



KING COUNTY AUDITOR'S OFFICE

June 25, 2020

TO:
Metropolitan
King County
Councilmembers

FROM:
Kymber Waltmunson,
County Auditor

Significant performance issues at Brightwater and West Point, costs to increase considerably

Wastewater Treatment Division consultants recently completed a "flow and load" study for the County's treatment plants. This study found significant near-term capacity concerns at both the Brightwater and West Point Treatment Plants. Each plant may soon be ill prepared to handle flows (liquid/hydraulics processing) or loads (solids including dissolved solids) unless capital improvements are planned and implemented.

Brightwater, the newest of the County's treatment plants, requires six critical capital investments to perform at expected capacity.

- The plant is operating acceptably now only by diverting more waste than intended to the South Plant because the existing membrane bioreactor (MBR) basins and cassettes system is underperforming.
 - To avoid ongoing diversion of wastewater to the South Plant, Brightwater requires six critical capital projects between now and 2030. The other implication is the plant will fail to handle near-term growth expectations.
- WTD is still in the process of identifying the timeline, design and construction cost, and specific projects to accomplish the work the flow and loads study identified.
 - WTD has only one project underway to address immediate plant shortfalls, while three plant processes are cited in the report as currently being at capacity.

Based on our high-level assessment, the number and timing of investments required at Brightwater are concerning. The Auditor's Office plans to analyze these concerns further.

Cost for two additional critical West Point capital projects may increase substantially from previously planned \$220 million.

- WTD has begun work to replace Raw Sewage Pumps and Aerators identified by the study. This means that the plant will be better prepared to handle increased liquid flows.
- Two new large West Point capital projects are not included in the CIP: digesters and secondary clarifiers. This means that the solids or loads at the plant are also driving future capacity constraints.

Our [West Point Treatment Plant](#) report showed approximately \$220 million of investments needed at West Point over 10 years. This cost will increase when WTD evaluates the price of these two new projects.

Michael Bowers, capital projects oversight analyst, conducted this review. Please contact Michael or me if you have any questions about the issues discussed in this letter.



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