



Montana Water Center

2003 Highlights

The *Montana University System Water Center*, located at MSU-Bozeman, was established by a 1964 Act of Congress which created Water Resources Research Institutes at land grant universities in 54 states and territories. The mission of the Montana Water Center is to mobilize the resources of Montana's public universities to resolve the state's water problems. It does this by sponsoring water-related research, providing training and education for current water professionals, and educating future water professionals. The Center does not receive an appropriation from the State of Montana, but is entirely grant-funded.

In 2003 the Water Center's core activities are taking place within four Federally-funded programs, summarized briefly below. Each of these programs draws on substantial non-Federal matching contributions.

I. The ***Water Resources Program*** funded through the US Geological Survey is sponsoring four research projects this year:

- ★ an evaluation of the effectiveness and costs of alternative erosion-control measures undertaken on burned forest lands in western Montana
- ★ an assessment of the ecology of the New Zealand mud snail, an invasive species now spreading in western Montana streams
- ★ trials to optimize inexpensive local organic amendments for the cost-effective reclamation of mine wastes
- ★ delineation of subsurface hydrology in Montana sage/grasslands where the soils freeze in winter.

Through this program the Water Center also operates the heavily-used *Montana Water* Internet site as a central reference source for both technical and non-technical information. In October it will co-sponsor the annual *Montana Water Resources* conference, which draws 150 professionals, undergraduates and graduate students.

II. More than a dozen research and management projects are advancing under the aegis of the ***Whirling Disease Initiative***, to preserve wild trout populations in Montana and other states. These include projects to:

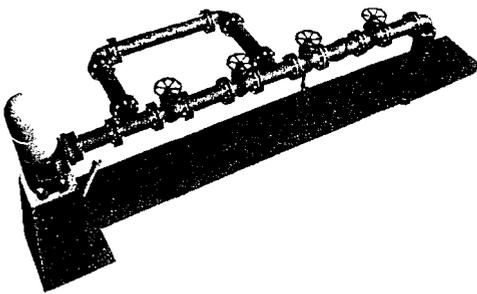
- ★ develop rapid, field-portable diagnostic techniques
- ★ test whether artificial "flushing flows" can eradicate populations of the disease's secondary host
- ★ use methods of epidemiology to predict watersheds that are vulnerable to infection
- ★ evaluate the effects of habitat-restoration projects on the extent and severity of whirling disease infection in a stream.

This year Initiative personnel are also developing research and management information packages for fisheries managers, to help them cope with the effects of the disease in the field.

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III. The **Small Systems Technical Assistance Center (TAC)** is the flagship of a nationwide eight-center network with the mission of helping small public water systems provide safe, reliable and affordable drinking water. This year's projects include:

- ★ developing a computer-based interactive training course for operators of surface-water systems, for which they can earn professional-education credit
- ★ developing a parallel course for operators of rural wastewater treatment systems
- ★ creating a computer-based course for water treatment engineers concerning the newly-permitted point-of-use approach toward treatment of drinking water within the homes of consumers
- ★ assembling a template of case histories, checklists, and databases for water system managers to formalize the protection plans for their source waters.



Pump system illustration from the *Operator Basics* training course

Representatives of the TAC will present their work at several professional conferences this year, and more than 10,000 copies of the training tools will be distributed nationwide. As in past years, the TAC will co-sponsor the week-long Montana Water School - attended by 350 water treatment operators - and will organize professional teleconferences with downlink sites in seven Montana communities. The TAC operates the website providing access to the tools developed by all eight of the assistance centers.

IV. The purpose of the **Wild Fish Habitat Initiative** is to evaluate the efficacy of measures to bolster wild fish populations, and publicize the results among fishery and land managers. This year Initiative investigators are:

- ★ examining the biology of bacterial coldwater disease and testing control measures for this disease that thwarts efforts to re-introduce native trout to rehabilitated waterways
- ★ defining the thermal tolerances of cutthroat trout so they can be re-introduced into streams where they will thrive
- ★ assembling habitat-restoration case histories, bibliographies and other technical references and airing this "gray literature" on an Internet site for land managers (<http://water.montana.edu/wildfish/>)
- ★ testing and documenting the performance of alternative devices to protect wild fish from irrigation diversions so they are not captured and lost to native populations.

The Initiative is a scientific adjunct to the *Partners for Fish and Wildlife* program operated by the US Fish and Wildlife Service for private landowners, aimed to enhance the effectiveness of its habitat-restoration projects.

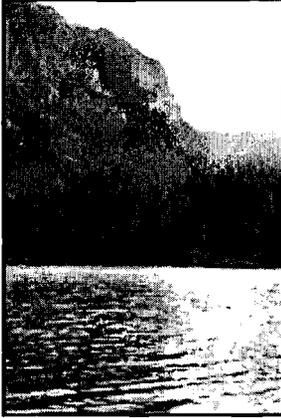
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MONTANA WATER CENTER

[HOME](#)

Our History



Hyalite Reservoir, Bozeman

Established in 1964 by an act of Congress, the **Montana Water Center** at Montana State University advances water research, information, education, and problem-solving partnerships throughout the state and more widely. It is one of 54 Centers in the nation collectively known as the Water Resources Research Institutes.

National Institutes
for Water Resources



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Our Mission

The Montana Water Center's mission is to mobilize the resources of the Montana University System to resolve Montana's water problems. It does this by:

- Sponsoring water-related research;
- Providing training and education for current water professionals; and
- Educating future water professionals.

[View the Montana Water Center 2001-2002 Annual Report \(648 KB PDF file\)](#)

The water resources of the United States will be subjected to more intense and broader arrays of pressure in the twenty-first century than they were in the twentieth century. Projected population growth, economic growth, and the increasing recognition of the need to preserve and enhance aquatic ecosystems will combine to make managing water resources more challenging than ever.....New policies to guide water resources research and new investment in that research will be needed if the nation is to respond effectively to the water problems of the twenty-first century.

Water Science and Technology Board
National Research Council
June, 2001

Updated: Tuesday, April 15, 2003

MONTANA WATER

Resources

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Watersheds

Welcome!

Monday June 16, 2003

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Three Dollar Bridge Spring Creek Restoration Project

The purpose of MONTANA WATER is to provide a practical and comprehensive resource for professionals, university faculty, and the many Montanans with an interest in water issues.

By making a wide range of water-related information easily accessible, Montana Water seeks to foster the development of a well-informed community of interested people.



This site is developed, designed, and administered by the Montana Water Center at Montana

State University -- Bozeman. For more about what we do, visit our web site.

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