

Northern Nevada Water Planning Commission

STAFF REPORT

DATE: April 28, 2022
TO: Chairman and Members, Northern Nevada Water Planning Commission (NNWPC)
FROM: Kim Rigdon, Water Resources Program Manager
SUBJECT: Report on National Science Foundation project at the University of Nevada, Reno (UNR),
“Nevada Water: A Science-With-Society Research and Education Network.”

SUMMARY

In the April 5, 2022 NNWPC meeting, the members of the commission directed staff to investigate the Nevada Today press release from April 1, 2022 regarding a water project led by Dr. Anne Nolin, Professor, Department of Geography and Nevada State Climatologist, with UNR.

Staff contacted Dr. Nolan through The Nature Conservancy (TNC) a partner agency working with UNR on the project. TNC staff provided a copy of the press release and an abstract of the project (attached). Either UNR or TNC will present the project to the NNWPC at the June 1, 2022 meeting.

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Attachments: Nevada Today April 01, 2022 press release “Gloomy water supply outlook in Nevada prompts new collaborative effort” and UNR Project Abstract “NSF Sustainable Regional Systems Research Network (Track 2): “Nevada Water: A Science With-Society- Research and Education Network.”



Truckee River upstream from Pyramid Lake

Gloomy water supply outlook in Nevada prompts new collaborative effort

College of Science researcher leading one-year project to address urban and rural water issues

April 01, 2022

[Mike Wolterbeek \(https://www.unr.edu/nevada-today/about/authors/mike-wolterbeek\)](https://www.unr.edu/nevada-today/about/authors/mike-wolterbeek)

As the drought in Nevada continues, and with a gloomy outlook for water supplies in the future, a newly funded National Science Foundation project based at the University of Nevada, Reno will bring together key players from around the state to address water issues.

"The project, Nevada Water, will develop a collaborative and inclusive partnership of water suppliers, users, policy-makers, and academics whose primary goal is to create a dynamic research, societal and education network focusing on critical urban-rural water issues across Nevada," Anne Nolin, geography professor at the University of Nevada, Reno, said. Nolin, also director of the Graduate Program of Hydrological Sciences at the University, is leading the project, which has received a \$149,923 NSF grant.

Across Nevada, water users, suppliers, and policymakers are facing growing stressors including declining snowpacks, extreme weather, rapid population growth and increasing urban-rural tensions around water sustainability. The network she and her team are building will include key public, private, tribal, research, nonprofit and educational water resource partners.

"Our guiding principle is Science *With* Society, which emphasizes inclusion, communication, connections, and collaboration," she said. "The project stems from our response to an NSF call for network development around Sustainable Regional Systems, specifically focusing on urban-rural challenges.

"Nevada's water issues are unusual in that our water supplies come from groundwater and mountains, both of which are being impacted by climate change and urban growth. We saw the need to develop a robust and inclusive water-focused network of key stakeholders across Nevada and our university and non-academic partners are well-positioned to co-lead this effort."

This is a one-year planning grant during which the structure and goals for the Nevada Water network will be created. The next step is to apply for a five-year, \$15 million Track 1 grant through the NSF Sustainable Regional Systems Research Network program.

"Importantly, our network will not develop policy," she said. "Rather, it is intended as a learning network where we co-identify diverse challenges, fill knowledge gaps, understand the social and hydrologic dimensions of water issues, and co-develop strategies for addressing seemingly intractable water issues."

The Nevada Water team includes Stephanie McAfee, associate professor in the University's Department of Geography and the Nevada State Climatologist; Eric Marchand, associate professor in the University's Department of Civil and Environmental Engineering and co-director of the Nevada Water Innovation Institute; Sean McKenna, executive director of the Division of Hydrologic Sciences at the Desert Research Institute; and Jennifer Edmonds, associate professor and director of the Environmental and Resource Science Program at Nevada State College.

In this one-year project, the Nevada Water partners will work together to

- identify crucial urban-rural water sustainability issues;
- discuss and frame different ways of thinking about water sustainability solutions;
- identify information, knowledge, and resource gaps need to be filled;
- develop shared visions for desirable, equitable, and sustainable water futures and
- determine would be the best network structure to address Nevada's urban-rural water sustainability challenges.

"To achieve these goals, we will form regional and thematically-based groups of partners who will prepare the nascent network for a two-day conference focused on characterizing information gaps, co-identifying water priorities, and network development," Nolin said. "Together, Nevada Water will foster new knowledge and collaboration strategies to significantly advance integration, coordination, innovation and sustainable regional systems science."

April 01, 2022

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Title: NSF Sustainable Regional Systems Research Network (Track 2): “**Nevada Water: A Science-With-Society Research and Education Network**”

PI: Anne Nolin, Professor, Department of Geography and Director of the Graduate Program of Hydrologic Sciences, UNR

Co-PIs:

- **Stephanie McAfee**, Associate Professor, Department of Geography and Nevada State Climatologist, UNR
- **Eric Marchand**, Associate Professor, Department of Civil and Environmental Engineering, UNR
- **Sean McKenna**, Executive Director, Division of Hydrologic Sciences, Desert Research Institute
- **Jennifer Edmonds**, Associate Professor, Director of the Environmental and Resource Science Program, Nevada State College

ABSTRACT:

Nevada is the driest state in the nation and is facing multiple water sustainability challenges including declining mountain snowpacks, extreme weather, rapid population growth, and increasing urban-rural tensions. “Nevada Water” will develop a partnership of water suppliers, users, policy-makers, and academics whose primary goal is to create a dynamic research, societal, and education network focusing on critical urban-rural water issues across Nevada. The network will include key public, private, tribal, research, nonprofit, and educational water resource partners. Our guiding principle is Science *With* Society, which emphasizes communication, connections, and collaboration. In this one-year project, our Nevada Water partners will work together to a) identify crucial urban-rural water sustainability issues; b) discuss and frame different ways of thinking about water sustainability solutions; c) identify information, knowledge, and resource gaps need to be filled; d) develop shared visions for desirable, equitable, and sustainable water futures; and e) determine would be the best network structure to address Nevada’s urban-rural water sustainability challenges. To achieve these goals, we will form regional and thematically-based groups of partners who will prepare our nascent network for a 2-day conference focused on characterizing information gaps, co-identifying water priorities, and network development. Together, Nevada Water will foster new knowledge and collaboration strategies to significantly advance integration, coordination, innovation, and sustainable regional systems science.