

ITEM #:	20
DATE:	08-25-26
DEPT:	W&PC

COUNCIL ACTION FORM

SUBJECT: WATER TREATMENT PLANT SPLIT TREATMENT MODIFICATIONS PROJECT

BACKGROUND:

The City of Ames Water Treatment Plant (WTP) is implementing split treatment modifications to improve water treatment processes. In a "split treatment" process, a portion of the raw, untreated water is intentionally bypassed around the primary softening process and blended back together with the softened water later in the process. This blending method is a highly efficient way for the plant to achieve the desired final water hardness and stability.

By bypassing a portion of the water around the softening process, the plant significantly reduces the quantity of chemicals required for pH adjustment and stabilization, ultimately lowering overall operational costs while still achieving the same hardness and pH characteristics as are currently being delivered to customers.

There will be no noticeable change in the chemistry or the taste of the finished water. The split treatment process occurs before the disinfection stage of the treatment process occurs, meaning this approach does not affect the safety of the finished water.

The table below shows the projected chemical use reduction and the financial savings of the split treatment method:

Chemical	FY 2026/27 Operating Budget	Estimated Reduction	Estimated FY 2026/27 Savings
Carbon Dioxide	\$57,960	46%	\$27,000
Lime	\$804,000	8%	\$64,000
Lime Sludge Disposal	\$387,140	8%	\$31,000
Estimated Annual Savings			\$122,000

To facilitate these operational modifications, new mechanical piping, pumps, and electrical controls must be installed within the facility. Staff has prepared detailed specifications for a qualified contractor to complete this work.

The next step in the process is to issue an Invitation to Bid (ITB) to solicit competitive bids from qualified contractors for the construction services. Upon receiving and evaluating the bids, staff will return to City Council to recommend the award of a contract.

The authorized budget for this project is carried over from the FY 2023/28 CIP (Water Plant Facility Improvements, originally budgeted at \$130,000 and subsequently amended to \$245,000). The staff estimate of the construction cost is \$245,000. This equates to an approximate two-year payback.

ALTERNATIVES:

1. Approve the preliminary plans and specifications for the Water Treatment Plant Split Treatment Modifications Project, setting September 23, 2026 as bid due date and October 13, 2026 as date of public hearing.
2. Direct staff to make modifications to the project specifications prior to issuing the ITB.
3. Reject the plans and specifications and provide staff with direction for this project.

CITY MANAGER'S RECOMMENDED ACTION:

The proposed project will implement modifications that will reduce operational costs while maintaining identical water quality as the current process. Approving these documents will allow staff to begin the competitive bidding process to secure a qualified contractor. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, as described above.