



**Navid H. Mehram**  
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## Memorandum

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**To: The Honorable Board of Directors**

**From: Navid H. Mehram, P.E., Wastewater Chief Operating Officer**

**CC: GLWA Executive Leadership**

**Date: April 23, 2025**

**RE: REQ-0003533 – Veolia - \$750,000.00**

**REQ-TBD – Commercial Contracting Corporation (CCC) - \$500,000.00**

**REQ-0003671 – MetalFAB - \$300,000.00**

**Baby Creek Fine Screen Emergency**

We are writing to advise you of an emergency that has arisen with the screens at the GLWA Baby Creek Screening & Disinfection Facility (SDF). This facility provides screening of floatable debris and disinfection of the combined sewer water before being discharged into the Rouge River in accordance with GLWA's National Pollutant Discharge Elimination System (NPDES) permit. This facility becomes active during rain, snow melt, and any other event which may result in high flows in the Baby Creek drainage area. The screening function is provided through escalator screens that have experienced several catastrophic failures, and visual inspection has found many damaged screening elements. Failures of the screen can cause hydraulic restriction, potentially leading to a facility bypass and a violation of our NPDES permit. The GLWA team needs to leverage the emergency procurement process for multiple vendors to quickly respond to the failures and procure long lead items.

When the Baby Creek SDF is activated, combined sewer water overflows a weir into the facility. This overflow passes through 16 escalator fine screens and then is disinfected via the addition of sodium hypochlorite, before traveling approximately 1 mile along the Baby Creek triple barrel enclosure to the Rouge River, where it is discharged in accordance with the GLWA NPDES permit. The escalator fine screens are now represented by Veolia as the original equipment manufacturer. The screen technology was acquired by Veolia from the original manufacturer. A screening element is an individual screen section. Each screen has 94 elements which rotate around on a gear driven chain, going through the flow, collecting/ stopping debris from passing, and then coming to the top of the screen to have a rotating brush clean each individual screen element off, before it goes back through the flow for another cycle. A picture of this is included below for clarity.

In 2020 and 2021, these screens were inspected as a part of the Combined Sewer Overflow Facilities Assessment Project (CS-299). It was determined that these screens required rehabilitation to ensure proper operation. CS-299 identified several wearable items on the screens for replacement, including sprockets, drive chains, brushes, and worn-out screening elements. In 2023 and 2024, 15 of the 16 fine screens were subsequently rehabilitated under CIP 260623. At the end of December 2024, approximately eight months after the screening rehabilitation project was completed, GLWA experienced its first catastrophic failure on Screen 8.

Subsequently, GLWA engaged the contractor who performed the original rehabilitation, and they and Veolia quickly mobilized on site in early January for inspection. Initially, the inspection determined that many screening elements on the fine screens were bent. After this initial inspection, GLWA experienced a second failure of a fine screen (Screen 14) and noticed many other screens exhibiting unusual noises. We are currently investigating the root cause of the screen elements becoming bent. While performing this inspection, GLWA needs to purchase new screening elements from the manufacturer, Veolia, and is exploring options to potentially manufacture other screen parts with MetalFAB. CCC is providing construction support for disassembly, diagnosis, and repair of the screens.

As we continue our investigation into these screens, we will keep the Board of Directors updated with new information, and the overall status of this critical work. The above-mentioned requisitions are currently being procured under emergency procurement procedures and are identified for the Board of Director's knowledge.

