

Sub-seasonal to Seasonal Precipitation Forecasting for Water Management

April 18, 2023

The Honorable Hal Rogers
Chairman
House Appropriations Subcommittee on
Commerce, Justice, and Science
United States House of Representatives
Washington, DC 20515

The Honorable Matt Cartwright
Ranking Member
House Appropriations Subcommittee on
Commerce, Justice, and Science
United States House of Representatives
Washington, DC 20515

Dear Chairman Rogers and Ranking Member Cartwright:

On behalf of the below-signed water management agencies and organizations, we are writing to request your support for a \$15 million Fiscal Year 2024 (FY24) appropriation to support the pilot for improving sub-seasonal to seasonal (S2S) precipitation forecasting in the western U.S. The National Oceanic and Atmospheric Administration's (NOAA) [2020 report to Congress](#) under Public Law 115-25 recommended the creation of this pilot project.

The purpose of the pilot project is to improve precipitation forecasting for water management in the U.S. As the report notes, NOAA pilot projects were chosen "...based on the existence of major climate phenomena that have huge economic impacts and for which current S2S predictive skill is too low to be effectively used by many stakeholders."

For many decades the scientific community has not been able to offer dependable forecasts beyond a week or two, and S2S forecasts have the ability to provide state and local water managers with reliable extended precipitation outlooks. These sub-seasonal (2- to 6-week) to seasonal (2- to 12-month) projections fill an important gap between weather and climate forecasting and represent a central component of seamless short-term and long-term predictions that are needed to support water project operations, drought preparedness and response, and innovative water management strategies such as forecast-informed reservoir operations.

NOAA's Climate Prediction Center (CPC) has been issuing S2S precipitation outlooks since the mid- 1990s. Their skill for the western U.S. has been minimal, just slightly better than predicting average weather conditions, and has shown little improvement over time. Forecasting precipitation at S2S timescales is scientifically challenging and has historically received little federal research funding support.

Your support for a \$15 million increase in the U.S. Weather Research Program line item within NOAA's Office of Oceanic and Atmospheric Research (OAR) would begin development of reliable forecasting with longer lead times to provide water managers with critical data to operate infrastructure more efficiently and allocate resources to mitigate and manage impacts of extreme wet and dry conditions. From this amount, we support a FY24 allocation of \$3 million for the Weather Program Office (WPO) for grants, \$4 million to the OAR Labs for product development, \$2 million to the National Weather Service (NWS) CPC for product evaluation and implementation, \$2 million to the NWS Environmental Modeling Center (EMC) for implementation and evaluation of model improvements, and \$4 million for computing resources needed to support the federal efforts at OAR and NWS. The attached proposed committee report language describes how we believe this critical funding should be focused.

We appreciate your consideration and hope you will support S2S pilot project funding in FY24. Please contact Jordan Smith at jas@vnf.com with any questions or to schedule a meeting to discuss this project with your staff.

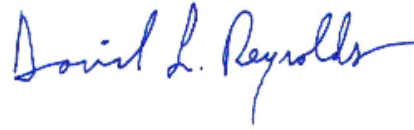
Sincerely,

Signature Page Follows

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Matthew Knudson
General Manager
Antelope Valley - East Kern Water Agency



David Reynolds
Director of Federal Relations
Association of California Water Agencies



Thomas Dobbins
Chief Executive Officer
Association of Metropolitan Water Agencies



John A. Coleman
Chief Executive Officer
Bay Planning Coalition



Karla A. Nemeth
Director
California Department of Water Resources



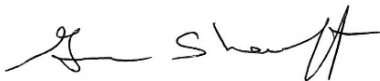
Aaron A. Avery
Senior Legislative Representative
California Special Districts Association



Paul Hutton
Executive Director
California Water & Environmental Modeling Forum



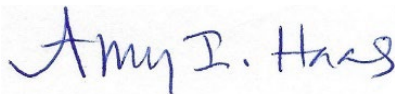
Joseph Yun
Executive Director
California Water Commission



Gene Shawcroft
General Manager
Central Utah Water Conservancy District



J.M. Barrett
General Manager
Coachella Valley Water District



Amy Haas
Executive Director
Colorado River Authority of Utah



Andrew A. Mueller
General Manager
Colorado River Water Conservation District

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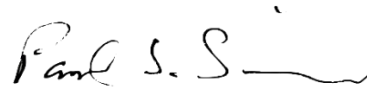
Dan Keppen
Executive Director
Family Farm Alliance



Jason Phillips
Chief Executive Officer
Friant Water Authority



Beth Callaway
Executive Director
Interstate Council on Water Policy



Paul Simmons
Executive Director
Klamath Water Users Association



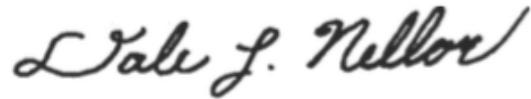
Anselmo G. Collins, P.E.
Senior Assistant General Manager – Water System
Los Angeles Department of Water and Power



Adel Hagekhalil
General Manager
Metropolitan Water District of Southern California



Matthew Chase
Executive Director
National Association of Counties



Dale Nellor
Executive Vice President
National Water Resources Association



Adam Sullivan
Nevada State Engineer
Nevada Department of Conservation and Natural Resources



David J. Guy
President
Northern California Water Association

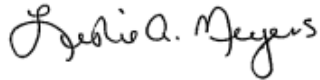


Cathy Green
Board President
Orange County Water District



Mary-Ann Warmerdam
Senior Vice President, Governmental Affairs
Regional Council of Rural Counties

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Leslie A. Meyers, PE
Associate General Manager & Chief Water Resources Executive
Salt River Project



Sandra L. Kerl
General Manager
San Diego County Water Authority



J. Scott Peterson
Water Policy Director
San Luis & Delta-Mendota Water Authority



Chris Harris
Secretary
Six Agency Committee



Grant Davis
General Manager
Sonoma Water



Jennifer Pierre
General Manager
State Water Project Contractors



John R. Zimmerman
General Manager
Truckee Meadows Water Authority



Lisa Wallace
Executive Director
Truckee River Watershed Council



Michelle Reimers
General Manager
Turlock Irrigation District



Tony Willardson
Executive Director
Western States Water Council

Cc: The Honorable Grace Napolitano