



WASHOE COUNTY

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STAFF REPORT

BOARD MEETING DATE: July 24, 2018

DATE: June 25, 2018
TO: Board of County Commissioners
FROM: Rick Warner, P.E., Sr. Licensed Engineer, Engineering & Capital Projects, Community Services Department, 954-4621, rwarn@washoecounty.us
THROUGH: Dwayne Smith, P.E., Division Director, Engineering & Capital Projects, Community Services Department, 328-2043, desmith@washoecounty.us
SUBJECT: Recommendation to approve an Agreement for Professional Consulting Services between Washoe County and the Board of Regents, Nevada System of Higher Education, on behalf of University of Nevada, Department of Civil and Environmental Engineering commencing July 24, 2018 through December 31, 2019, to provide research and technical assistance to achieve treatment goals at the South Truckee Meadows Water Reclamation Facility [\$298,694]. (Commission District 2.)

SUMMARY

An agreement between Washoe County and the University of Nevada, Reno (UNR) is proposed to support research and technical assistance UNR would provide at Washoe County's South Truckee Meadows Water Reclamation Facility (STMWRF). STMWRF provides wastewater treatment service for approximately 16,000 home and businesses. The facility also produces and delivers reclaimed water for irrigation throughout the south Truckee Meadows.

UNR's assistance at STMWRF provides research and technical support for four critical projects, described in detail in Exhibit A – Scope of Work, being conducted over the next 18 months. Projects would be staffed by UNR professors, graduate research assistants, and undergraduate students.

Project 1 - Reclaimed Water Filtration Pilot Study (\$79,321)

Study will look at various pretreatment and filtration steps to improve water quality. UNR will complete the work with two graduate researchers supported by two undergraduate students.

Project 2 - Aerobic Digester Optimization Research and Development (\$69,368)

STMWRF's newly completed aerobic digester will be optimized for aeration efficiency thorough bench-scale testing and field-scale tests. UNR will complete the work with two graduate researchers supported by two part-time undergraduate students.

Project 3 – STMWRF Indirect Potable Reuse Study for Pathogens (\$87,289)

This project supports the overall regional feasibility study exploring the benefits of the newly adopted State of Nevada Category A+ reclaimed water, which creates the regulatory framework for groundwater recharge. At STMWRF for the remainder of 2018, a demonstration scale test is occurring, and this funding supports testing to validate the advanced treatment process make the water free of pathogens, such as giardia. Project supports one graduate researcher supported by two part-time undergraduate students.

Project 4 – STMWRF Process Model and Database (\$62,716)

This project supports development of a treatment process computer model that will be used to help design and optimize STMWRF treatment processes. One graduate researcher and two undergraduate student will conduct this work.

Strategic Objective supported by this item: Safe, secure and healthy communities.

PREVIOUS ACTION

There has been no previous action.

BACKGROUND

An agreement between Washoe County and the University of Nevada, Reno (UNR) is proposed to support research and technical assistance by UNR at Washoe County's South Truckee Meadows Water Reclamation Facility (STMWRF). STMWRF provides wastewater treatment service for approximately 16,000 home and businesses. The facility also produces and delivers reclaimed water for irrigation throughout the south Truckee Meadows.

Projects 1 and 3 support Washoe County's effort to examine if the State of Nevada's newly adopted "A+" reclaimed water category offers significant water resource management benefits including improving efficiency, providing flexibility during periods of water scarcity, and diversifying the regional water supply portfolio. Category A+ reclaimed water meets all Federal and State of Nevada drinking water standards. A+ quality will be achieved from a combination of advanced water treatment processes and soil-aquifer-treatment and storage.

Project 2 is needed to help optimize STMWRF's recently completed biosolids digestion facility for aeration efficiency. Project 4 develops a treatment process model used to examine operating strategies and new infrastructure options allowing Washoe County staff plan, design, and operate STMWRF more effectively and efficiently.

FISCAL IMPACT

Should the Board approve this Agreement, the expense for the Projects will post to internal order numbers within Utilities Fund 566. Budget authority for the Projects exists in each internal order number's corresponding cost center. The detail is noted below:

Project	Project Name	Budget in Cost Center	Expense	Amount
1	Reclaimed Water Filtration Pilot Study	664950	IO 49573 – GL 710100	\$ 79,321
2	Aerobic Digester Optimization Research	664900	IO 49300 – GL 710100	\$ 69,368
3	STMWRF Indirect Potable Reuse Study for Pathogens	664950	IO 49573 – GL 710100	\$ 87,289
4	STMWRF Process Model and Database	664900	IO 49300 – GL 710100	\$ 62,716
		Total		\$298,694

Revenues in support of these Projects are provided from monthly sewer rate charges.

RECOMMENDATION

It is recommended the Board of County Commissioners approve an Agreement for Professional Consulting Services between Washoe County and the Board of Regents, Nevada System of Higher Education, on behalf of University of Nevada, Department of Civil and Environmental Engineering commencing July 24, 2018 through December 31, 2019, to provide research and technical assistance to achieve treatment goals at the South Truckee Meadows Water Reclamation Facility [\$298,694].

POSSIBLE MOTION

Should the Board agree with staff's recommendation, a possible motion would be "Move approve an Agreement for Professional Consulting Services between Washoe County and the Board of Regents, Nevada System of Higher Education, on behalf of University of Nevada, Department of Civil and Environmental Engineering commencing July 24, 2018 through December 31, 2019, to provide research and technical assistance to achieve treatment goals at the South Truckee Meadows Water Reclamation Facility [\$298,694]."