

Making a Difference with CSREES Water Programs

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Where have we been?

- 2005 Office of Management and Budget (OMB) Portfolio Review
- 5 Year Analysis, Data Collected from FY1999 - FY2003 CSREES projects



Funding Sources for Water Programs

(Cons/Effic. KA 111 & Watershed Prot/Man. KA 112)

CSREES Funding Source (FY 1999 – 2003)	(\$ 000)
Other CSREES (Inc. NIWQP)	40,996
Hatch	16,452
NRI Grants	15,409
Special Grants	10,593
McIntire-Stennis	4,228
Evans Allen	1,527
SBIR Grants	1,210
Total	90,415



Knowledge Area (KA) Coding (1999-2003 expenditures)

Knowledge Area		CSREES (Mil \$)	NRI (Mil \$)
111	Conservation and Efficient Use of Water	25	2
112	Watershed Protection and Management	65	13
405	Drainage and Irrigation systems	5	1

Knowledge Area (KA) Coding (1999-2003 expenditures)

Knowledge Area		CSREES (Mil \$)	Number of projects
133	Pollution Prevention (soil, water and air remediation of nutrients, pesticides, metals, salts, toxics)	85	3500
102	Soil, plant, water, nutrients	85	2300

Where are we going?

- 2006 Gap analysis—fewer than 100 studies on emerging pathogens, antibiotics, hormones
- Fewer than 20 studies on social and economic barriers to long term water conservation and availability

Stakeholder Input 2005:

- Other federal agencies: OSTP/CENR, USGS, ARS, EPA, NRCS, FS, NOAA, FWS, NRC, NAS, NSF
- Professional societies: AWWA, WEF, SWCS, AWRA, AGU
- Advisory Boards: NAREEEEB, ESCOP, ECOP, ACOP, USDA drought task force
- Nongovernment: Nature Conservancy, Environmental Defense, Groundwater Foundation
- State DEQ/DNR
- Career data: FAEIS (Food and Agriculture Education Information System)

Meeting USDA Goals

- enhance international exports
- enhance domestic economic opportunities for producers
- support rural development and quality of life
- protect food safety
- support nutrition and human health
- protect natural resources and the environment

NRI Water and Watersheds

The long-term (10-year) program goals:

- ✓ reduce pathogens, such as bacteria, viruses, and protozoa in waters derived from agricultural and rural watersheds,
- ✓ maintain adequate water supplies for agricultural crop and livestock production and rural use.

Documenting Outcomes - NRI projects that pack a punch:

- Three projects responded to the recent *E. Coli* scare and have worked together to solve water quality problems with pathogens
- One project in Idaho worked to conserve water in the West

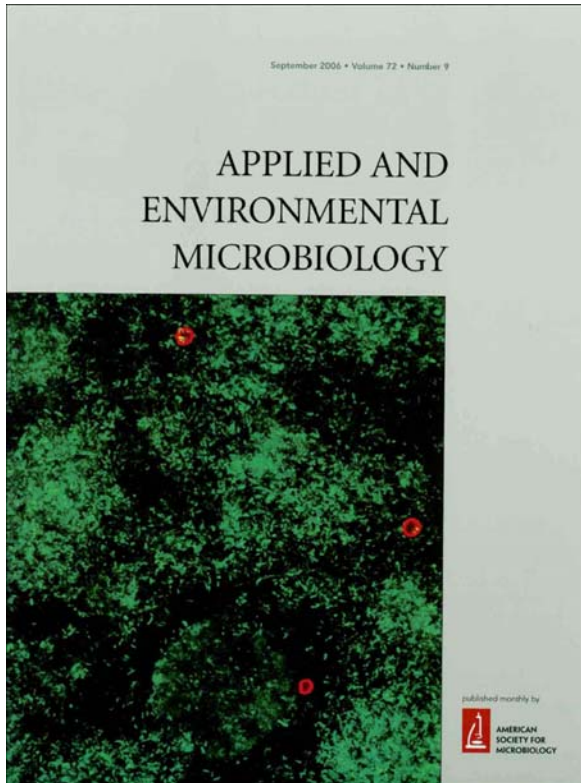
Atwill, Harter and Packman (U.C. Davis, Northwestern Univ.)

- Ready response to 2006 E.coli 0157:H7 spinach and 2006 Taco Bell lettuce outbreaks
- 3 people died, hundreds were sick, many suffered kidney failure disease
- Exports sales were lost, domestic spinach and lettuce sales were lost
- Livestock farms faced possible lawsuits.

Project Impacts:

- Recommendations developed for California Dept. of Health Services for spinach production
- Lessons used in Livestock and Poultry Environmental webcasts for E-Extension
- Cover article featured on 2007 *Applied and Environmental Microbiology*
- Graduate and post doc students were trained for future workforce
- Future outbreaks may be avoided or minimized
- TMDL and irrigation water standards can be developed
- Continuing workshops on water and food safety

Cover Story: Major Publication Featuring NRI-Funded Research!



Tim Link - Univ of Idaho: Forest Clearcuts to Extend Water Supplies in the Arid West



Project Impacts:

- Modified forest clearcuts can increase annual watershed flows by 20-30%
- water flows can be sustained at colder temperatures for longer periods of time
- salmon habitat is protected
- urban water needs can be met
- watershed curricula was developed for live, online, and graduate courses

Project Impacts - continued

- continuing education for natural resource professionals
- government, industry and scientific tours
- popular press and public radio features
- collaborative grants with NSF
- forested rural communities can diversify economy with ecosystem services
- publications in Forest Science and Hydrological Processes

What's Next?

- Next OMB reporting cycle will be 2004-2009
- Please help us report strong water quality and quantity impacts!