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# Future Water Priorities for the Nation - Directions for the U.S. Geological Survey Water Mission Area: The National Academies of Sciences Engineering Medicine

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The National Academies of Sciences Engineering Medicine published a September 2018 Consensus Study Report titled:

*Future Water Priorities for the Nation: Directions for the U.S. Geological Survey Water Mission Area ("Report")*

By way of introduction, the *Report* notes the increasing importance of United States water resources and references pressure related to:

- Growing populations
- Climate change
- Extreme weather
- Aging water-related infrastructure
- Increasing demand for food, energy, and industrial production

Such pressures are considered threats to both water availability and quality by:

- Increasing exposure to hydrologic extremes and hazards
- Affecting economic and policy decisions
- Making tradeoffs between human and ecological water uses even more difficult

The U.S. Geological Survey ("USGS") asked that the *Report* be produced and identify:

- The United States highest-priority water science and resource challenges over the next 25 years
- The water mission areas of USGS current water science and research portfolio
- Recommendations of strategic opportunities for water mission area water science and research that would address the highest-priority national water challenges

Challenges identified in the *Report* include:

- Understanding the role of water in the earth system
- Quantifying the water cycle
- Developing integrating modeling
- Quantifying change in the socio-hydrological system

- Securing reliable and sustainable water supplies
- Understanding and predicting water-related hazards

Recommendations include:

- Enhance data collection, include citizen science, develop web-based analytical tools
- Coordinate with agencies and organizations on data delivery
- Increase focus on the relationships between human activities and water
- Develop a robust water accounting system
- Collaborate with agencies and organizations on water-data standards and categories of use
- Ensure that monitoring networks provide adequate information to access changing conditions
- Focus on long-term prediction and risk assessment of extreme water conditions
- Develop multiscale, integrated, dynamic models that encompass the full water cycle
- Collaborate as appropriate both within and outside of USGS, including agencies in the private sector
- Build a workforce ready to take on new water challenges

A copy of the *Report* can be downloaded [here](#).