Content Development for CSREES Water Quality Web Network

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The network of 406 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

Home
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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.

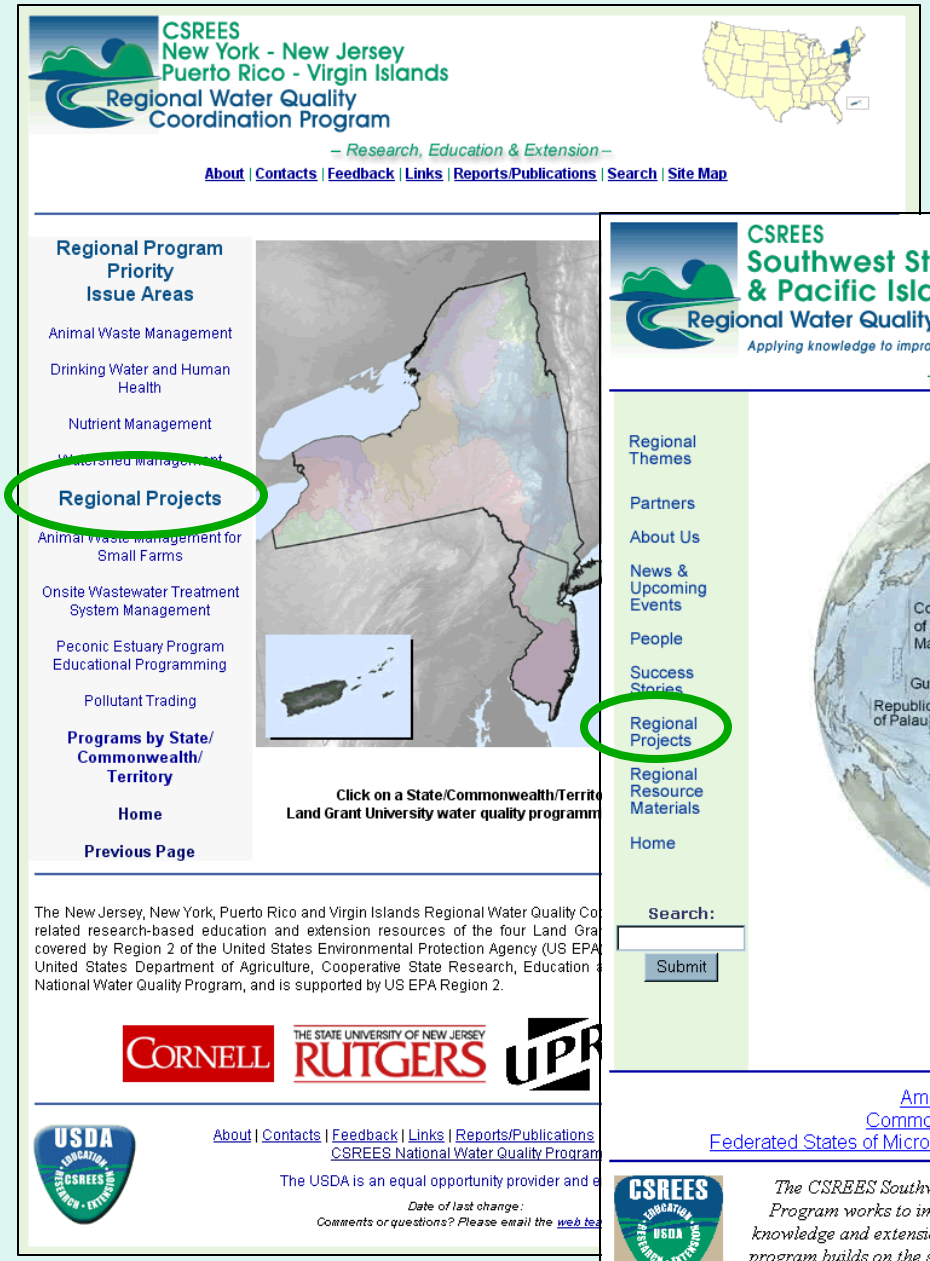
Recognizing the importance of self-monitoring for families with private wells, US Environmental Protection Agency (EPA) requested assistance from Extension in educating well owners to voluntarily test and protect their drinking water supply. Private well water protection has also been identified by the 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:

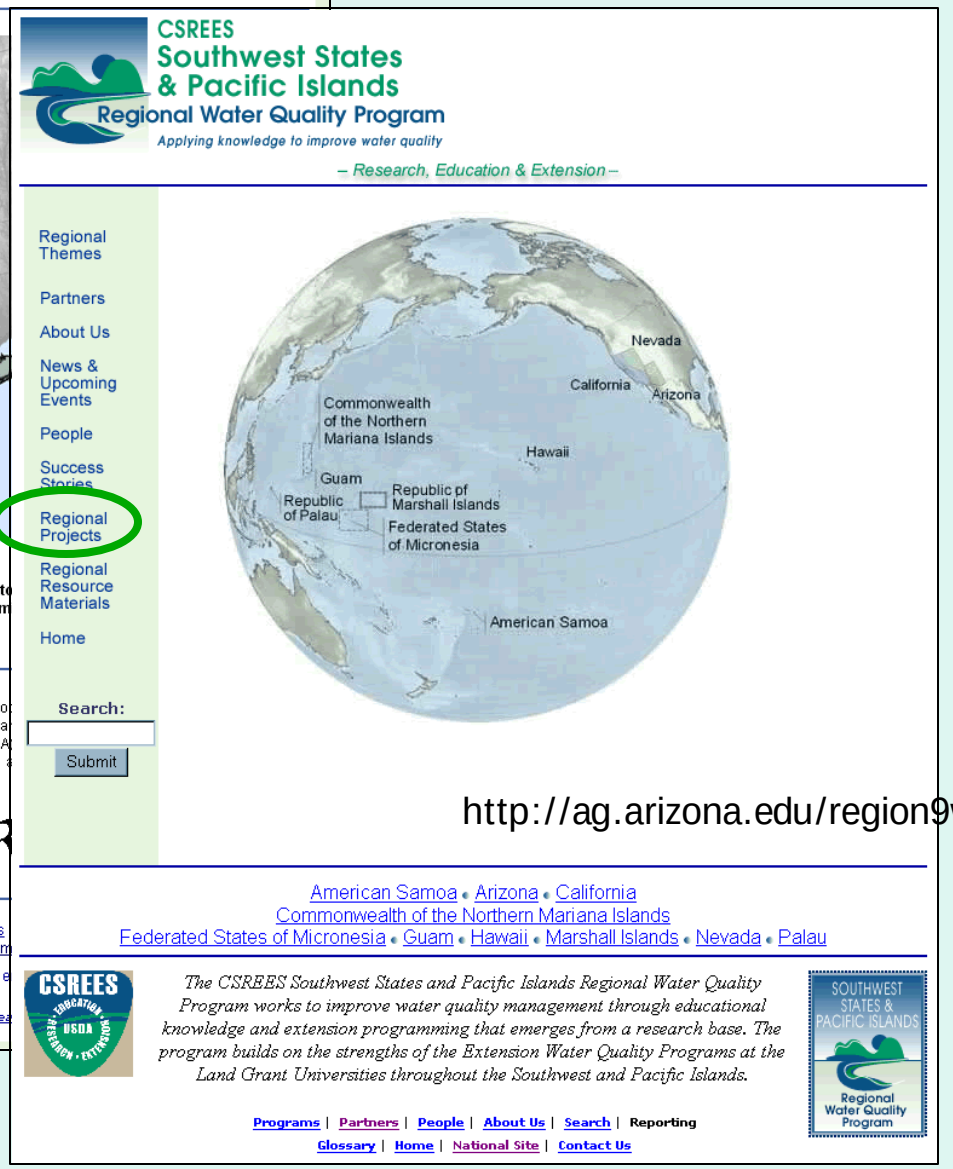
- Set of 26 factsheets on the topic of drinking water testing and contaminants. These factsheets have been developed for Rhode Island and are being revised and updated by each of the other states.
- Purchase of one groundwater demonstration model for each state and distribution of Rhode Island groundwater 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.

Regional or Multi-State Efforts

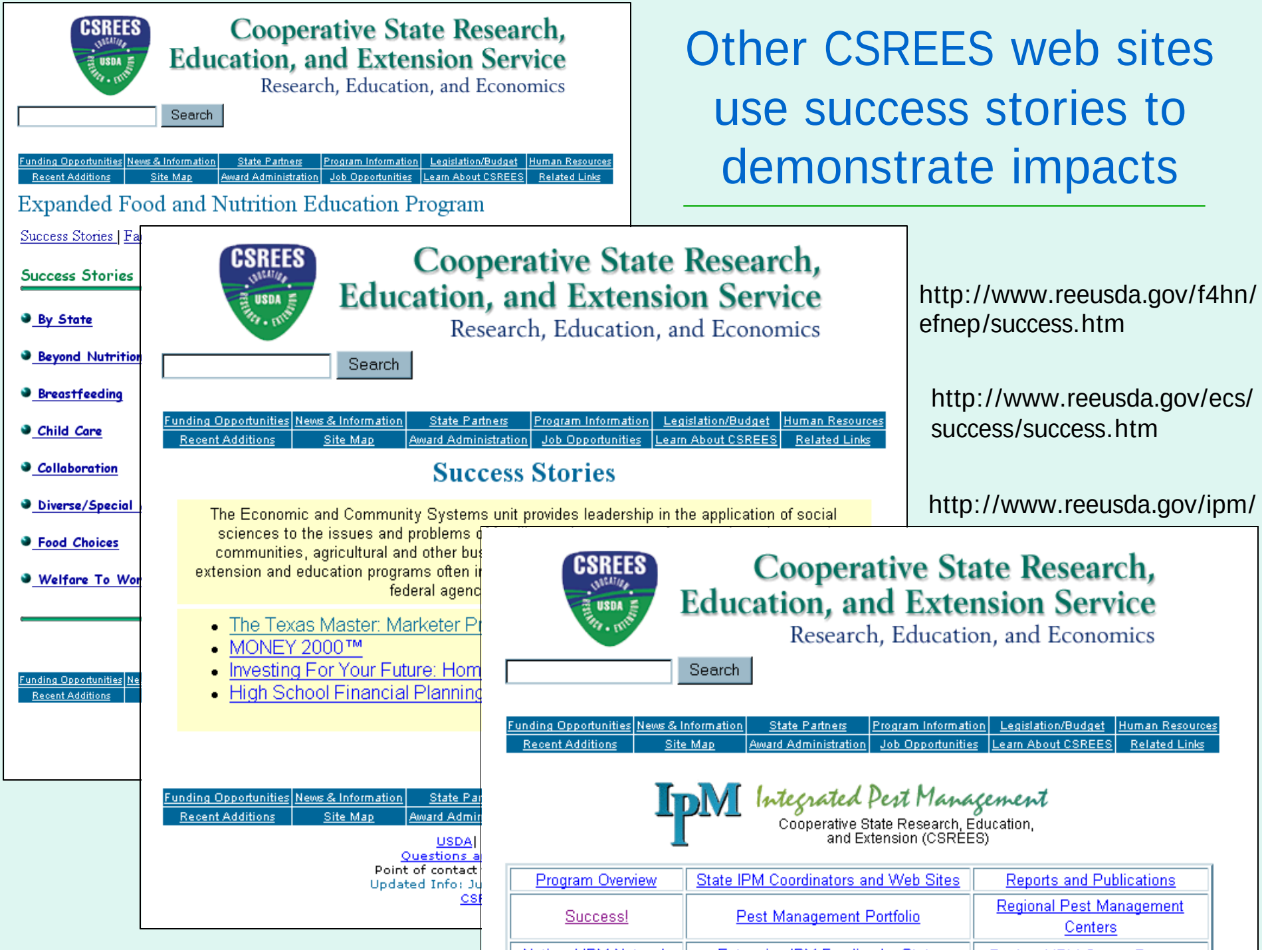


http://rwqp.rutgers.edu/



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

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

About this 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

Home

Previous Page

search this website: Go!

Research
Education
Extension

NATIONAL THEME: DRINKING WATER AND HUMAN HEALTH

- 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.

Contacts | Event Calendar | Feedback | Reporting | Site Map

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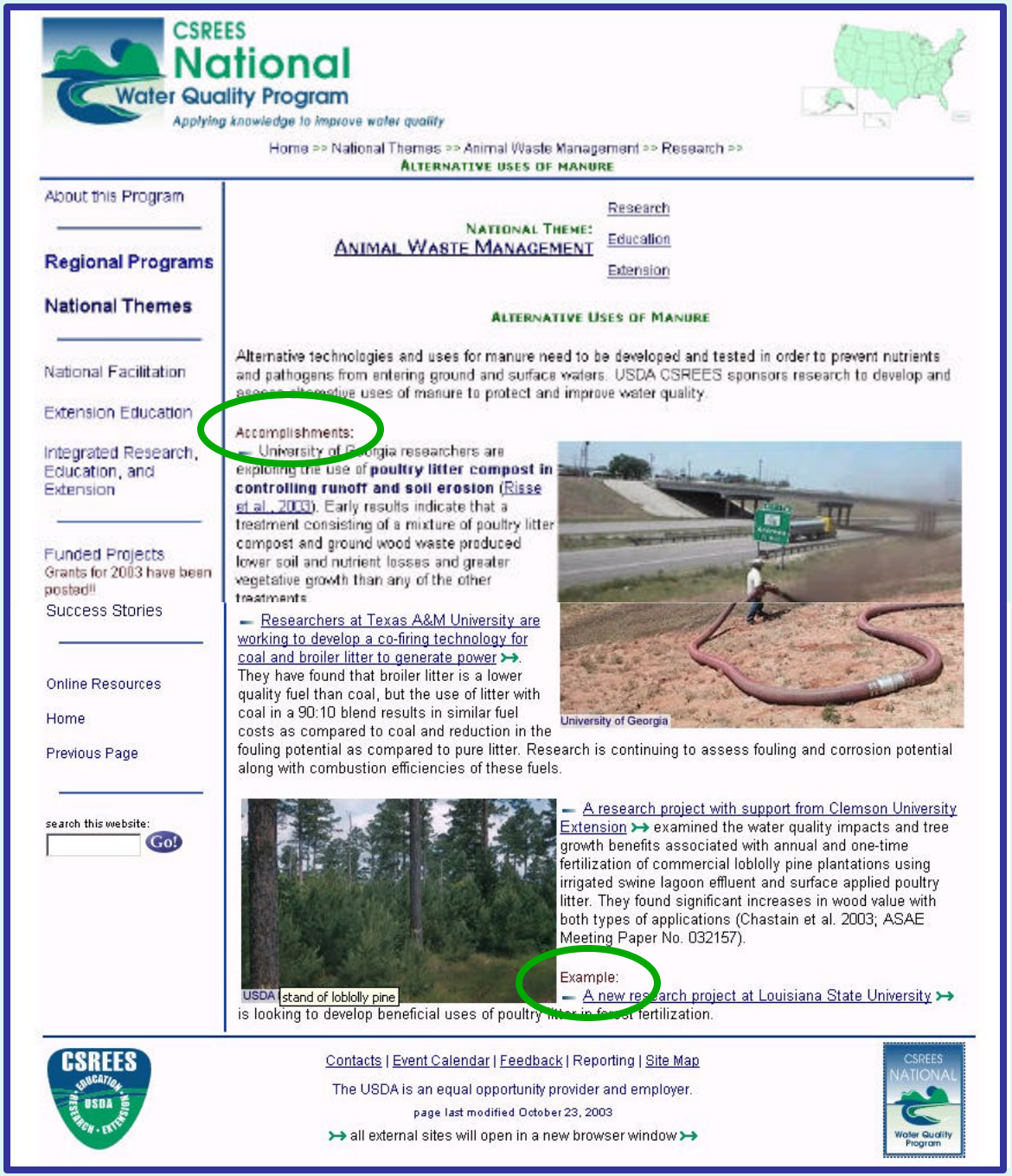
page last modified January 5, 2004

all external sites will open in a new browser window

Draw attention to impacts

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

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



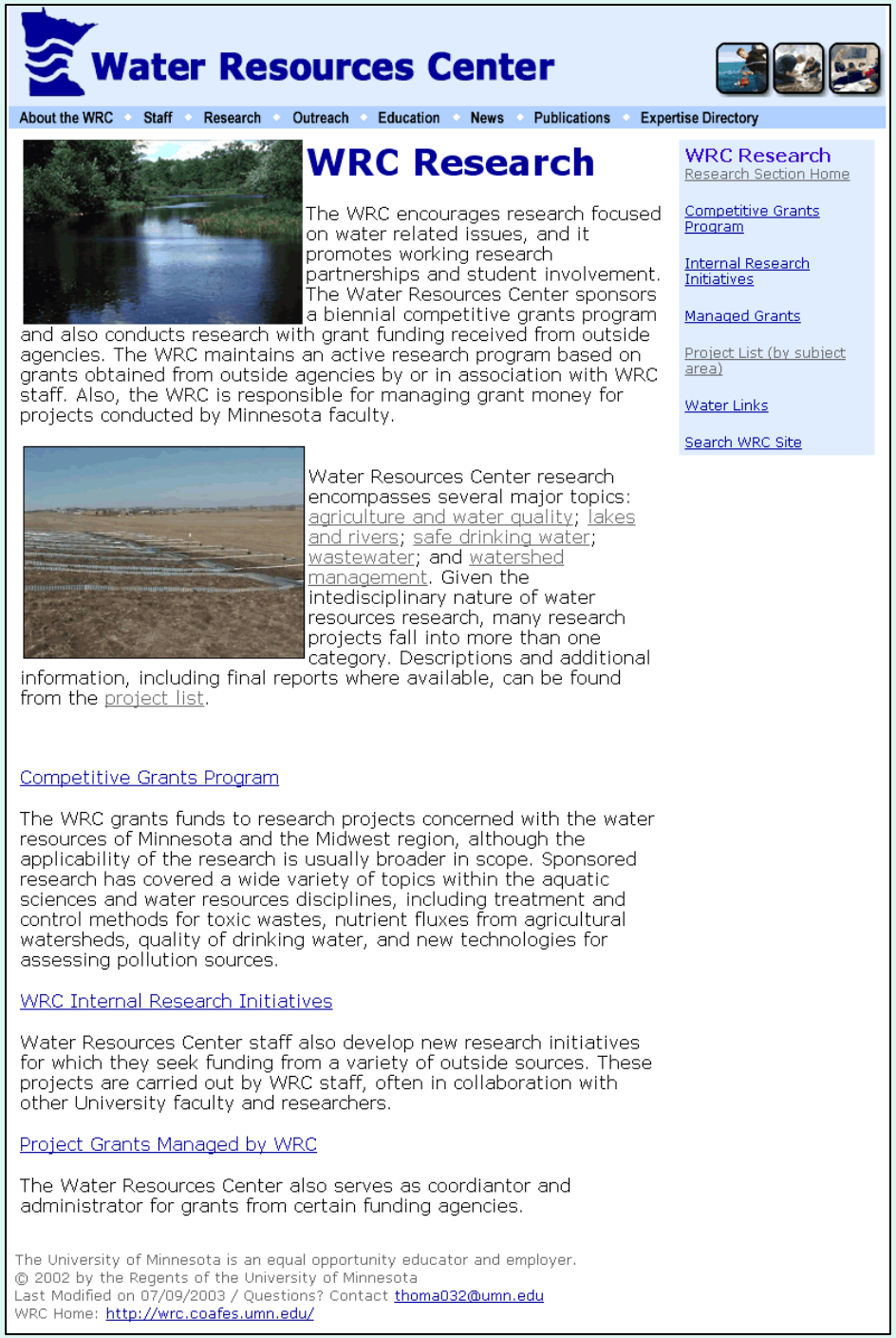
Where to start gathering content

- 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/



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 intedisciplinary 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.

WRC Research
Research Section Home
Competitive Grants Program
Internal Research Initiatives
Managed Grants
Project List (by subject area)
Water Links
Search WRC Site

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

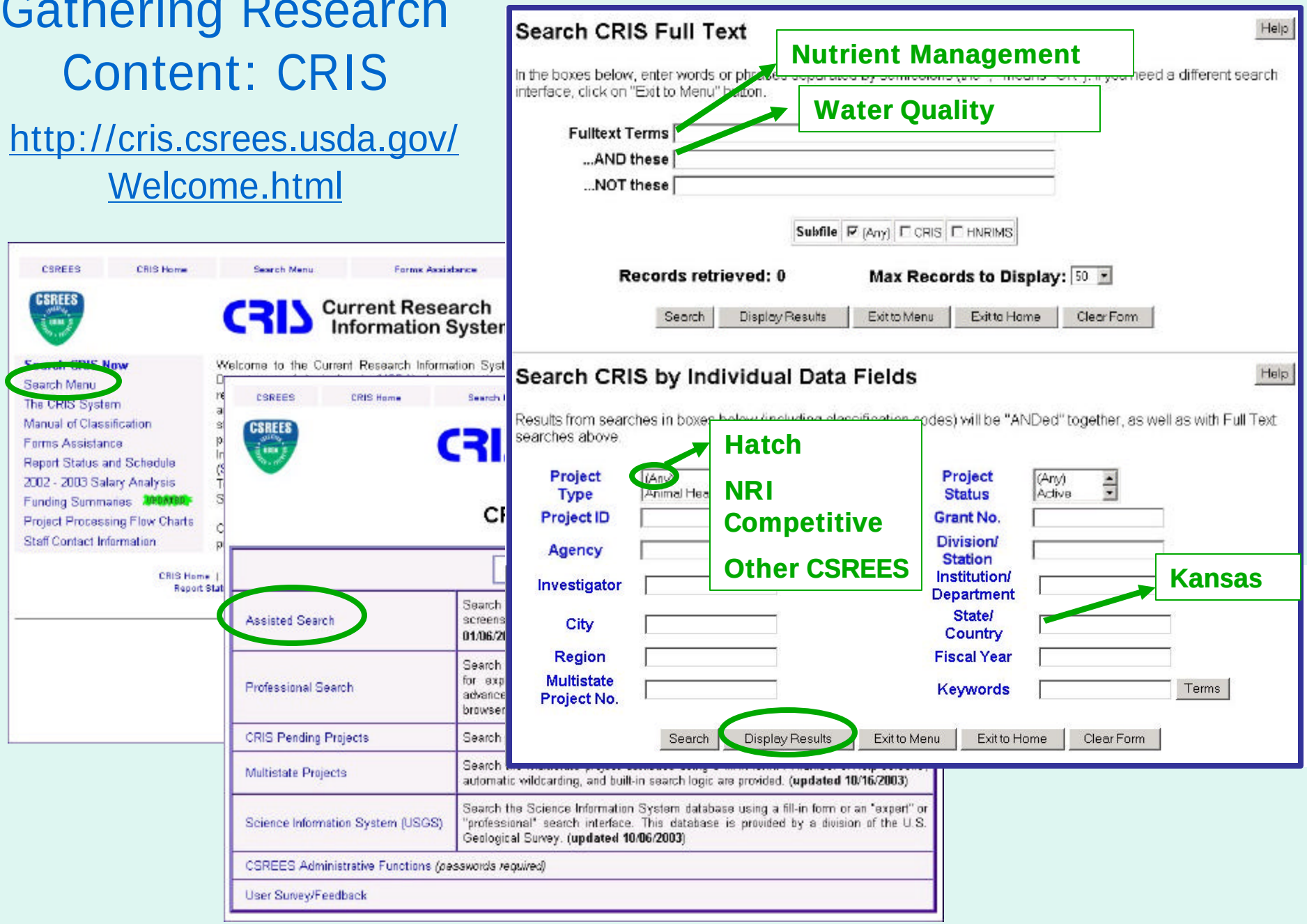
The Water Resources Center also serves as coordiantor and administrator for grants from certain funding agencies.

Gathering Research Content

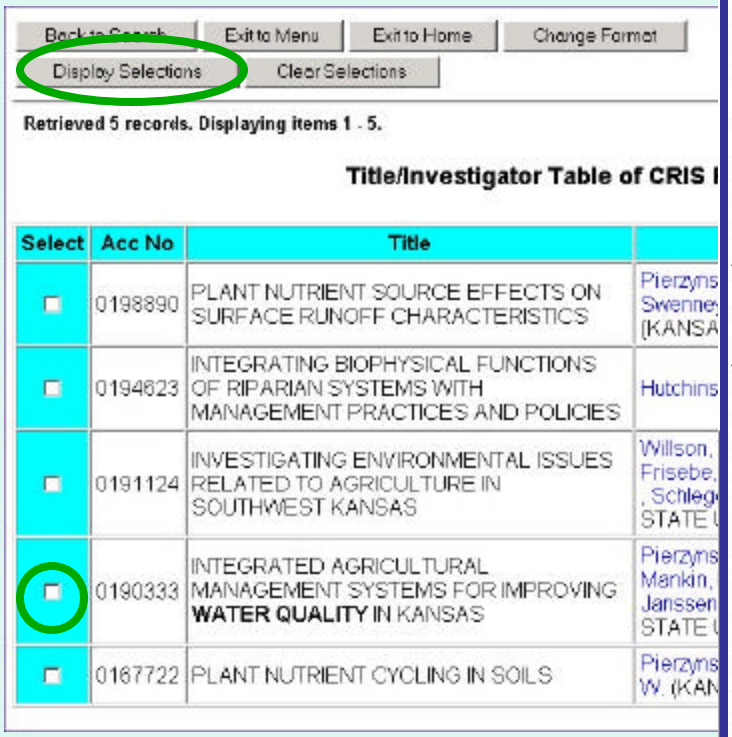
- CSREES WQ Conference abstracts-posters-presentations available through http://www.usawaterquality.org
- 406 Integrated Research, Education, and Extension Grants http://www.usawaterquality.org/projects/
- CSREES Current Research Information System (CRIS): search USDA funded projects database
- NRI Water 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



Gathering Research Content: CRIS



ACCESSION NO: 0190333 **SUBFILE:** CRIS
PROJ NO: KS996[illegible] **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

New England on the National Scale

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Home >> Focus Areas >> Volunteer Water Quality Monitoring >> Research >>

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)

About | Calendar | Contacts | Feedback | Links | Reporting | Search | Site Map
CSREES National Water Quality Program
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Partners in this Regional Program are also equal opportunity providers and employers.
page last modified on June 24, 2003

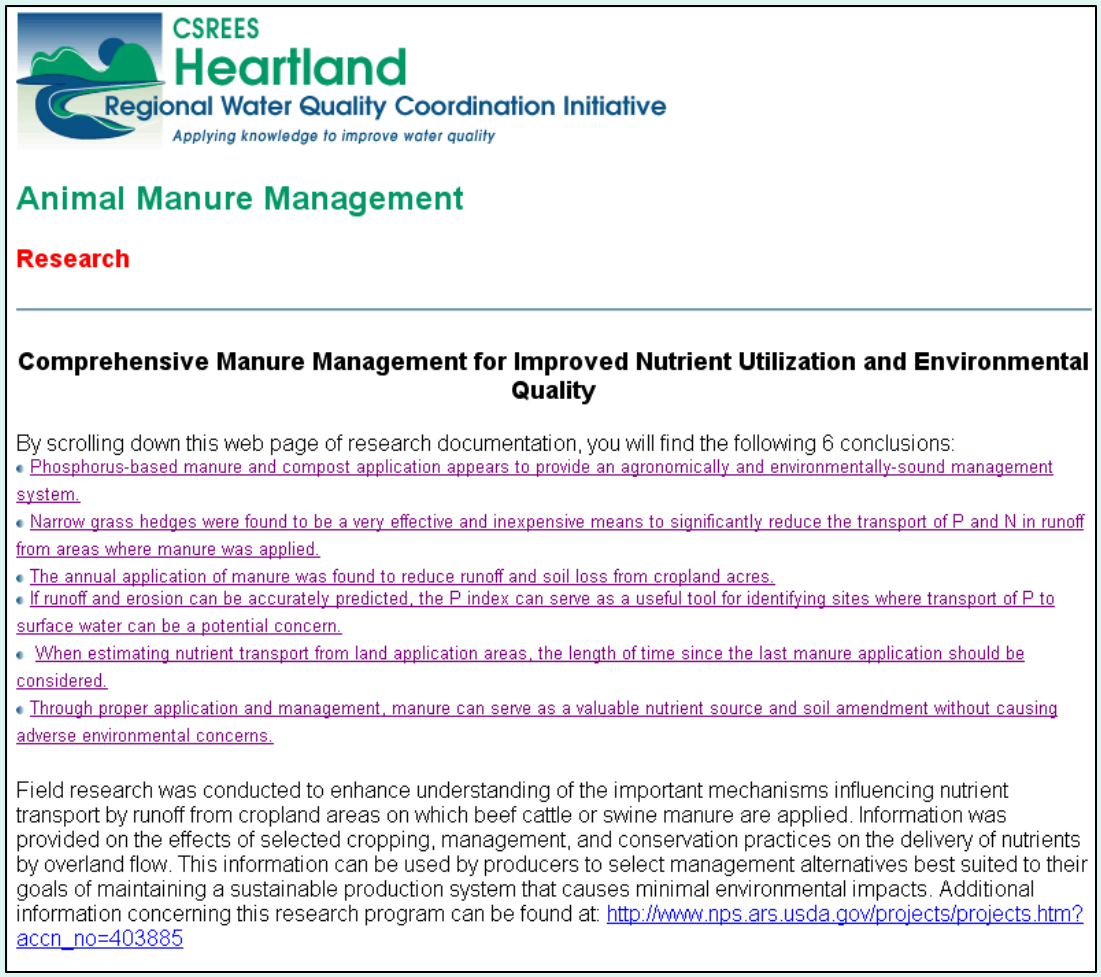
http://www.usawaterquality.org/newengland/focus_areas/volunteer/research/coastal.html

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



CSREES Heartland Regional Water Quality Coordination Initiative

Applying knowledge to improve water quality

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

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

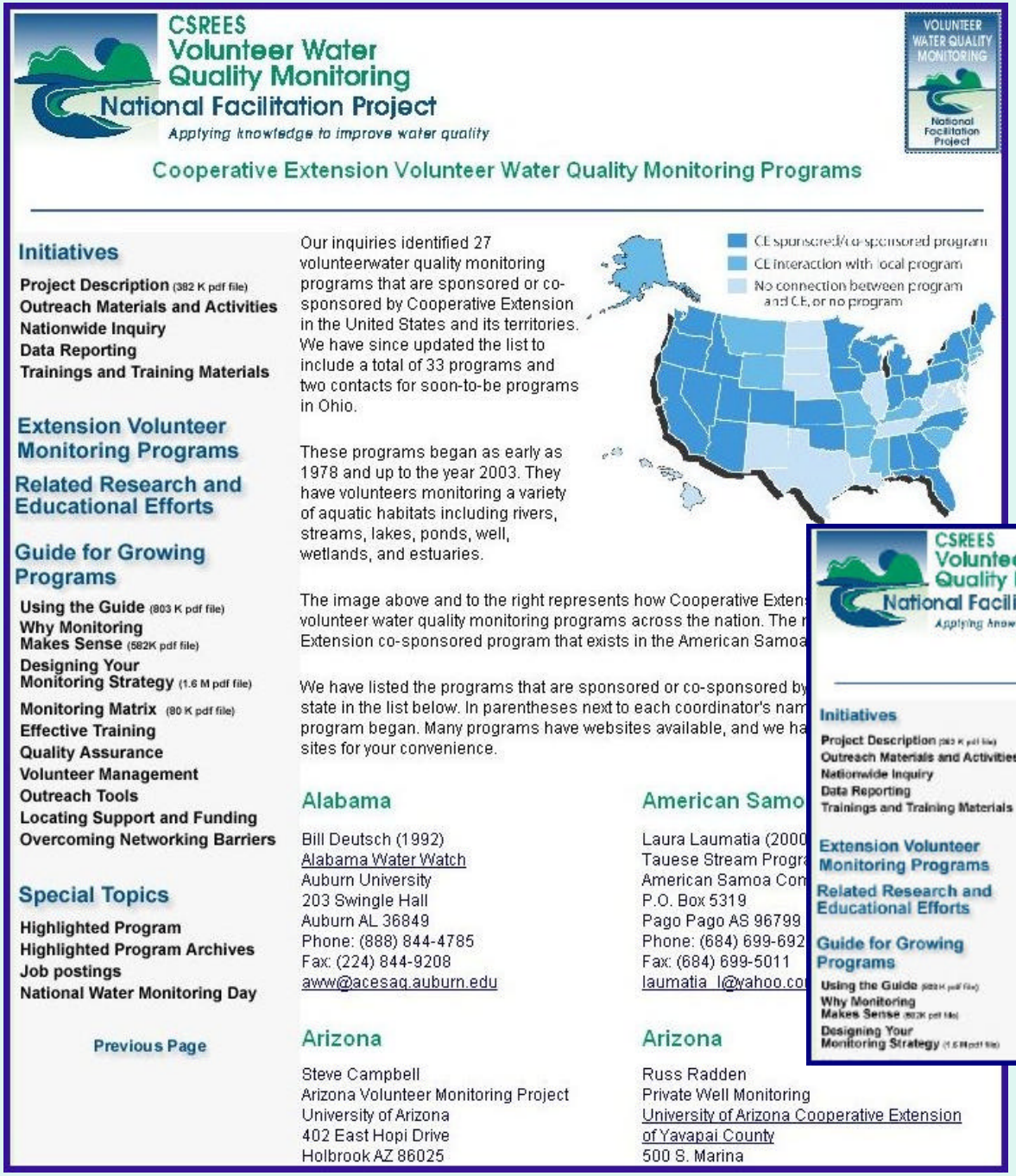
Pollution Assessment & Prevention Theme Team

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	Cryptospridium 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

http://www1.uwex.edu/ces/farmasyst/library/viewlibrary.cfm

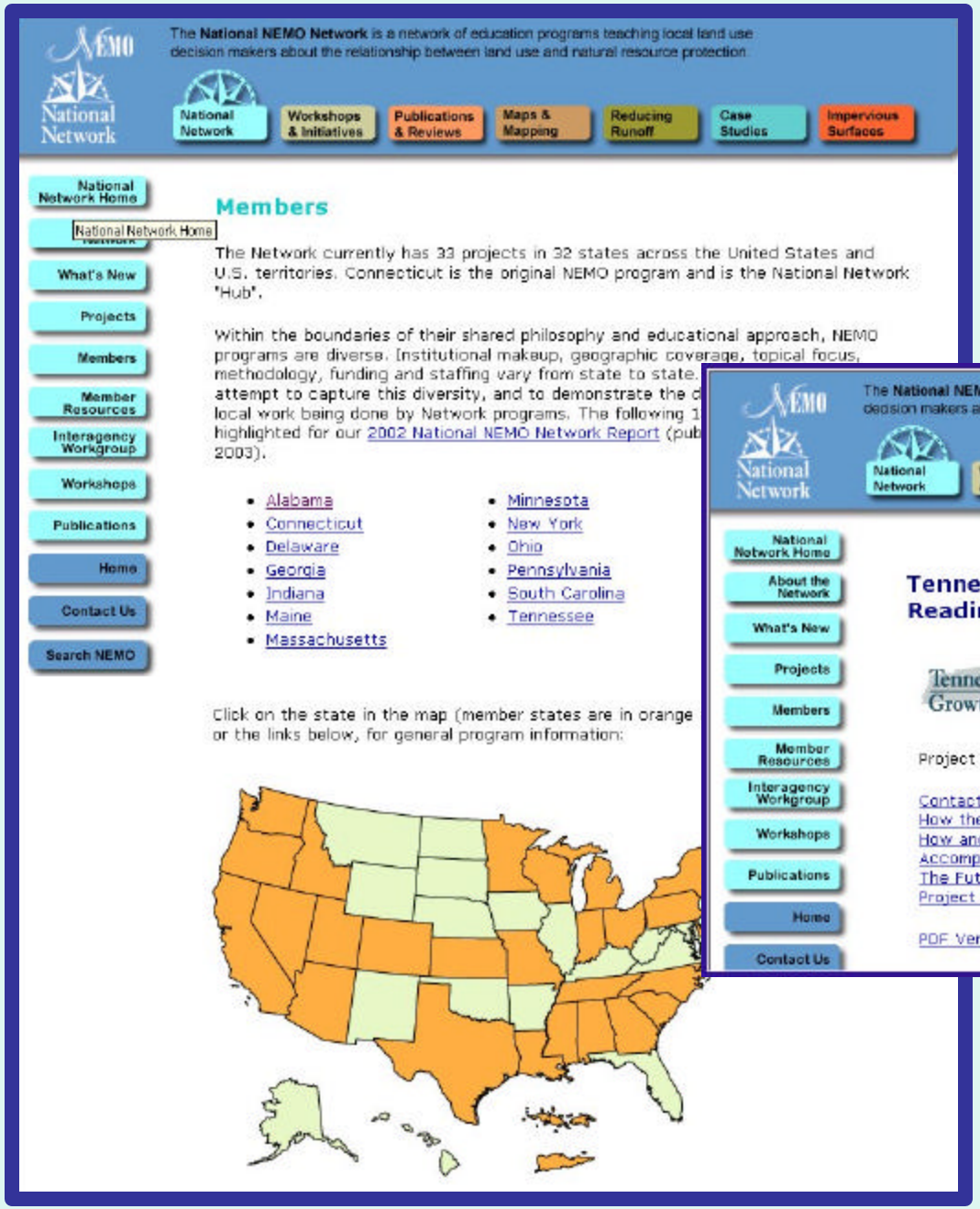
Volunteer Monitoring National Facilitation Project



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

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

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?