City of Arkansas City, Kansas

Environmental Services Department
Rod Philo
Technical Consultant

Memo

To: **Kyle Blubaugh**
CC:
From: **Rod Philo**
Date: **October 29, 2025**
Re: **Recommendation WTP High Service Pump Rebuild with Stainless Steel Impeller & Purchase 3 Additional Stainless Impellers for Remaining Pumps.**

High Service Pump #4 locked up. The pump was pulled and taken to Lee Mathews' shop. Inspection of the pump revealed the radial bearing had failed and the bronze impeller vanes were excessively worn far beyond expected wear. The chlorine in the Water Treatment Plant's treated water had caused the excessive wear to the bronze. To remedy the premature failure of the High Service Pumps Lee Mathews recommended the replacement impeller be made of 316 stainless-steel. Stainless steel will resist the high chlorine levels in the finished water. Our current situation is one High Service Pump inoperable and three high service pumps with bronze impellers that could fail at any time. In these times of escalating costs with stainless steel prices expected to rise due to raw material costs, events such as the Russia-Ukraine war and infrastructure development projects expected to drive demand I recommend having all four stainless steel impellers made at the same time to be the most economical. Lee Mathews as our pump representative could accomplish this and rebuild High Service Pump #4 installing the stainless-steel impeller with the other three for the remaining pumps. The remaining pumps would be rebuilt as they failed or scheduled for rebuilding every six months for preventive maintenance.

I recommend the pump repair with the stainless steel impeller and manufacture of three additional stainless steel impellers at the same time from Lee Mathews at their bid cost of $62,966.81. Acceptance of this bid saves $2,720.00 for disassembly, cleaning, inspection and estimating cost on our failed pump.