Improving Groundwater Security in the United States: President's Council of Advisors on Science and Technology Report



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The President's Council of Advisors on Science and Technology ("PCAST") released a December 2024 report titled:

REPORT TO THE PRESIDENT: Improving Groundwater Security in the United States ("Report").

PCAST is a federal advisory committee appointed by the President to augment the science and technology advice available to him from inside the White House and from the federal agencies.

The Report by way of introduction notes the importance of groundwater to the "health, security, and economic vitality of communities across the United States."

The Report also states that groundwater:

- Supports nearly half of the Nation's drinking water supply.
- Sustains agricultural production.
- Powers industries.

Challenges discussed include:

- Depletion.
- Contamination.
- Limited data systems.
- Shortages of skilled workers.
- Impact of climate variability on refilling aquafers.

The Report discusses:

- Groundwater resource challenges and risks.
- Groundwater governance.
- Federal role in groundwater management.

Recommendations include:

- Establish a coordinated interagency working group on groundwater security and sustainability to help integrate groundwater and surface water data, modeling, and risk assessments to better facilitate informed decisions-making and planning at local levels.

- Expand research on innovative groundwater technologies for recharge, conservation, contamination mitigation, and sustainable water use.
- Establish a network of regionally tailored hubs, including tribal focused hubs, to support knowledge sharing and coordination among local and regional experts.
- Develop a federal incentive program for sustainable groundwater management to support aquafer restoration, improved water efficiency, and sustainable management practices.
- Develop methodologies to account for the value of natural capital including groundwater resources to integrate these estimates into cost-benefit and analyses in planning across government.
- Launch campaign to recruit, develop, and retain well-trained professionals skilled in groundwater science and management to address current and future challenges.

Appendices in the Report include:

1. Water-Related Directives in the Bipartisan Infrastructure Law and Inflation Reduction Act.
2. Agencies with Activities Related to Water Resources.
3. Agencies with Activities Related to Water Quality.
4. Examples of Groundwater Data Collections and Models.
5. All Organizations that Provided Input Considered in Developing this Report.
6. External Experts Consulted.

A copy of the Report can be downloaded here.