

SURVEYS ON WATER SUSTAINABILITY

The National Ground Water Association (NGWA) is a not-for-profit professional society and trade association representing the ground water industry. Our headquarters are located in Westerville, OH. Our more than 15,000 members, from all 50 states, include some of the country's leading public and private sector ground water scientists, engineers, water well contractors, manufacturers and suppliers of ground water related products and services. NGWA hosts numerous educational forums across the country on crucial issues impacting ground water resources. These forums provide an opportunity for leading scientists to discuss the issues and share ideas on solutions.

Water sustainability has been a leading topic of discussion for the past several years. NGWA decided to survey our experts in order to determine what water professionals viewed as the impetus for current or impending water shortages, what data is currently being collected, what data needs to be collected, what are the solutions available and what role should the federal government take in helping protect our ground water resources. Additionally, we have collected survey data from state geologists across the country as well as surveyed specific states (AZ, CA, and NM) to obtain their view points on water shortage issues.

Water sustainability is such that there is not a one-size-fit-all solution for water shortages across the country. The reason for this lies in the fact that there are different pressure points on water systems in different parts of the country. Additionally, geology and hydraulic properties vary from water system to water system which affect how they are impacted by contamination, drought and other pressures causing water shortages. Below we provide a summary of key points describing all five of our expert surveys on ground water sustainability.

GROUND WATER SHORTAGE FORECASTS: Most states across the country are either experiencing water shortages now or predict shortages in the new 20 years. The West is facing additional pressures currently due to the drought conditions over the past few years.

REASON FOR GROUND WATER SHORTAGES: All of the surveys showed that there is no one cause of shortages but a combination of quality and quantity. In the west additional causes include drought and legal issues.

HOW TO REMEDY SHORTAGES:

- All five surveys listed aquifer storage and recovery and conjunctive use as one of the top four remedies.
- The Western states all agree that conservation is an important component and New Mexico lists treatment of brackish ground water as a leading remedy.



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MOST IMPORTANT TYPES OF WATER DATA TO EXPAND: *All of the data types below represent the top 6 priorities outlined in the surveys with 1 being highest priority.*

- Accurate Water Use (NGWA – Rank 1; State Geologists – Rank 4; NM – Rank 2)
- Water Quality for All Aquifers (NGWA–2; State Geologists–5; CA–5; NM–4)
- Hydraulic Properties of Major Aquifers (NGWA–3; State Geologists–1; CA-3; NM–3; AZ-4)
- Ground Water Level Monitoring Network (NGWA-4; State Geologists-2; AZ-1)
- On-line Aquifer Data (NGWA-5; CA-1; NM-6)
- Ground Water Recharge Rates (NGWA-6; State Geologists-6)

Other Issues Highlighted by State Geologists and State Surveys:

- Ground Water Quality Monitoring Network (AZ-2; CA-4; NM-5)
- Statewide Aquifer Maps (State Geologists-3; AZ-3)
- 3-D Aquifer Maps/Models (CA-2)
- Consumptive Use Data (NM-1)
- Potential Artificial Recharge Rates (AZ-6)

TOP FEDERAL ACTIONS NEEDED:

- Increase Funding for Cooperative Ground Water Quantity Data Collection (NGWA-1; State Geologists-1; AZ-3; NM-4)
- Increase Funding for Cooperative Ground Water Quality Data Collection (NGWA-2; State Geologists-2; CA-4; NM-4; AZ-1)
- Increase Research Related to Ground Water Availability (NGWA-3; State Geologists-4; CA-1; NM-2)
- Increase Funding for Cooperative Mapping of Aquifers (NGWA-4; State Geologists-3; CA-2; NM-5; AZ-5)
- Develop a National Clearinghouse for Ground Water Quality and Quantity Information (NGWA-5; CA-5)

Other Actions Highlighted by State Geologists and State Surveys:

- Fund Public Education and Outreach on Water Conservation (State Geologists-5; AZ-2)
- Provide Forum for Government and Water Professionals to Discuss Various Water Data, Research and Infrastructure Issues (CA-3; AZ-4)
- Increase Funding for Federal Ground Water Quantity Data Collection (NM-1)
- Increase Funding for Federal Ground Water Quality Data Collection (NM-3)

*To see these surveys in their entirety, please contact Cartier Esham, Ph.D., Asst. Vice-President – Dutko Worldwide; cartier.esham@dutkoworldwide.com (202-484-4884)
Dutko Worldwide provides Washington representation for NGWA.*

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