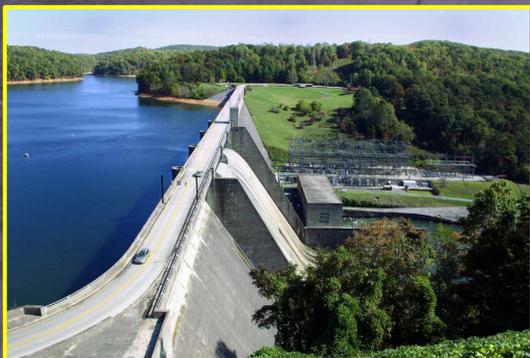
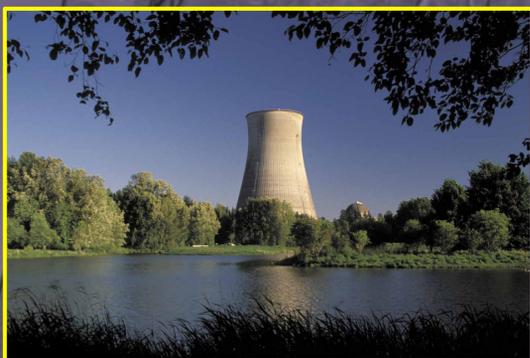


Water and Energy

Energy production accounts for a significant portion of all water consumed in the U.S. In the next 25 years, this consumption is expected to increase nearly 70 percent. Conflicts between traditional water uses and energy production interests will inevitably increase. The Mountain West Water Institute hosts a research program focused on water-energy issues. This research directly supports the development of solutions to energy resource development and power generation challenges in adjoining regions of the Western Energy Corridor.



*Providing
state-of-the-art
science and
technology to
understand impacts
and optimize water
availability for
energy resource
development.*

Water and Energy

Energy production accounts for a significant portion of all the water consumed in the United States and ranks only behind agriculture in terms of water consumption. The Mountain West Water Institute (MWWI) leads research into the sustainability of energy and water resources and in developing solutions to energy-water challenges in the Mountain West. MWWI aims to develop science-based solutions to regional challenges associated with energy resource development and power generation. Some examples of MWWI's technical and programmatic activities relevant to water and energy are highlighted below.

Water and Nuclear Power – The generation of nuclear power, like the production of most sources of energy, requires large, reliable sources of clean water. Idaho National Laboratory (INL), the U.S. Department of Energy's lead laboratory for nuclear power research and development and coordinating partner for MWWI, is finding ways to reduce the amount of water necessary to generate nuclear power, including alternatives to water use.

Water and Energy Efficiency / Alternative Energy Technologies – INL has also long been involved in fossil energy, hydropower, wind, geothermal, industrial energy efficiency, and water treatment research and technology development programs that address the relationship between a power source or industrial process and water use. MWWI and its member partners are expanding this capability to conduct systems modeling research, evaluate hybrid and alternative energy approaches, predict water balances on a basinwide level and more efficiently manage watersheds.

Water Treatment / Reuse Technology – Building on INL's leadership in advancing biogeochemical sciences, the MWWI Water Treatment / Reuse Technology program is directed toward cleanup of impacted surface and subsurface water sources using microbiological and biogeochemical processes. INL has successfully developed advanced water treatment technologies for a variety of applications. Leading-edge technology has also been successfully demonstrated for treating wastewater from metal plating operations, pulp and paper operations, and groundwater contaminated with arsenic, heavy metals, and volatile organic compounds.

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