

The NASA Western Water Applications Office (WWAO)

Annual Meeting - Program Updates, April 30, 2024

Stephanie Granger, Manager, NASA WWAO Stephanie.L.Granger@jpl.nasa.gov









Mission: Directly benefit water management in the Western United States by getting NASA data, models, analyses, and tools into the hands of decision makers.

- Convenes regional water management communities to collectively identify gaps and needs
- Increases access and use of NASA Earth
 Observations (data) for decision-making by
 connecting NASA's Earth science capabilities with
 water management gaps.
- Transitions mature projects to operational use for sustained use and impact



WWAO Org Chart

The NASA WWAO is part of the Earth Science to Action Water Resources Program

Assoc. Dir for Earth Action, NASA Earth Science Division (Tom Wagner, NASA-HQ)

Water Resources Program Manager, NASA Earth Science Division (Erin Urquhart, NASA-HQ)

JPL Earth Science and Technology Directorate (Jim Graf/ Randy Friedl)

Program Manager (Stephanie Granger, JPL) JPL Earth Science and Technology Formulation Office (Frank Webb, Sharon Kedar)

Program Coordinator (Alphan Altinok, JPL) Program Business Support (Marjorie Reynolds, Cyndi Johnson, JPL)

Stakeholder Engagement (Sharon Ray, JPL)

> Private Sector/ Alliance (Mark Davidson, JPL)

Strat Comm/ Information Architectures

(Amber Jenkins, JPL affiliate, Colleen Schroeder, JPL) Program Science/ Capabilities

(TBD, Granger Acting)

Applications Transition

(Amber McCullum, Ames Research Center)

Science Team

- Renatto Frasson, JPL
- Bailing LI, GSFC,
- Amita Mehta, GSFC,
- A. J., Purdy, ARC





The WWAO Team

WWAO has brought together a Multi-Center NASA team with a unique set of skills needed to identify needs, vet potential NASA capabilities, and create connections from within NASA to the Western water management community

















Renato Frasson (JPL)

Bailing Li (GSFC),

Amita Mehta (GSFC),

AJ Purdy (ARC)

Science Team

Saskatoon Calgary Vancouver Columbia MONTANA MINNESOTA Missouri Minneapolis WISCONSIN OREGON IOWA NEBRASKA salt Upper Great ILLINOIS Basin **United States** Colorado California Arkansas Lower Colorado MISSISSIPP Rio Grande CALIFORNIA Austin SONORA LOUISIANA. Houston San Antonio √ √ = Survey + Needs Assessment Workshop complete √ = Survey complete Gulf of √ = Survey in progress SINALOA DURANGO √ = Strategic, long-term engagement with CA partners Mexico

Regional Perspective – Major River Basins

- Conduct water management studies and needs assessments for major western US basins
 - Eight major basins in the western US, roughly west of the 100th meridian
- 7 Basins Studied
 - Upper and Lower Colorado River Basin
 - Columbia River Basin
 - Rio Grande Basin
 - Missouri River Basin
 - California
 - o In progress: Arkansas-White-Red River Basin



Looking Back at 2023 – Results and Progress

Three Big Results

- 1. Missouri River Basin Needs Assessment Published
 - 21 needs identified
- 2. Successful completion of all 5 Columbia River Basin Projects
- 3. Publication of a Request for Information (RFI) for the Rio Grande Basin
 - 7 Projects selected contracting in process

Progress

- Arkansas-White-Red Basin Characterization Study Completed
- Private Sector partnerships gaining steam
- Two last mile projects underway CO, NM
- WWAO Water Portal launched
 - Online Knowledge Exchange Platform for water managers and scientists to exchange partner needs and solutions





Coming up soon

	Arkansas-White-Red Needs Assessment	June 2024
ldentify	Private Sector Engagement	Ongoing
	Cross-Basin Synthesis	Summer/Fall 2024
	Launch Great Basin Study	Fall 2024
	Water Practitioners Work Group	2024
Connect	Rio Grande Projects Kicked Off	Imminent - Selections made, getting on contract
	Private Sector Projects	Initial project expected to launch in 2024
	Missouri River Basin RFI Published, Projects Selected	June 2024, October 2024
Transition	Research to Decisions White Paper	Fall 2024
	Final Mile projects	Two projects underway - CO, NM
Knowledge Exchange	Connect the Drops Webinar Series	Kick-off July 2024



Looking Forward to Earth Action

User Centric

- WWAO will continue its "user-needs driven", bottom-up approach to identify and address critical information gaps in the western US.
- Continue co-development of projects and sustained engagement with key practitioners and partners.

Scale

- Prioritize a cross-basin synthesis and assessment to identify opportunities to scale projects and tools
- Identify pathways to advance inter-agency partnerships for project development and transition to sustained use

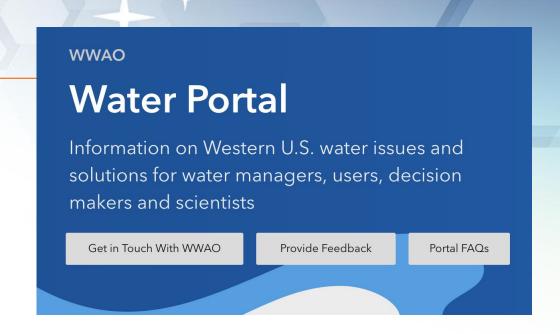
Building Bridges

 Encourage teaming and networking within the western water management community, the private sector, academia, and NASA to collectively address needs and increase the useability of NASA capabilities



For more information

- Visit our NASA-WWAO Website and Portal:
 - https://wwao.jpl.nasa.gov/
 - https://wwao.jpl.nasa.gov/portal/



- Reach out to our NASA-WWAO Team
 - Stephanie Granger, Program Manager: stephanie.l.granger@jpl.nasa.gov
 - Alphan Altinok, Program Coordinator: alphan.altinok@jpl.nasa.gov
 - Sharon Ray, Engagement Lead: sharon.ray@jpl.nasa.gov
 - Amber Jenkins, Information Architect/Strategic Communication Lead: amber.h.jenkins@jpl.nasa.gov
 - Amber McCullum, Impact/Transition Lead: amberjean.mccullum@nasa.gov



Significant Achievements



Identify

4 needs assessments completed

7 western basins / watersheds studied

60+ Use **Cases documented**

150+ participants in workshops / surveys

Connect

5 award rounds

15 completed projects

2 active projects – CO & NM

7 new projects - Rio Grande

40+ project partners

20+ papers/articles on project results

Private sector pathfinder





5 capabilities transitioned

1 new company formed - ASO, Inc.

1 Research to **Operations Workshop**

2 Interagency Research to Operations publications

3 impact assessments