

Content Development for CSREES Water Quality Web Network

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The network of 406 websites.

National Water Quality Program website
www.usawaterquality.org



Regional Water Quality Program websites
National Facilitation Grant websites



State Cooperative Extension websites
(when available / suitable)



specific program websites

What is the purpose of the network?

Marketing

Provide overview of the CSREES Water Quality Program to congressmen, deans, directors, partners, and funding agencies.

- How is their money being used to improve water quality?



Communication

Quickly connect Land-Grant personnel and visitors with the resources of the CSREES Water Quality Program network.

Coordination

Distribute materials and information useful to the 406 network

What is the CSREES National WQ Program?

* Applying Knowledge to Improve Water Quality *

- The goal is to protect or improve the quality of water resources throughout the U.S.
- Goal addressed at the national, regional (ten regional partnerships), state and local levels
- Bring researchers, instructors, and extension educators into more effective and efficient partnerships with each other and other agencies

Need to Demonstrate

- Research-Based Extension
- Partnerships
- Regional or multi-state efforts
- Impacts → Our programs are improving water quality

Integrating Research, Education, and Extension

Everywhere possible indicate:

- How is Extension incorporating new research into its program?
- Are research efforts being guided by Extension and Education feedback?



Partnerships

- CSREES New England Water Quality Program teams up with EPA New England for Private Well Water Initiative

http://www.usawaterquality.org/newengland/focus_areas/residential/success.html



CSREES
New England
Regional Water Quality Program
Applying knowledge to improve water quality

Cooperative Extension in New England
Research - Education - Extension



Focus Areas

- Agricultural Best Management Practices
- Community-Based Watershed Protection
- Residential Pollution Prevention
- Volunteer Water Quality Monitoring

Initiatives

- American Heritage Rivers Initiative
- National Heritage Corridors

Programs by State


- New England on the National Scale

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Private Well Water Initiative

New England Regional Water Quality Program (NERWQP) Partners with EPA New England

Unlike public water supplies in New England, private well water is not regulated and well owners are responsible for the quality and safety of their own drinking water. New England groundwater is naturally susceptible to certain contaminants that well owners should be able to recognize and protect against. In addition, practices around the home can inadvertently contaminate drinking water. Education about protecting private sources of drinking water is critical to the health and safety of families relying on private wells.



Recognizing the importance of self-monitoring for families with private wells, US Environmental Protection Agency (EPA) requested assistance from Extension in educating well owners to voluntarily test and protect their drinking water supply. Private well water protection has also been identified by the NERWQP, supported by the USDA Water Quality 406 program and coordinated out of the University of Rhode Island, as a main topic to address within the Residential Pollution Prevention Focus Area. In 2002, Extension staff from throughout New England began meeting with EPA New England staff to coordinate efforts to address the management and protection of private drinking water wells.

In 2002, EPA provided some funding through a Cooperative Agreement to URI Extension via the NERWQP. Funding was provided to enable Cooperative Extension to produce and/or purchase educational materials for private well water education. These educational materials include:

- Set of 26 factsheets on the topic of drinking water testing and contaminants. These factsheets have been developed for Rhode Island and are being revised and updated by each of the other states.
- Purchase of one groundwater demonstration model for each state and distribution of Rhode Island groundwater model educational handbook.
- Development of a groundwater poster for youth to accompany the groundwater model.
- Development of 3-fold private well testing brochure and display stand to be distributed in public places throughout New England based on NH Department of Environmental Service's current initiative.


As these materials are completed, they will be incorporated into already existing programs and educational efforts throughout New England. In addition, efforts are underway to expand private well water educational programming throughout New England.

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CSREES National Water Quality Program

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Partners in this Regional Water Quality Program are also equal opportunity providers and employers.

page last modified on June 24, 2003



Regional or Multi-State Efforts



CSREES
New Jersey
New York - Puerto Rico - Virgin Islands
Regional Water Quality
Coordination Program

— Research, Education & Extension —

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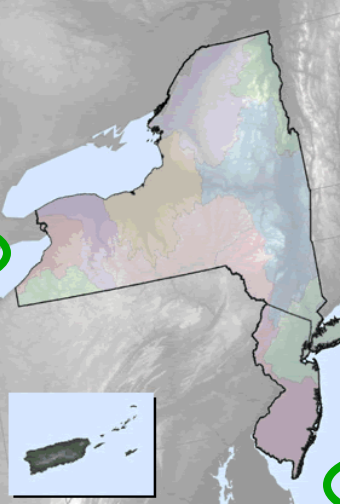
Regional Program Priority Issue Areas

- Animal Waste Management
- Drinking Water and Human Health
- Nutrient Management
- Watershed Management
- Regional Projects**
- Animal Waste Management for Small Farms
- Onsite Wastewater Treatment System Management
- Peconic Estuary Program Educational Programming
- Pollutant Trading

Programs by State/ Commonwealth/ Territory

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The New Jersey, New York, Puerto Rico and Virgin Islands Regional Water Quality Coordination Program is a research-based education and extension resources of the four Land Grant Universities (Cornell University, Rutgers University, and the University of Puerto Rico) covered by Region 2 of the United States Environmental Protection Agency (US EPA) and the United States Department of Agriculture, Cooperative State Research, Education and Extension Service (CSREES) National Water Quality Program, and is supported by US EPA Region 2.





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CSREES National Water Quality Program

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Date of last change: _____
Comments or questions? Please email the [web team](#).

<http://rwqp.rutgers.edu/>



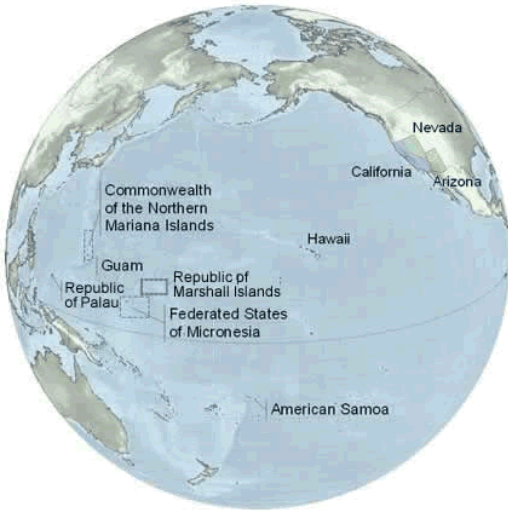
CSREES
Southwest States
& Pacific Islands
Regional Water Quality Program

Applying knowledge to improve water quality

— Research, Education & Extension —


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The CSREES Southwest States and Pacific Islands Regional Water Quality Program works to improve water quality management through educational knowledge and extension programming that emerges from a research base. The program builds on the strengths of the Extension Water Quality Programs at the Land Grant Universities throughout the Southwest and Pacific Islands.



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<http://ag.arizona.edu/region9wq/index.htm>



Cooperative State Research, Education, and Extension Service

Research, Education, and Economics

 Search

Funding Opportunities	News & Information	State Partners	Program Information	Legislation/Budget	Human Resources
Recent Additions	Site Map	Award Administration	Job Opportunities	Learn About CSREES	Related Links

Expanded Food and Nutrition Education Program

[Success Stories](#) | [Fa](#)

Success Stories

- [By State](#)
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Funding Opportunities	Ne
Recent Additions	



Cooperative State Research, Education, and Extension Service

Research, Education, and Economics

 Search

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Success Stories

The Economic and Community Systems unit provides leadership in the application of social sciences to the issues and problems of communities, agricultural and other business extension and education programs often in federal agency

- [The Texas Master Marketer Program](#)
- [MONEY 2000™](#)
- [Investing For Your Future: Home](#)
- [High School Financial Planning](#)

Funding Opportunities	News & Information	State Pa
Recent Additions	Site Map	Award Adm

[USDA](#)
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Point of contact:
Updated Info: Ju
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Cooperative State Research, Education, and Extension Service

Research, Education, and Economics

 Search

Funding Opportunities	News & Information	State Partners	Program Information	Legislation/Budget	Human Resources
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IpM *Integrated Pest Management*

Cooperative State Research, Education,
and Extension (CSREES)

Program Overview	State IPM Coordinators and Web Sites	Reports and Publications
Success!	Pest Management Portfolio	Regional Pest Management Centers

Other CSREES web sites
use success stories to
demonstrate impacts

<http://www.reeusda.gov/f4hn/efnep/success.htm>

<http://www.reeusda.gov/ecs/success/success.htm>

<http://www.reeusda.gov/ipm/>

Draw attention to impacts

Web attention spans are short

- Summarize "why is this important?" first-prominently
- Add subheadings to capture attention

From workshop delivered to CSREES

http://www.usawaterquality.org/themes/health/extension/mobile_lab.html

CSREES National Water Quality Program
Applying knowledge to improve water quality

Home >> National Themes >> Drinking Water and Human Health >> Extension >> **THE TEX*A*SYST MOBILE LAB PROGRAM**

Regional Programs

National Themes

National Facilitation

Extension Education

Integrated Research, Education, and Extension

Funded Projects
Grants for 2003 have been posted

Success Stories

Online Resources

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search this website:

NATIONAL THEME: DRINKING WATER AND HUMAN HEALTH

[Research](#)
[Education](#)
[Extension](#)

- SUCCESS STORY -

This program is just one example of CSREES Extension programming that has positively impacted drinking water quality. Please check back periodically for other highlighted programs.

THE TEX*A*SYST MOBILE LAB PROGRAM: SCREENING DRINKING WATER WELLS AND EDUCATING CITIZENS

By participating in the Tex*A*Syst Mobile Lab Program, well owners receive specific instructions about how to treat their wells to reduce contaminant levels and how to lessen the threat of contamination in the future.

Situation

The health and livelihood of Americans depends on the availability of a safe drinking water supply. Residents in rural areas of Texas primarily rely upon private wells for their water needs. Private wells are a water source that is not regulated to the extent that public drinking water supplies are. Private well owners are responsible for the quality of their own drinking water. They need to be aware of potential contamination risks to their wells and how to protect against these risks. As a result, more private well owners are demanding well water testing and water quality information.



Actions

In 1999, the Tex*A*Syst Mobile Lab Program was established with technical assistance from the [Blackland Research Center](#) and an initial equipment investment from the [Texas Water Resources Institute](#), a unit of the [Texas Agricultural Experiment Station](#) and [Texas Cooperative Extension](#). This program, along with other Tex*A*Syst programs, are marketed to communities which identify water resources as a high priority in Extension's annual [Texas Community Futures Forum](#). Communities that choose to participate in the Mobile Lab Program which is brought to them. Private well and small water system water samples are routinely screened for bacteria, nitrate, and salinity. Some counties have also chosen to screen for lead or arsenic. Typically, the analysis of well water samples is followed by an educational meeting where individual results are provided, county-wide water quality trends are discussed, potential sources of ground water contamination and possible remediation or treatment methods are suggested, and Tex*A*Syst Wellhead Protection educational materials are presented.

Impacts

The Tex*A*Syst Mobile Lab Program has screened over 4,500 water samples from rural drinking water wells in 46 counties in Texas. After participating in follow-up educational meetings within some of the individual counties, an average of 27% of participants declared that they gained knowledge on how they can improve their drinking water quality. For example, two well owners installed a chlorinator to provide continuous bacterial treatment of water while another chose to use bottled water for human consumption in their home.

In Mills County, Texas where more than a third of the wells screened were found to contain high levels of nitrate, the Tex*A*Syst Mobile Lab Program led a special project in cooperation with the [Texas Water Resources Institute](#), the Mills County Extension office, and local civic leaders of the City of Mullin. 26 reverse osmosis (RO) units were made available to homeowners at substantial savings to remediate these problem wells. Mobile Lab staff installed two RO units and trained local volunteers to install other systems. The RO units significantly reduced the concentration of both contaminants from levels above the US-EPA public drinking water standards (10 ppm, nitrate and 500 ppm, salinity) to much more safe levels below the EPA standards.



The Tex*A*Syst Mobile Lab Program and related projects were featured in the Texas Water Resources Institute [July 2003 Newsletter](#) (pdf).

For more information on this project, contact [Monty Dozier](#).

CSREES
EDUCATION
USDA
NATIONAL WATER QUALITY PROGRAM

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all external sites will open in a new browser window

CSREES NATIONAL Water Quality Program

Draw attention to impacts

- Scatter accomplishments, outcomes, impacts, and examples throughout text
- Be obvious

http://www.usawaterquality.org/themes/animal/research/alt_uses.html

The screenshot shows the CSREES National Water Quality Program website. The header includes the logo and tagline 'Applying knowledge to improve water quality'. The navigation path is 'Home >> National Themes >> Animal Waste Management >> Research >> ALTERNATIVE USES OF MANURE'. A sidebar on the left lists navigation options: About this Program, Regional Programs, National Themes, National Facilitation, Extension Education, Integrated Research, Education, and Extension, Funded Projects, Success Stories, Online Resources, Home, and Previous Page. The main content area features a 'NATIONAL THEME: ANIMAL WASTE MANAGEMENT' section with sub-links for Research, Education, and Extension. Below this is the 'ALTERNATIVE USES OF MANURE' section, which contains several paragraphs of text and images. The first paragraph discusses the need for alternative technologies to prevent nutrients and pathogens from entering water bodies. The 'Accomplishments' section highlights research from the University of Georgia on poultry litter compost, a Texas A&M University project on co-firing broiler litter with coal, and a Clemson University project on loblolly pine fertilization. An 'Example' section mentions a new research project at Louisiana State University. A search bar is located at the bottom left of the main content area. The footer includes contact information, a site map, and a disclaimer that the USDA is an equal opportunity provider.

CSREES National Water Quality Program
Applying knowledge to improve water quality

Home >> National Themes >> Animal Waste Management >> Research >> **ALTERNATIVE USES OF MANURE**


NATIONAL THEME:
ANIMAL WASTE MANAGEMENT

Research
Education
Extension

ALTERNATIVE USES OF MANURE


Alternative technologies and uses for manure need to be developed and tested in order to prevent nutrients and pathogens from entering ground and surface waters. USDA CSREES sponsors research to develop and assess alternative uses of manure to protect and improve water quality.

Accomplishments:
University of Georgia researchers are exploring the use of **poultry litter compost in controlling runoff and soil erosion** (Risse et al., 2003). Early results indicate that a treatment consisting of a mixture of poultry litter compost and ground wood waste produced lower soil and nutrient losses and greater vegetative growth than any of the other treatments



University of Georgia

— Researchers at Texas A&M University are working to develop a co-firing technology for coal and broiler litter to generate power →. They have found that broiler litter is a lower quality fuel than coal, but the use of litter with coal in a 90:10 blend results in similar fuel costs as compared to coal and reduction in the fouling potential as compared to pure litter. Research is continuing to assess fouling and corrosion potential along with combustion efficiencies of these fuels.



USDA stand of loblolly pine

— A research project with support from Clemson University Extension → examined the water quality impacts and tree growth benefits associated with annual and one-time fertilization of commercial loblolly pine plantations using irrigated swine lagoon effluent and surface applied poultry litter. They found significant increases in wood value with both types of applications (Chastain et al. 2003; ASAE Meeting Paper No. 032157).

Example:
— A new research project at Louisiana State University → is looking to develop beneficial uses of poultry litter in forest fertilization.

search this website: Go!

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→ all external sites will open in a new browser window →

CSREES NATIONAL
Water Quality Program

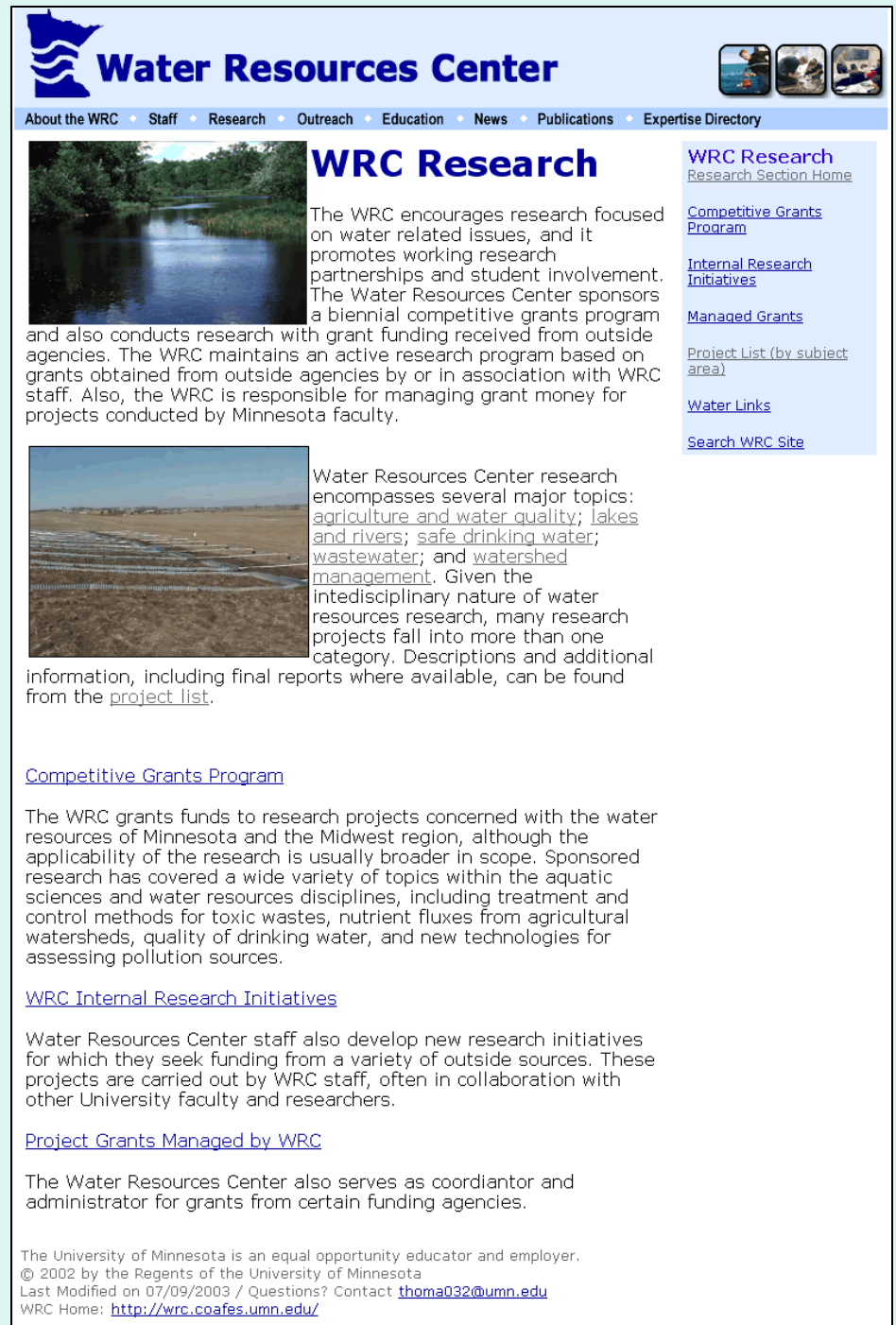
Where to start gathering content

- Communicate with experts via state and regional water quality coordinators
 - What are the hot topics within regional themes?
 - Where do we have history of expertise?
 - Who are the key researchers, educators, & outreach specialists
- Interview, create drafts & send out for review
 - Better response rate with draft formulated
 - Basis for further discussion

Gathering Research Content

- Consult with state or regional water quality coordinator
- State or local CE websites often link to research laboratories

<http://wrc.coafes.umn.edu/research/>



The screenshot shows the homepage of the Water Resources Center website. At the top left is the logo for the Water Resources Center, featuring a stylized blue wave and the text "Water Resources Center". To the right of the logo are three small square images showing water-related scenes. Below the logo is a navigation menu with links: "About the WRC", "Staff", "Research", "Outreach", "Education", "News", "Publications", and "Expertise Directory". The main content area is titled "WRC Research" and features two images: a river flowing through a lush green landscape and a wide, flat, dry landscape under a clear sky. The text describes the center's research focus on water-related issues, including partnerships, grants, and interdisciplinary projects. A sidebar on the right contains links for "WRC Research", "Competitive Grants Program", "Internal Research Initiatives", "Managed Grants", "Project List (by subject area)", "Water Links", and "Search WRC Site". At the bottom of the page, there is a footer with contact information and a copyright notice.

Water Resources Center

About the WRC • Staff • Research • Outreach • Education • News • Publications • Expertise Directory

WRC Research

The WRC encourages research focused on water related issues, and it promotes working research partnerships and student involvement. The Water Resources Center sponsors a biennial competitive grants program and also conducts research with grant funding received from outside agencies. The WRC maintains an active research program based on grants obtained from outside agencies by or in association with WRC staff. Also, the WRC is responsible for managing grant money for projects conducted by Minnesota faculty.

Water Resources Center research encompasses several major topics: [agriculture and water quality](#); [lakes and rivers](#); [safe drinking water](#); [wastewater](#); and [watershed management](#). Given the interdisciplinary nature of water resources research, many research projects fall into more than one category. Descriptions and additional information, including final reports where available, can be found from the [project list](#).

[Competitive Grants Program](#)

The WRC grants funds to research projects concerned with the water resources of Minnesota and the Midwest region, although the applicability of the research is usually broader in scope. Sponsored research has covered a wide variety of topics within the aquatic sciences and water resources disciplines, including treatment and control methods for toxic wastes, nutrient fluxes from agricultural watersheds, quality of drinking water, and new technologies for assessing pollution sources.

[WRC Internal Research Initiatives](#)

Water Resources Center staff also develop new research initiatives for which they seek funding from a variety of outside sources. These projects are carried out by WRC staff, often in collaboration with other University faculty and researchers.

[Project Grants Managed by WRC](#)

The Water Resources Center also serves as coordinator and administrator for grants from certain funding agencies.

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Last Modified on 07/09/2003 / Questions? Contact thoma032@umn.edu
WRC Home: <http://wrc.coafes.umn.edu/>

[WRC Research](#)
Research Section Home

[Competitive Grants Program](#)

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[Search WRC Site](#)

Gathering Research Content

- CSREES WQ Conference abstracts-posters-presentations available through <http://www.usawaterquality.org>
- 406 Integrated Research, Education, and Extension Grants <http://www.usawaterquality.org/projects/>
- CSREES Current Research Information System (CRIS): search USDA funded projects database
- NRI Water Quality CRIS listing (excel file; institutions identified; kaddy@uri.edu)
- Animal Waste Management CRIS listing organized by state (fastlinks from word document courtesy of R. Hegg & staff at CSREES; kaddy@uri.edu)
 - Google: search for more info or websites with PI and institution name

Gathering Research Content: CRIS

<http://cris.csrees.usda.gov/Welcome.html>

The screenshot shows the CRIS homepage navigation menu. The 'Search CRIS Now' link is circled in green. Below it, the 'Assisted Search' link is also circled in green. The menu includes links for 'Search Menu', 'The CRIS System', 'Manual of Classification', 'Forms Assistance', 'Report Status and Schedule', '2002 - 2003 Salary Analysis', 'Funding Summaries', 'Project Processing Flow Charts', and 'Staff Contact Information'. At the bottom, there are links for 'CSREES Administrative Functions (passwords required)' and 'User Survey/Feedback'.

The screenshot shows the CRIS search interface. The top section is titled 'Search CRIS Full Text' and includes a 'Help' button. Below the title, there is a text box for 'Fulltext Terms' and two additional text boxes for '...AND these' and '...NOT these'. A green box labeled 'Nutrient Management' has an arrow pointing to the 'Fulltext Terms' box. Another green box labeled 'Water Quality' has an arrow pointing to the '...AND these' box. Below the text boxes are checkboxes for 'Subfile', '(Any)', 'CRIS', and 'HNRIMS'. The status 'Records retrieved: 0' and 'Max Records to Display: 50' is shown. Buttons for 'Search', 'Display Results', 'Exit to Menu', 'Exit to Home', and 'Clear Form' are at the bottom.

The bottom section is titled 'Search CRIS by Individual Data Fields' and includes a 'Help' button. Below the title, there is a text box for 'Project Type' with a dropdown menu showing '(Any)' and 'Animal Health'. A green box labeled 'Hatch' has an arrow pointing to the 'Project Type' dropdown. Below this are text boxes for 'Project ID', 'Agency', 'Investigator', 'City', 'Region', and 'Multistate Project No.'. To the right, there are dropdown menus for 'Project Status' (showing '(Any)' and 'Active') and 'State/Country'. A green box labeled 'Kansas' has an arrow pointing to the 'State/Country' dropdown. Below these are text boxes for 'Grant No.', 'Division/Station', 'Institution/Department', 'Fiscal Year', and 'Keywords'. A 'Terms' button is next to the 'Keywords' box. At the bottom, buttons for 'Search', 'Display Results', 'Exit to Menu', 'Exit to Home', and 'Clear Form' are shown.

Gathering Research Content: CRIS

Retrieved 5 records. Displaying items 1 - 5.

Title/Investigator Table of CRIS

Select	Acc No	Title	Investigator
<input type="checkbox"/>	0198890	PLANT NUTRIENT SOURCE EFFECTS ON SURFACE RUNOFF CHARACTERISTICS	Pierzynski, G.; Swenne, D.; Janssen, K.; McVay, K.
<input type="checkbox"/>	0194623	INTEGRATING BIOPHYSICAL FUNCTIONS OF RIPARIAN SYSTEMS WITH MANAGEMENT PRACTICES AND POLICIES	Hutchins
<input type="checkbox"/>	0191124	INVESTIGATING ENVIRONMENTAL ISSUES RELATED TO AGRICULTURE IN SOUTHWEST KANSAS	Willson, J.; Frisebe, J.; Schlegel, J.
<input checked="" type="checkbox"/>	0190333	INTEGRATED AGRICULTURAL MANAGEMENT SYSTEMS FOR IMPROVING WATER QUALITY IN KANSAS	Pierzynski, G.; Mankin, K.; Janssen, K.; McVay, K.
<input type="checkbox"/>	0167722	PLANT NUTRIENT CYCLING IN SOILS	Pierzynski, G.; Swenne, D.; Janssen, K.; McVay, K.

ACCESSION NO: 0190333 **SUBFILE:** CRIS
PROJ NO: KS9968 **AGENCY:** CSREES KAN
PROJ TYPE: OTHER GRANTS **PROJ STATUS:** NEW
CONTRACT/GRANT/AGREEMENT NO: 2001-51130-11377 **PROPOSAL NO:** 2001-04946
START: 15 SEP 2001 **TERM:** 14 SEP 2004 **FY:** 2002 **GRANT YR:** 2001
GRANT AMT: \$560,000

INVESTIGATOR: Pierzynski, G.; Regehr, D.; Devlin, D.; Mankin, K.; Langemeier, M.; Sweeney, D.; Janssen, K.; McVay, K.

PERFORMING INSTITUTION:

AGRONOMY
 KANSAS STATE UNIV
 MANHATTAN, KANSAS 66506

INTEGRATED AGRICULTURAL MANAGEMENT SYSTEMS FOR IMPROVING WATER QUALITY IN KANSAS

NON-TECHNICAL SUMMARY: The goal of this project is to develop and apply a model that utilizes local, field-scale research knowledge to simulate the effects of nutrient, sediment, and pesticide BMPs at the watershed scale. This capability will be utilized to develop BMP strategies to address TMDL issues in a pilot watershed through K-State Research and Extension activities. Concurrently, the economics of BMPs will be studied so that the total impact of BMPs on the producer will be known.

OBJECTIVES: Our goal is to develop and apply a model that utilizes local, field-scale research knowledge to simulate the effects of nutrient, sediment, and pesticide BMPs on **water quality** at the **watershed** scale. This capability will be utilized to devise BMP strategies to directly address TMDL issues in a pilot watershed through Extension activities. A complete economic analysis will be performed. further, results will be integrated into undergraduate and graduate curricula at KSU in a variety of ways.

APPROACH: Two limitations in addressing total maximum daily load (TMDL) issues are determining the net effect of best management practices (BMPs) designed for single contaminants on a mix of contaminants in runoff, and modeling the net impact of BMP adoption on a watershed scale. Our goal is to develop and apply a model that utilizes local, field-scale research knowledge to simulate the effects of nutrient, sediment, and pesticide BMPs at the watershed scale. Field studies will be conducted that are designed to test combinations of tillage systems, with herbicide and fertilizer timing and placement variables, to determine how various combinations of practices affect the movement of sediments, nutrients, and herbicides from cropland in surface water runoff. The proposed work will continue surface runoff studies in three watersheds for an additional three years. This approach represents an integrated agricultural management system for improving surface **water quality**. The ADAPT field-scale model will be calibrated against data collected from the field studies and will then be expanded to the watershed scale. This capability will be utilized to devise BMP strategies to address TMDL issues in a pilot watershed through Extension activities. Concurrently, the economics of BMPs will be studied so the total impact of BMPs on the producer will be known and economic barriers to BMP implementation can be identified. Results will be integrated into undergraduate and graduate curricula at Kansas State University as case studies in several courses and as a term project for a capstone course in the Natural Resources and Environmental Sciences secondary major. An Extension and Education program will be developed to deliver watershed-based modeling land management alternatives and recommendations to local conservation districts (Washington and Marshall County Conservation Districts), Little Blue River Watershed District Board, and to County Extension Council Boards (Washington County and Marshall County Extension Councils) and assist them in reaching decisions leading to meeting TMDLs goals for the Little Blue River Basin of Kansas. A second objective will be to educate citizens and landowners in the Little Blue River Basin as to the **water quality** impacts of various management alternatives allowing them to make informed decisions leading to improved **water quality** in the Little Blue River Basin of Kansas.

+ impacts and contact info

PROGRESS: 2002/01 TO 2002/12

The project measures runoff losses of sediment, nutrients, and herbicides at three locations in Kansas. The effects of tillage and nutrient or pesticide management on runoff losses are being studied in an attempt to identify best management

Displaying Research Content

- Tables with links to CRIS records
 - Positive: yields thorough listing of projects
 - Negative: does not answer why this work is important



CSREES
New England
Regional Water Quality Program
Applying knowledge to improve water quality

Cooperative Extension in New England
Research - Education - Extension



Focus Areas

- Agricultural Best Management Practices
- Community-Based Watershed Protection
- Residential Pollution Prevention
- Volunteer Water Quality Monitoring

Initiatives

- American Heritage Rivers Initiative
- National Heritage Corridors

Programs by State

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INLAND LAKES, PONDS, RIVERS, AND STREAMS MONITORING

The following research articles are documented on the [Current Research Information System \(CRIS\) website](#). CRIS is the U.S. Department of Agriculture's (USDA) documentation and reporting system for ongoing and recently completed research projects in agriculture, food and nutrition, and forestry. Projects are conducted or sponsored by USDA research agencies, state agricultural experiment stations, the state land-grant university system, other cooperating state institutions, and participants in a number of USDA research grant programs. CRIS is a part of Information Systems and Technology Management (ISTM), Cooperative State Research, Education, and Extension Service (CSREES), and is located in the Waterfront Centre in Washington, DC.



Project ID	Title	Investigator(s)	Affiliation
0186731	NATIONAL FACILITATION OF CSREES VOLUNTEER MONITORING EFFORTS	Green, L.T., Gold, A.J., and Shepard, R.L.	(UNIVERSITY OF RHODE ISLAND)
0055497	MICROCYSTINS (MC) IN NH LAKES AND A STRATEGY FOR THEIR MANAGEMENT	Haney, J.F., Sasner, J.J., and Ikawa, M.	(UNIVERSITY OF NEW HAMPSHIRE)
0186866	CONTRIBUTION OF FORESTED WATERSHEDS TO FECAL CONTAMINATION OF STREAMS AND RIVERS	Morrissey, L.	(UNIVERSITY OF VERMONT)
0132275	IDENTIFICATION MANUAL WITH TOLERANCE VALUES OF AQUATIC INSECTS FROM SOUTHERN NEW HAMPSHIRE FOR USE IN DEVELOPING WATER QUALITY STATEMENTS	Chandler, D.S. and Burger, J.F.	(UNIVERSITY OF NEW HAMPSHIRE)



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[CSREES National Water Quality Program](#)

The USDA is an equal opportunity provider and employer.
Partners in this Regional Program are also equal opportunity providers and employers.

page last modified on June 24, 2003




Displaying Research Content

- Instead of or in addition to CRIS listings, highlight a few research projects listing accomplishments, outcomes, and impacts

<http://www.iowabeefcenter.org/heartlandwq/research.htm>

Southern website regional theme pages also describe some research projects



Animal Manure Management

Research

Comprehensive Manure Management for Improved Nutrient Utilization and Environmental Quality

By scrolling down this web page of research documentation, you will find the following 6 conclusions:

- [Phosphorus-based manure and compost application appears to provide an agronomically and environmentally-sound management system.](#)
- [Narrow grass hedges were found to be a very effective and inexpensive means to significantly reduce the transport of P and N in runoff from areas where manure was applied.](#)
- [The annual application of manure was found to reduce runoff and soil loss from cropland acres.](#)
- [If runoff and erosion can be accurately predicted, the P index can serve as a useful tool for identifying sites where transport of P to surface water can be a potential concern.](#)
- [When estimating nutrient transport from land application areas, the length of time since the last manure application should be considered.](#)
- [Through proper application and management, manure can serve as a valuable nutrient source and soil amendment without causing adverse environmental concerns.](#)

Field research was conducted to enhance understanding of the important mechanisms influencing nutrient transport by runoff from cropland areas on which beef cattle or swine manure are applied. Information was provided on the effects of selected cropping, management, and conservation practices on the delivery of nutrients by overland flow. This information can be used by producers to select management alternatives best suited to their goals of maintaining a sustainable production system that causes minimal environmental impacts. Additional information concerning this research program can be found at: http://www.nps.ars.usda.gov/projects/projects.htm?accn_no=403885

Gathering Education Content

- Consult state and regional water quality coordinators
- Visit Land Grant University web sites to learn about academic programs
- Consult with Extension staff to learn about the best programs
- Learn from program graduates



Displaying Education Content

- Listing and links to university programs
- Highlight a program
- Present quote from graduate about how his education has furthered his improvement of water quality



The screenshot shows the website for CSREES New England Regional Water Quality Program. The header includes the logo, the text "CSREES New England Regional Water Quality Program", and the tagline "Applying knowledge to improve water quality". A navigation menu includes "Home >> Focus Areas >> Residential Pollution Prevention >> Education >> University-Based". The main content area is titled "University-Based" and provides an overview of university-based education within the New England land grant universities. It lists several universities and their major programs:

- University of Connecticut:** College of Agriculture and Natural Resources. Major programs include: Environmental Health * Natural Resources * Resource Economics
- University of Maine:** College of Natural Sciences, Forestry, and Agriculture. Major programs include: Ecology * Envl. Science * Environmental Mgmt & Policy * Landscape Horticulture
- University of Massachusetts:** College of Natural Resources and the Environment. Major programs include: Environmental Design * Landscape Architecture * Natural Resource Studies. The Environmental Institute at UMass Amherst. Major programs include: Envl. Engineering * Envl. Health Sciences * Public Policy & Administration
- University of New Hampshire:** College of Life Sciences and Agriculture. Major programs include: Environmental Conservation * Microbiology * Water Resources Management
- University of Rhode Island:** College of the Environment and Life Sciences. Major programs include: Landscape Architecture * Environmental Science & Mgmt * Water & Soil Science
- University of Vermont:** College of Agriculture and Life Sciences, College of Arts and Science. Major programs include: Ecosystem Ecology & Mgmt * Environmental Resources * Resource Planning * Sustainable Landscape Horticulture

The footer contains navigation links: "About | Calendar | Contacts | Feedback | Links | Reporting | Research | Site Map", the CSREES logo, and the text "NEW ENGLAND CSREES National Water Quality Program". It also includes the USDA logo and the text "The USDA is an equal opportunity provider and employer. Partners in this Regional Program are also equal opportunity providers and employers." and a page modification date: "page last modified on June 30, 2003".

http://www.usawaterquality.org/newengland/focus_areas/residential/education/university.html

Gathering Extension Content

- Consult with state and regional water quality coordinators
- CSREES WQ Conference abstracts-posters-presentations available through <http://www.usawaterquality.org>
- 406 Education and Extension Grants <http://www.usawaterquality.org/projects/>
- State or local CE web sites
- Talk to folks who have participated in Extension programs
- Ask about follow-up surveys

Displaying Extension Content

- Highlight accomplishments, outcomes, and impacts in addition to describing program
- Quotes from citizens and partners participating in programs helps to convey how behaviors have changed which leads to water quality improvements
- Pictures help too!

Volunteers were the “hub of the wheel that made the [Lake Chocura, NH runoff remediation] project a success...they provided the factual data on which decisions were made” S. Godlewski, NH Dept of Environmental Services



National Facilitation Projects

- Help you to learn about projects happening in your state or region

There is are 830 items listed in the database.

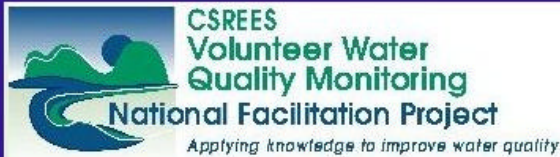
You may choose to reorganize this listing by clicking on one of the following options:

[Organize by state](#)
[Organize by topic](#) - [View alphabetized list.](#)
[Organize by title](#)

**Pollution Assessment
& Prevention Theme
Team**

Complete List of Materials

STATE	PROGRAM	TOPIC	TITLE	WEB LOCATION
Alaska	Home*A*Syst	Home*A*Syst	Living in the Mat-Su	Not currently available online.
Alaska	Home*A*Syst	Pathogens	Cryptosporidium and Potable Water	Not currently available online.
Alabama	Farm*A*Syst	Livestock Waste Management	Alabama Farm*A*Syst: Animal Waste Products Used in Crop and Forage Production (CRD-67A) Alabama Farm*A*Syst: Animal Waste P	View online



CSREES
Volunteer Water
Quality Monitoring
National Facilitation Project
Applying knowledge to improve water quality



Cooperative Extension Volunteer Water Quality Monitoring Programs

Initiatives

- Project Description** (382 K pdf file)
- Outreach Materials and Activities**
- Nationwide Inquiry**
- Data Reporting**
- Trainings and Training Materials**

Extension Volunteer Monitoring Programs

Related Research and Educational Efforts

Guide for Growing Programs

- Using the Guide** (803 K pdf file)
- Why Monitoring Makes Sense** (582K pdf file)
- Designing Your Monitoring Strategy** (1.6 M pdf file)
- Monitoring Matrix** (80 K pdf file)
- Effective Training**
- Quality Assurance**
- Volunteer Management**
- Outreach Tools**
- Locating Support and Funding**
- Overcoming Networking Barriers**

Special Topics

- Highlighted Program**
- Highlighted Program Archives**
- Job postings**
- National Water Monitoring Day**

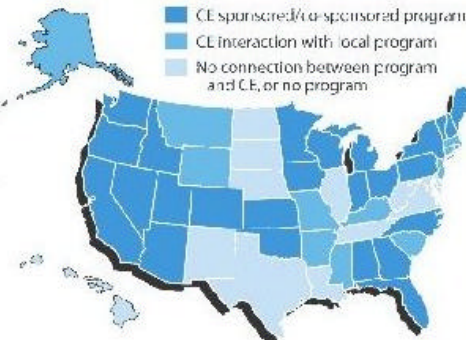
[Previous Page](#)

Our inquiries identified 27 volunteer water quality monitoring programs that are sponsored or co-sponsored by Cooperative Extension in the United States and its territories. We have since updated the list to include a total of 33 programs and two contacts for soon-to-be programs in Ohio.

These programs began as early as 1978 and up to the year 2003. They have volunteers monitoring a variety of aquatic habitats including rivers, streams, lakes, ponds, well, wetlands, and estuaries.

The image above and to the right represents how Cooperative Extension volunteer water quality monitoring programs across the nation. The Extension co-sponsored program that exists in the American Samoa

We have listed the programs that are sponsored or co-sponsored by state in the list below. In parentheses next to each coordinator's name program began. Many programs have websites available, and we have sites for your convenience.



Alabama

Bill Deutsch (1992)
[Alabama Water Watch](#)
 Auburn University
 203 Swingle Hall
 Auburn AL 36849
 Phone: (888) 844-4785
 Fax: (224) 844-9208
www@acesaq.auburn.edu

Arizona

Steve Campbell
 Arizona Volunteer Monitoring Project
 University of Arizona
 402 East Hopi Drive
 Holbrook AZ 86025

American Samoa

Laura Laumatia (2000)
 Tauese Stream Program
 American Samoa Com
 P.O. Box 5319
 Pago Pago AS 96799
 Phone: (684) 699-692
 Fax: (684) 699-5011
laumatia_l@yahoo.co

Arizona

Russ Radden
 Private Well Monitoring
[University of Arizona Cooperative Extension of Yavapai County](#)
 500 S. Marina

Volunteer Monitoring National Facilitation Project

<http://www.usawaterquality.org/volunteer/VolunteerMonPrograms/>

CSREES Volunteer Water Quality Monitoring National Facilitation Project
Applying knowledge to improve water quality

Highlighted Program Archives

Initiatives

- Project Description** (382 K pdf file)
- Outreach Materials and Activities**
- Nationwide Inquiry**
- Data Reporting**
- Trainings and Training Materials**

Extension Volunteer Monitoring Programs

Related Research and Educational Efforts

Guide for Growing Programs

Using the Guide (803 K pdf file)

Why Monitoring Makes Sense (582K pdf file)

Designing Your Monitoring Strategy (1.6 M pdf file)

From this page we provide you with links to past highlighted programs so that you can learn more about the variety of volunteer water quality monitoring programs that are sponsored or co-sponsored by Cooperative Extension across the nation.

[Washington State University Beach Watchers](#)

The WSU Beach Watchers program began in 1990 to provide education related to watersheds of the marine environment; it is not solely a monitoring program. Today, most intertidal zone monitoring sites (located in Puget Sound) are assessed once each year for biological organisms and physical parameters.

[The University of Vermont Watershed Alliance](#)

For four years now, the Watershed Alliance, a partnership of University of Vermont Extension, the School of Natural Resources and Sea Grant, has made it possible for secondary schools and youth groups throughout Vermont to begin the process into the

<http://www.usawaterquality.org/volunteer/Special/Highlighted/Archives.html>



The National NEMO Network is a network of education programs teaching local land use decision makers about the relationship between land use and natural resource protection.



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Publications & Reviews

Maps & Mapping

Reducing Runoff

Case Studies

Impervious Surfaces

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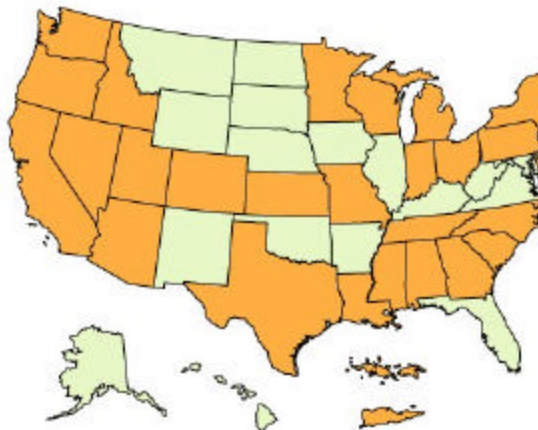
Search NEMO

The Network currently has 33 projects in 32 states across the United States and U.S. territories. Connecticut is the original NEMO program and is the National Network "Hub".

Within the boundaries of their shared philosophy and educational approach, NEMO programs are diverse. Institutional makeup, geographic coverage, topical focus, methodology, funding and staffing vary from state to state. We attempt to capture this diversity, and to demonstrate the local work being done by Network programs. The following 11 states are highlighted for our [2002 National NEMO Network Report](#) (published 2003).

- [Alabama](#)
- [Connecticut](#)
- [Delaware](#)
- [Georgia](#)
- [Indiana](#)
- [Maine](#)
- [Massachusetts](#)
- [Minnesota](#)
- [New York](#)
- [Ohio](#)
- [Pennsylvania](#)
- [South Carolina](#)
- [Tennessee](#)

Click on the state in the map (member states are in orange) or the links below, for general program information:



The National NEMO Network is a network of education programs teaching local land use decision makers about the relationship between land use and natural resource protection.



Workshops & Initiatives

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National Network Home

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Tennessee Growth Readiness Project



Project Initiated: August, 2001

- [Contact](#)
- [How the Project Developed](#)
- [How and Where NEMO Works](#)
- [Accomplishments](#)
- [The Future](#)
- [Project Stats](#)

[PDF Version](#)

National NEMO National Facilitation Project

<http://nemo.uconn.edu/national/members.htm>

Into the future

- Introduce Inter-regional research and extension projects
 - EPA Region 2 attending trainings at NE Waste Water Training Center
 - National programs like the Center for Animal and Manure Waste Management
- New 406 Reporting Assessment Tool (Robin Shepard) will aid in gathering timely and complete web content

Discussion: How do we stand?

- How are things going with content development?
 - How are things working with individual states hosting websites?
 - What has been most useful?
 - Where do we need help?
- What can we learn from each other?