

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

**December 9, 2013**

**Presentation and Discussion of  
Pipeline Route Evaluation and Overall Project Study for CAP Recharge Recovery System**

**Synopsis**

The Board of Directors is requested to review and discuss with HDR Engineering and staff the draft pipeline route evaluation and overall project study for the District's CAP Recharge Recovery System completed by HDR Engineering.

**Background**

Metro Water District's CAP Water Utilization Program entails recovering CAP water that has been recharged at the Avra Valley Recharge Project and delivering it through a pipeline to the District's Metro-Main distribution system. This effort involves various components including the recovery wells near the Avra Valley Recharge Project, a delivery pipeline to move the water that will need to cross the Santa Cruz River, I-10, and the Railroad, a pumping station that includes land for a possible future treatment facility, and then the last stretch of pipeline to connect with the Herb Johnson Reservoir and the Metro-Main distribution system, to achieve an acceptable water quality blend.

Over the years, the District has worked on different components of what is now the CAP Utilization Program. The District acquired the Avra Valley Recharge Project in 2010. With this acquisition, the District focused on a recharge and recovery approach for utilizing its CAP water allocation. The District participated with the Northwest Providers to have a route analysis done that was completed at the end of 2009. However, under this study, the pipeline route would be added to and modified since the Avra Valley Recharge Project site would be the starting point instead of the I-10/Tangerine Road area noted in the previous route study. The District is also exploring the possibility of using existing wells near the Avra Valley Recharge Project that would serve as recovery wells.

At the April 8, 2013 meeting, the Board of Directors awarded the Professional Engineering Services contract to HDR Engineering, Inc. in order to evaluate alternative pipeline routes, alternative locations for a future treatment plant, and to do an initial analysis of the existing wells proposed for recharge recovery and blending, along with cost estimates for the design, construction and inspection of the proposed alternatives.

**Issues**

HDR Engineering has completed its study of the pipeline route evaluation and overall project for the CAP Recharge Recovery System. Attached is the draft executive summary from this report.

The report considers at recovery wells, transmission main, water facility, Herb Johnson Reservoir, system costs, and next steps. Regarding recover wells, the study found that the BKW wells were feasible as CAP recovery wells. Four different transmission mains were evaluated based on various factors including hydraulic analysis, engineering evaluations, land ownership reviews, and environmental assessments. While all alternatives were considered feasible, Alternative 3 had both the least expensive route and the lowest (therefore best) score for the non-monetary criteria. Regarding a water facility, four potential locations were identified, all of which were east of I-10. Regarding blending the recovered water at the Herb Johnson Reservoir, the study found that a blend of 0.8 to 1 (groundwater to recovered CAP water) is economically feasible at a recovered water flow rate of 2,500 gpm and would produce a targeted TDS of 400 mg/L. The draft overall cost for Phase I, which excludes advanced treatment and brine management, is \$35.8 million. District staff is currently reviewing the study findings and comments may impact the overall cost estimate.

HDR Engineering will make a presentation to the Board of Directors at the December 9, 2013 meeting. The presentation will review the findings of their study as well as provide Board members an opportunity to have any questions answered.

### **Staff Recommendation**

It is recommended that the Board of Directors discuss with staff and HDR Engineering the pipeline route evaluation and overall draft project study for the District's CAP Recharge Recovery System. The draft executive summary includes a list of next steps that the District should consider implementing to make the CAP Recharge Recovery System a reality. The Board of Directors is encouraged to discuss with staff the best approach to those next steps. No motion is necessary for this agenda item.

Respectfully submitted,

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General Manager