

Western Regional Water Commission

STAFF REPORT

DATE: June 15, 2017

TO: Chairman and Members, Western Regional Water Commission ("WRWC")

FROM: Jim Smitherman, Water Resources Program Manager

SUBJECT: Report on the Advanced Water Treatment Technologies Demonstration Project being conducted by the University of Nevada, Reno ("UNR"), and possible direction to staff.

SUMMARY In August 2016, the WRWC approved a four-year scope of work and interlocal agreement with UNR for the Advanced Water Treatment Technologies Demonstration Project. The agreement was amended in May 2017 to provide funding for the second year of the project. Two of the nine project tasks have been completed so far: 1) Project Rationale and Justification for Advanced Treated Recycled Water in the Truckee Meadows; and 2) Critical Review of Technologies that can meet Nevada Division of Environmental Protection ("NDEP") Regulations / Requirements.

Task 1 uses a triple bottom line approach (economic-social-environmental) to determine whether potable reuse can improve the efficiency of water use among the triple bottom line parameters in the Truckee Meadows. Such improvements to water use efficiency may defer possible future expenditures on water importation, provide a drought-resistant water source, and improve water management resiliency.

The purposes of Task 2 are to summarize a critical review of advanced wastewater treatment technologies, and summarize the selection of advanced treatment processes suitable for spreading basin and groundwater injection demonstration projects that meet NDEP Reclaimed Water Regulations for exceptional quality (A+ quality) criteria, which allow for indirect potable reuse.

A verbal progress report on the Advanced Water Treatment Technologies Demonstration Project will be provided to the WRWC on June 21, 2017.

BACKGROUND

In December 2014, the Northern Nevada Water Planning Commission ("NNWPC") directed staff to prepare a presentation summarizing wastewater master planning in the region and outlining a scope of work for a wastewater and effluent management master plan update. The Regional Effluent Management Team (the "Team"), consisting of technical staff from the City of Reno, the City of Sparks, Washoe County, the Truckee Meadows Water Authority, and the WRWC, has been meeting informally since April 2014 to discuss regional effluent management issues. Working together with the Team, staff provided the requested information and materials at the following two NNWPC meetings.

In January 2015, the NNWPC reviewed and discussed a proposed approach to regional effluent management planning. In February 2015, the Team recommended that the NNWPC provide funding for a project coordinator to assist the Team in working toward regionally-based solutions to several near-term effluent management issues that were outlined in the proposal reviewed at the prior meeting. The NNWPC approved the requested funding and the Team continues to use the project coordinator for ongoing effluent management planning.

In January 2016, The WRWC received a brief report on the activities of the Team. Staff discussed near-term effluent management issues including the need to reduce the nitrogen load to the Truckee River, which could be accomplished by diverting Truckee Meadows Water Reclamation Facility (“TMWRF”) effluent to locations and uses away from the river in allowable quantities and during appropriate times of the year. The Team continues to evaluate a variety of alternatives and scenarios to help develop a plan for effluent management that is most beneficial to the local community.

On August 3, 2016, the Team delivered a PowerPoint presentation, at the regular meeting of the NNWPC, covering recent Team activities; proposed (at that time and since approved) revisions to NDEP reclaimed water regulations that allow for the use of exceptional quality reclaimed water; and a proposal from UNR for an Advanced Water Treatment Technologies Demonstration project. The NNWPC recommended that the WRWC approve the UNR proposal and provide funding by way of an interlocal agreement with UNR.

RECOMMENDATION

Staff recommends that the WRWC accept the report on the Advanced Water Treatment Technologies Demonstration Project, and provide appropriate direction to staff if desired.

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