

## SAFE AND SUSTAINABLE WATER RESOURCES RESEARCH

### Background

Protecting America's water resources is one of EPA's top priorities. Significant threats to our nation's water resources include:

- Increasing demands for sources of clean water
- Changing land-use practices (such as farming and mining)
- Population growth and urban development
- Aging water infrastructure
- Climate variability and change

Failure to manage these resources in an integrated, sustainable manner jeopardizes both human and aquatic ecosystem health.

EPA's Safe and Sustainable Water Resources (SSWR) Research provides the science and innovative technologies we need to protect and maintain drinking water sources and systems, as well as to protect the chemical, physical, and biological integrity of our water.

### Research Focus Areas

SSWR research is divided into two main themes:

#### *Sustainable Water Resources*

Studies integrate social, economic, and environmental research for use in protecting and restoring water resources and their designated uses for drinking water, industrial processes, recreation, and other uses. Research topics include:

- Identifying those factors that contribute to the degradation and contamination of water resources
- Determining effective approaches for minimizing risk



and environmental impacts of chemical and pathogen contaminants

- Evaluating the impacts of climate change and variability and changing human demographics on water programs

Watersheds, coastal waters, estuaries, and other inland water resources are the focus of this research.

Research efforts directly support the Agency's National Drinking Water Strategy, water quality criteria under the Clean Water Act and the National Water Program's Climate Strategy.

#### *Sustainable Water Infrastructure*

This research promotes a healthy and effective network of drinking water, wastewater, and stormwater systems.

Innovative methods for infrastructure management, maintenance, and replacement are evaluated in order to:

- Advance and improve natural and engineered water systems, including green infrastructure
- Advance water treatment approaches and technologies
- Develop sustainable processes for contaminant removal
- Encourage energy conservation and resource recovery, while minimizing costs

This research provides a better understanding of how natural and human-made water systems work, interact and, together, provide services that support us and our natural environment.

Results of this research help utility companies more effectively provide reliable service to their customers and to meet Clean Water Act and Safe Drinking Water Act requirements.

The SSWR research program provides the scientific backing that local, state, and federal decision makers need to direct informed water resource management.

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## References

Water Research Web Site:

<http://www.epa.gov/research/waterscience/>

EPA's National Drinking Water  
Strategy:

[http://water.epa.gov/lawsregs/rulesre  
gs/sdwa/dwstrategy/index.cfm](http://water.epa.gov/lawsregs/rulesre<br/>gs/sdwa/dwstrategy/index.cfm)

Summary of the Clean Water Act:

[http://www.epa.gov/lawsregs/laws/c  
wa.html](http://www.epa.gov/lawsregs/laws/c<br/>wa.html)

## Contact

Suzanne Van Drunick, Ph.D.,

National Program Director,

202-564-0436,

vandrunick.suzanne@epa.gov

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