the original price, in case necessary minor changes are discovered during preparation of the final plans or for other adjustments deemed essential during construction and testing, for a total not to exceed cost of \$1,702,673.90.

**Fiscal Impact:**

There are sufficient appropriations for this work in the Council-approved FY 2023-2024 Water Reclamation Capital Fund.

**Environmental Review:**

The project is exempt from the California Environmental Quality Act (CEQA) in accordance with section 15302 because it consists of replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced. A Notice of Exemption will be filed with the County Clerk of the County of Sonoma prior to construction.

**Attachment(s):**

1. [Site Location Map](#)
2. [Purchase Agreement - Trojan Technologies - UV System Replacement Project](#)
3. [Technical Memorandum - UV Technology Assessment](#)

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**Reviewed by:**

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**Reviewed by:**

Jeneen Peterson  
Administrative Services Director

**Recommended by:**

Jon Davis  
Town Manager