



WATER RESOURCES RESEARCH CENTER

Congressman Stephen F. Lynch

Action:

- Reauthorization of the Water Resources Research Act (WRRRA).
- Funding for the 54 National Institutes of Water Resources (NIWR) as part of the Interior & Environment Appropriations bill at a funding level of \$8.8 million.

Who We Are:

The Massachusetts Water Resources Research Center (WRRC) at the University of Massachusetts Amherst addresses water resource needs of the Commonwealth and New England through interdisciplinary university/college research, creative partnerships with federal, state, and community agencies, and information transfer.

- WRRC receives base funding annually for water research, education and outreach through the WRRRA Section 104(B) grant program.
- We leverage this modest funding by providing seed grants to researchers & faculty at higher education institutions throughout the Commonwealth. This funding provides proof of concept opportunities enabling faculty researchers to apply and win future competitive grants.
- We host an annual conference and a variety of workshops and professional certification and training events to facilitate technology transfer from the universities to stakeholders as well as education of the next generation of water managers.
- UMass has received additional funding through the competitive WRRRA Section 104(G) (regional) grants.
- WRRC also provides a mechanism for agencies to fund critical, short-term research through non-competitive (sole-source) grants.
- In partnership with the U.S. Geological Survey, the water institutes have a 45-year history of rendering assistance to all members of the water-user communities in their states.

Impacts:

If the Water Resources Research Act is not reauthorized,

- WRRC will close and our technology and information transfer programs for water managers and students will end. This means no conference and no opportunity in Massachusetts for students to present their water-related research, for example.
- The 104(B) and 104(G) funding opportunities for faculty across the Commonwealth will end, making it harder for young faculty to obtain seed funding for their cutting-edge research.
- Other funding traditionally awarded to campus researchers via the WRRC will be curtailed.

WRRC Activity in District 9:

Over past 5 years, WRRC had 15 projects affecting your District, see back of this page for some examples.

WRRC Projects in District 9

Pending Projects (FY 2011)	
Monitoring and Understanding Water Quality at Three Potential Charles River Swimming Sites	Focuses on monitoring and understanding water quality at three potential Charles River swimming sites.
Emerging Contaminants	
Development of a Standardized Protocol for Fish Bioassays	Researched a new method, using gene expression in fish, to indicate estrogenic pollution. Endocrine disrupting compounds, including estrogenic contaminants, have been detected in surface waters in the Northeast and cause feminization of fish and other wildlife.
Habitat	
Stream Continuity Project	Study looking whether road and railroad crossings with streams create barriers for fish and wildlife.
Outreach/Education	
The Role of Mobile Devices for Contextual Learning: Plant Biodiversity as a Model	Redesign of three plant identification courses to incorporate handheld computers and electronic field guides. Collaborating departments include Landscape Architecture and Regional Planning and Biology at UMass Amherst and Biology at UMass Boston; UMass Academic Technology grant.
Seeing the Forest and the Trees	Course, Computer, and Laboratory Improvement Program: This project employs a variety of information technology tools to enhance student learning in four plant identification courses on the UMass Amherst and Boston campuses.
The River's Calendar	<i>In development</i> - The Water Center along with other departments at UMass Amherst and Boston are collaborating with Trout Unlimited to develop a citizen-science climate change monitoring project, focussing on impacts to phenology of riparian areas in coldwater fisheries.
Stormwater	
Innovative Stormwater Technology Transfer and Evaluation Project	Provides technology transfer information about innovative stormwater Best Management Practices, evaluates studies that test the BMPs performance and posts all the information on a website (www.mastep.net).
Water Quality	
Technical support for the development of a probabilistic water quality monitoring program for Massachusetts	Provide technical support for the design of a probabilistic water quality monitoring program for the Commonwealth of Massachusetts which would provide sufficient data to report on the overall quality of freshwaters in Massachusetts every two years and at the same time provide MassDEP with additional information to assess the condition of water quality in specific lakes and rivers to meet the Commonwealth's obligations under section 303d of the federal Clean Water Act.
Water Quantity	
Estimation of Climatic and Anthropogenic Influences on Freshwater Availability	Conducted a comprehensive analysis of all three essential influences -- climate, land-use, and human water-withdrawal combined -- to understand the relative importance of the interactions among these factors on water scarcity.