

Excellence in Sustainable Global Systems: Clean Water

The College's Clean Water initiative will help resolve some of the intractable water quality and distribution problems that are expected to result from a gradually warming climate, decreasing fresh water resources, and the re-urbanization of the northeastern United States.

The cross-disciplinary, campus-wide initiative focuses on the smart use of water resources and infrastructure, sustainable urban design and planning, and the application of new water technologies. The initiative blends basic and applied research and education at the University and fosters collaborative efforts with regional research and educational institutions.



Below are examples of interdisciplinary research and scholarship initiatives in water resources, water supply, and water quality. The new Excellence Initiative will build on these existing strengths and provide new research and funding opportunities in critical areas of water resources management.

Water Resources Past and Present

Scientists are documenting how water resources and water quality have changed from many thousands of years ago to the present in both emerging and developed nations as well as in Upstate New York. Aspects of the research incorporate how water quality and quantity change in streams, lakes, and coastal ecosystems in response to climate change and human activities. Examples of human activities include the addition of nutrients and heavy metals to water resources and the degree to which humans mine or affect non-renewable ground water resources.

Clean Water Initiatives

Scientists are investigating ways to use natural bacterial and non-bacterial processes to eliminate such contaminants as agricultural nutrients, road salt, and point-source heavy metals from lakes and streams. As part of these efforts, scientists have constructed computer simulations about how contaminants move in the landscape, and have developed novel instrumentation to measure quality changes.

Water Resources and Public Policy

Scientists are working collaboratively with scholars at the University's College of Law to assess how broad environmental problems related to fresh and coastal waters can be addressed in the future, including the effects of observed climate warming on coastal wetlands and communities.