

**Metropolitan Domestic Water Improvement District
Board of Directors Meeting**

May 11, 2020

**Authorizing the Hydraulic Analysis and Cost Estimate for the
Northwest Recharge, Recovery, and Delivery System (NWRRDS)
Metro-only Transmission Main**

Synopsis

The Board of Directors is requested to authorize utilizing Carollo Engineers to perform professional engineering services using the Arizona Department of Administration State Procurement Office annual professional services list. Work will include an evaluation and recommendations for pipeline sizing and the development of an opinion of probable costs for the Northwest Recharge, Recovery, and Delivery System (NWRRDS) Metro-only transmission main.

Background

In April 2014, the Metropolitan Domestic Water Improvement District (District) Board of Directors considered the timeline to implement NWRRDS. It is estimated that construction of NWRRDS infrastructure will be completed in Fiscal Year 2023. The portion of the project that includes the booster station and pipeline from the shared forebay facility to Herb Johnson Reservoir is being completed by the District. For simplicity, this has been called NWRRDS Metro-only project.

The District desires to maximize use of its Central Arizona Project (CAP) water allocation through NWRRDS to reduce groundwater pumping within the Metro Main service area and stabilize the observed trends in declining groundwater levels. As part of that goal, the appropriate delivery mechanism includes a properly-sized transmission main.

District staff have completed a portion of the NWRRDS Metro-only transmission main design, while HDR Engineering is completing the remaining portion under contract with the District. As part of a previous effort related to the shared Forebay facility operation, HDR Engineering completed a high-level evaluation of each Partner's independent transmission mains to inform parameters related to delivery of water from the shared Forebay. No detailed analysis has been completed.

Issues

Prior to finalizing the design of the NWRRDS Metro-only transmission main, staff recommends completing a detailed hydraulic analysis to evaluate various pipeline sizes, which will consider

impacts on construction costs and life-cycle operational costs. A cost estimate will be developed for up to two pipeline sizes to ensure compliance with the District's Debt Management Policy, which requires the completion of an independent cost estimate for work that will be funded by debt.

This effort is intended to provide additional certainty with respect to infrastructure needs prior to finalizing the design of the NWRRDS Metro-only transmission main.

Recommendation

Staff recommends the Board authorize the General Manager to execute an agreement with Carollo Engineers to complete evaluation and recommendations for pipeline sizing and the development of an opinion of probable costs for the NWRRDS Metro-only transmission main in the amount of \$49,719 using the Arizona Department of Administration State Procurement Office annual professional services list. Staff also recommends the General Manager be authorized to increase the scope and fee by \$5,000.00, if necessary, to accommodate unforeseen conditions encountered during the evaluation.

Suggested Motion

I move to authorize the General Manager to execute an agreement with Carollo Engineers to complete an evaluation and recommendations for pipeline sizing and the development of an opinion of probable costs for the Metro-only transmission main in the amount of \$49,719 using the Arizona Department of Administration State Procurement Office annual professional services list and to authorize the General Manager to increase the scope and fee by \$5,000.00, if necessary, to accommodate unforeseen conditions encountered during the evaluation.

Respectfully submitted,

Sheila M. Bowen, P.E.
District Engineer

I concur with the above-noted recommendation.

Respectfully submitted,

Joseph Olsen, P.E.
General Manager