

AGENDA ITEM FORM

SUBJECT: Request Authorization to Solicit Bids for 2019 Well Rehabilitation – Maffitt Reservoir and Establish the Date of Public Hearing as the Date of the February 2019 Board Meeting

SUMMARY:

- The Maffitt Reservoir well field consists of six radial collector wells and one horizontal well. Five of the radial collector wells and the horizontal well were constructed in the late 1990s and placed in operation in 2000 to serve as the raw water collection system for the Maffitt Water Treatment Plant, now known as the McMullen Water Treatment Plant.
- The raw water supply for the Maffitt Reservoir well field is drawn from the Raccoon River alluvial aquifer. Typical maintenance frequencies for wells constructed in alluvial aquifers is between two to five years.
- Well screens require periodic maintenance to remove materials that plug the well screens and the aquifer surrounding the well screens. These materials are generally incrustations that form from the precipitation of calcium and magnesium carbonates and iron and manganese compounds that are naturally present in the groundwater. It is also suspected that slime produced by naturally occurring iron-related bacteria has formed around the well screens.
- Well rehabilitation properly done removes the materials that plug the well screens by various treatment methods and restores much of the well's ability to produce raw water.
- High-pressure water jetting was the method used to successfully rehabilitate two wells at the Maffitt Reservoir well field in 2014. The raw water production from these two wells increased by 200 percent after rehabilitation.
- High-pressure water jetting was also used to successfully rehabilitate two wells at the Saylorville Reservoir well field in 2017.
- Contract documents and specifications have been configured to obtain a "base bid" for rehabilitation of one well and an "alternate bid" for rehabilitation of the second well at the Maffitt Reservoir well field using the same high-pressure water jetting that has been successfully used at the Maffitt Reservoir and Saylorville Reservoir well fields.
- The engineer's estimate for the Base Bid portion of the contract for rehabilitation of one radial collector well is \$205,000. The engineer's estimate for rehabilitation of both radial collector wells (Base Bid plus Alternate 1) is \$390,000.
- Staff recommends the Board authorize staff to solicit bids for the 2019 Well Rehabilitation – Maffitt Reservoir and establish the date of Public Hearing as the date of the February 2019 Board meeting.

FISCAL IMPACT:

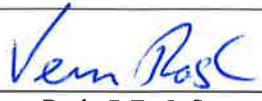

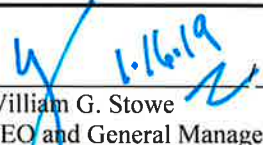
Funds for this project will come from the Maffitt Reservoir Well Rehabilitation Work Plan, which has a budget of \$400,000.

RECOMMENDED ACTION:

Authorize staff to solicit bids for 2019 Well Rehabilitation – Maffitt Reservoir and establish the date of Public Hearing as the date of the February 2019 Board meeting.

BOARD REQUIRED ACTION:

Motion to authorize staff to solicit bids for 2019 Well Rehabilitation – Maffitt Reservoir and establish the date of Public Hearing as the date of the February 2019 Board meeting, and direct staff to publish notice as provided by law.

 Vern Rash, P.E., L.S. Project Manager	<u>10/15/19</u> (date)	 Michael J. McCurnin, P.E. Engineering Services Manager	<u>1/15/2019</u> (date)	 William G. Stowe CEO and General Manager	<u>1/16/19</u> (date)
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Attachments: none