Partnering with Extension for Volunteer Water Quality Monitoring

Elizabeth Herron[1], Kelly Addy[1], Linda Green[1], Kristine Stepenuck[2], Art Gold[1], and Robin Shepard[2]

[1] University of Rhode Island
[2] University of Wisconsin

Americans Volunteer: A Great National Habit*

- 44% of Americans (age 21+) volunteered in 2000
- Total of 15.5 billion hours
- Average volunteer commits 3.6 hrs/wk
- $239 billion in value (2001)
  ($15.40 hourly rate)
- Water quality programs are wise to tap into this resource
- *www.IndependentSector.org

www.usawaterquality.org/volunteer

Why work with volunteers in water quality monitoring?

- Source of credible data
- More comprehensive data
  - Greater monitoring frequency
  - Larger # of sites monitored
- Local knowledge
- Enhances local stewardship
- Gain support for your efforts
- Cost effective (<u>not</u> cost free)

www.usawaterquality.org/volunteer

Main Uses of Volunteer Data

- Water Quality or Watershed Education
- Problem Identification
- Local Decision-making

(*The Volunteer Monitor*, US EPA, Spring 1994)

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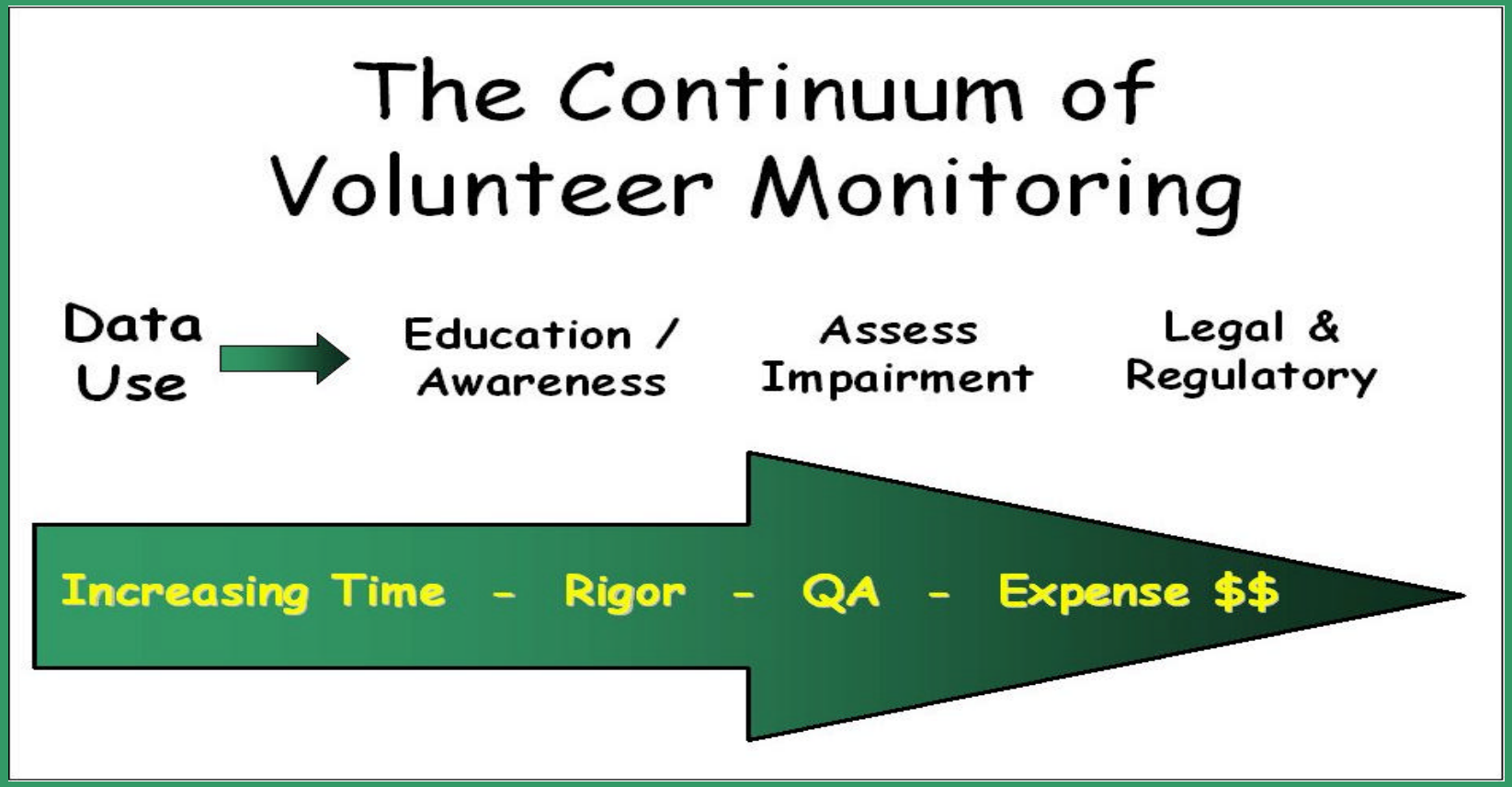
Program Design Elements

- Good design critical for success
- Must define goals and data uses



Geoff Dates, River Network

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Program Management Components

- Training & QA development
- Technical and logistical support
- Data management, interpretation & reporting
- Budget management
- Staff & volunteer management
- Maintain relationships with partners, sponsors, & data users

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What is Cooperative Extension?

- Extension = community-based educators
- Mission: to bring science to the people, conduct educational outreach, and encourage "better practices"
- Land Grant University System - USDA
  - at least one in every U.S. state & territory
  - Water quality branch
- Large audience – volunteer monitoring can easily grow here

USDA CSREES
National Facilitation Grant Goals

- Build a comprehensive support system for Extension volunteer water quality monitoring efforts in the U.S.
- Expand & strengthen the capacity of existing Extension volunteer monitoring programs
- Support development of new groups

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

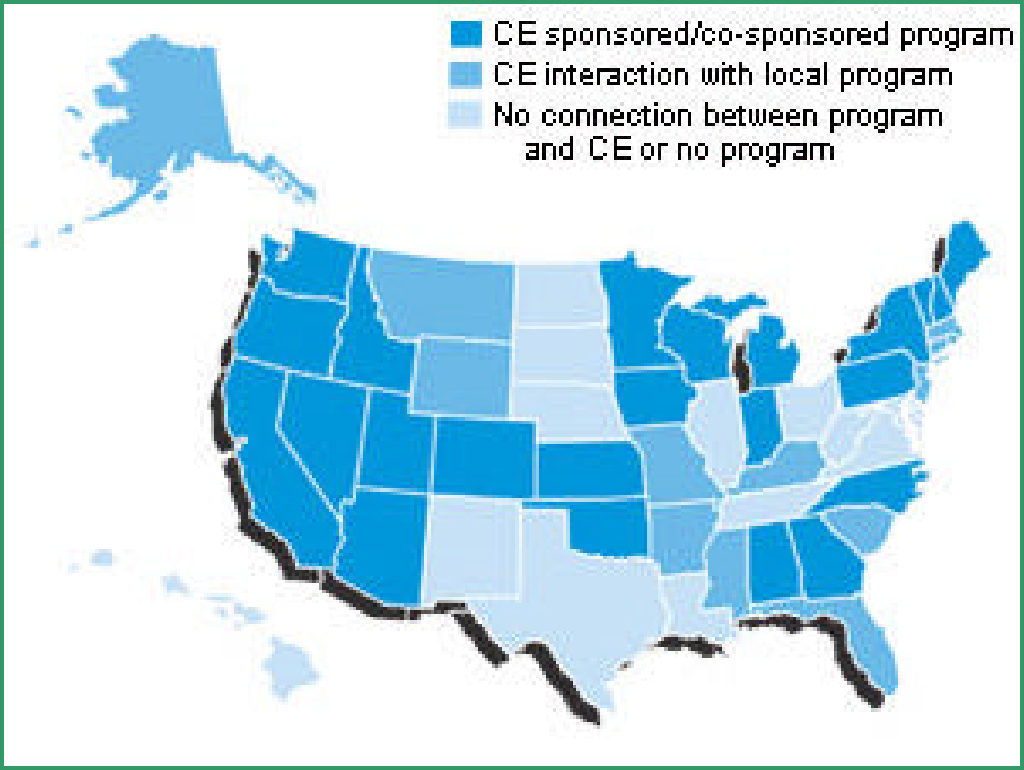
www.usawaterquality.org/volunteer

USDA CSREES
National Facilitation Grant Objectives

- Identify current Extension volunteer monitoring programs
- Develop multi-media training materials
- Offer training programs
- Develop & establish internet and web-based tools
- Increase collaboration & cooperation - within and outside of CSREES

Current Extension Programs

- Total of 38 programs associated with Extension identified
- Began as early as 1978 and as recently as 2002
- Monitor variety of habitats, including rivers, streams, lakes, ponds, wells, wetlands, & estuaries
- Inquiry results



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Multi-media training materials

- "Guide to Growing" Extension Programs
  - Based on case studies of model programs
  - Modular format to ensure timeliness
  - Available in hardcopy and electronic formats
    - Why volunteer water quality monitoring makes sense *
    - Designing your monitoring strategy *
    - Effective training techniques*
    - Quality assurance issues
    - Volunteer management and support tools
    - Outreach tools
    - Finding support and funding for local efforts
    - Successful approaches to local data sharing and networking

* www.usawaterquality.org/volunteer

Offer training programs

- Based on “Guide to Growing”
- Conduct training sessions offered through CSREES regional conferences and other venues
  - Pacific Northwest (EPA region 10)
  - Southern (EPA regions 4 & 6)
  - Arizona (EPA region 9)

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Develop & establish internet and web-based tools

- Developed online database that is being tested with the Water Action Volunteers (WAV) Program in WI
- Soon to be released fact sheet on database development and ongoing management

www.usawaterquality.org/volunteer

Quality Monitoring National Facilitation Project homepage - Netscape

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Applying knowledge to improve water quality

CSREES NATIONAL Water Quality Program

This Volunteeer Water Quality Monitoring National Facilitation Project is designed to build a comprehensive support system for Extension volunteer water quality monitoring efforts across the country. The goal is to expand and strengthen the capacity of existing Extension volunteer monitoring programs and support development of new groups.

Initiatives

Outreach Materials and Activities

Nationwide Inquiry

Data Reporting

Extension Volunteer Monitoring Programs

Related Research and Educational Efforts

National Facilitation Projects

NEMO

Best Education Practices

Pollution Assessment and Prevention

All outreach materials to date, Including fact sheets, posters, and presentations

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NEW!

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nd Funding

rking Barriers

Special Topics

Highlighted Program

Highlighted Program Archives

Job postings

National Water Monitoring Day

Upcoming Events

Galaxy II - National Extension Conf.

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and strengthen the capacity of existing l levelopment of

Results of Inquiry to Current Extension Programs on:

- **Program Beginnings**
- **Training Techniques**
- **QA Measures**
- **Volunteer Support Tools**
- **Outreach Tools**
- **Program Funding**

Initiatives

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

Extension Volunteer Monitoring Programs

Related Research and Educational Efforts

National Facilitation Projects

NEMO
Best Education Practices
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CSREES NATIONAL Water Quality Program

Guide for Growing Programs:

.pdf files of Guide modules ranging from designing your monitoring strategy for programs just starting out, to funding and overcoming networking barriers for more established programs

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monitoring programs and support development of
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Best Education Practices
Pollution Assessment and Prevention

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) NEW!
Effective Training
Quality Assurance
Volunteer Management
Outreach Tools
Locating Support and Funding
Overcoming Networking Barriers

Special Topics

Highlighted Program
Highlighted Program Archives
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CSREES NATIONAL Water Quality Program

Link back to the USDA CSREES National Water Quality Program web site

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National Water Quality Program
Applying knowledge to improve water quality

– Research, Education & Extension –

Contacts • Event Calendar • Feedback • Reporting • Site Map

About this Program

Regional Programs

National Themes

National Facilitation

Extension Education

Integrated Research, Education, and Extension

Funded Projects

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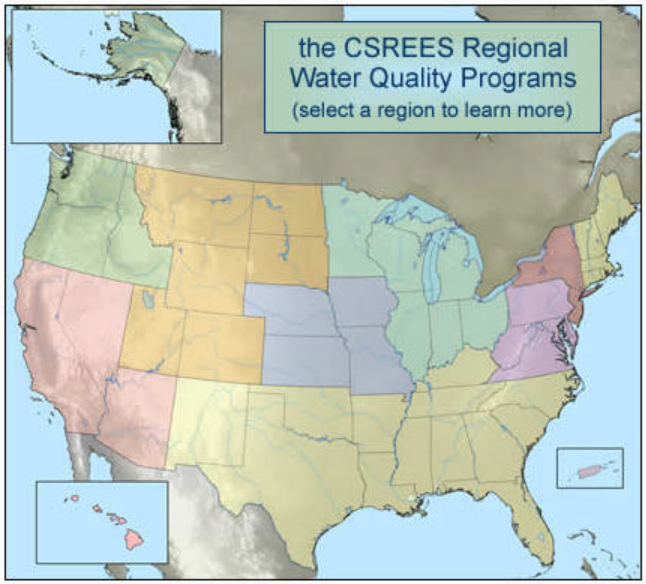
January 11 - 15, 2004
USDA-CSREES National Water Quality Conference:
Integrating Research, Extension and Education
Clearwater, Florida



Upcoming Events

October 19 - 23:
Southern Region Extension Water Quality Conference
Venue: Ruidoso, NM

November 2 - 4:
Water Environment Federation; Animal Residuals Conference
Venue: Arlington, VA

November 4 - 8:
North American Lake Management Society (NALMS) Annual Conference
Venue: Mashantucket, CT

January 11 - 15:
USDA-CSREES National Water Quality Conference: Integrating Research, Extension and Education
Venue: Clearwater, FL

more events are listed in the event calendar...

Proceedings of the 2003 National Water Quality Coordinators' Conference

A cooperative program consisting of the USDA Cooperative State Research, Education, and Extension Service
and
the Land Grant Colleges and Universities.

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NATIONAL CONTACTS

Click on map to obtain contact information of State and Regional Water Quality Coordinators:

These may be your initial contacts for determining local Extension interest in volunteer water quality monitoring

Michael P. O'Neill, Ph.D.
USDA-CSREES
Mail Stop 2210
1400 Independence Avenue, SW
Washington, D.C. 20250-2210

Phone: 202-205-5952
Fax: 202-401-1706
Email: moneill@csrees.usda.gov

Use this map to locate regional contact information:

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CSREES Volunteer Water Quality Monitoring National Facilitation Project

December 2002
Factsheet II

USDA EDUCATION RESEARCH EXTENSION CSREES

Why Volunteer Water Quality Monitoring Makes Sense

University of Rhode Island University of Wisconsin

Kelly Addy, Linda Green, Elizabeth Herron, and Kris Stepenuck

Engages Citizens in Watershed Protection and Enhancement

Assessments of existing volunteer monitoring efforts within CSREES[1] suggest that volunteer water quality monitoring programs provide a unique opportunity to engage citizens in watershed protection and enhancement efforts. These programs have a unique capacity to:

- Address CSREES themes
- Help communities make informed decisions and improve water quality
- Capture the excitement and

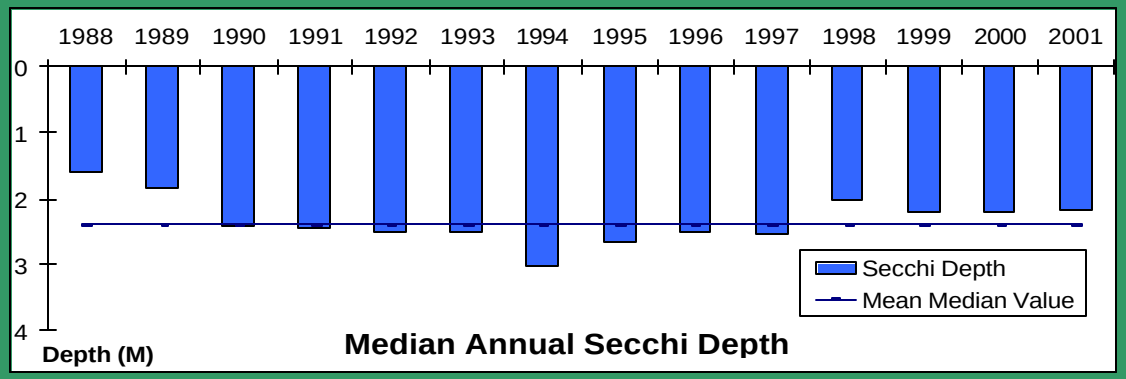
Addresses CSREES Themes

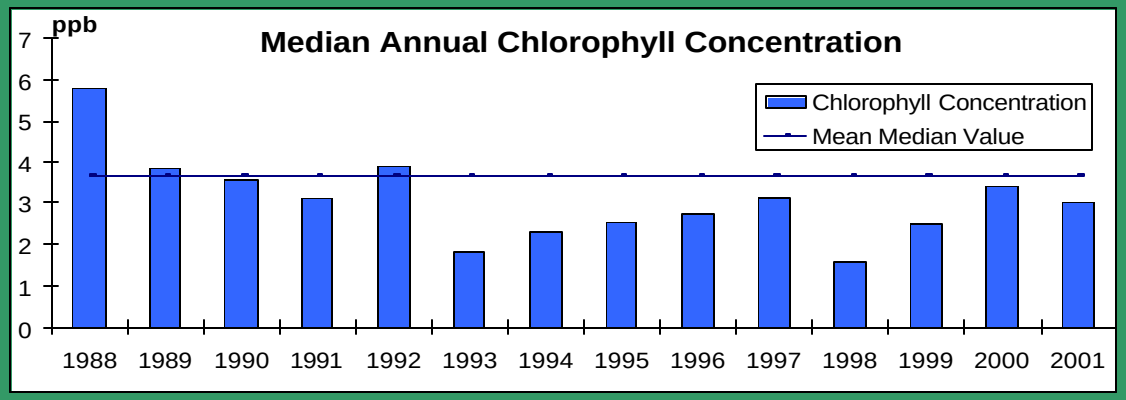
The Cooperative State Research, Education, and Extension Service (CS

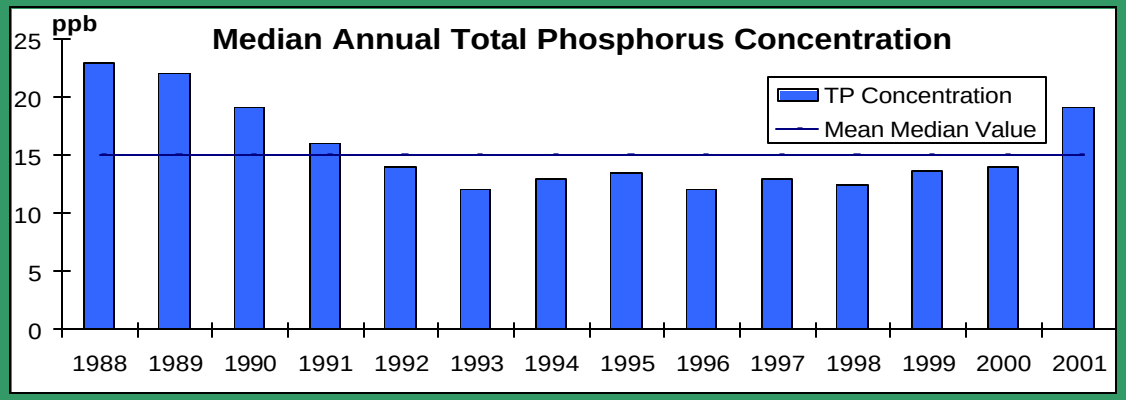
Some National Facilitation Grant materials may be helpful when approaching Extension or other agencies for assistance

Local Water Quality Trends

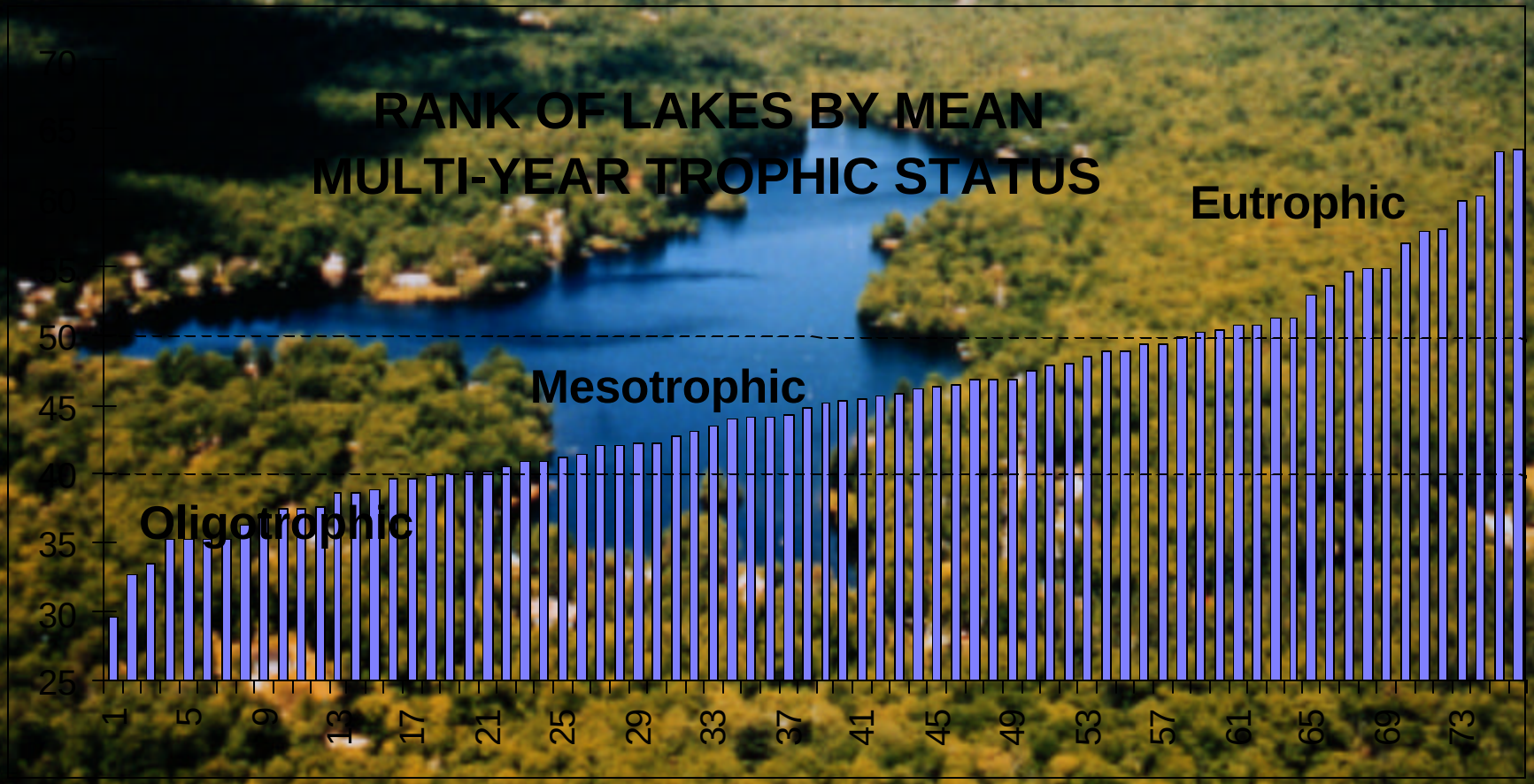
URIWW Locations with 3 or more years of data only





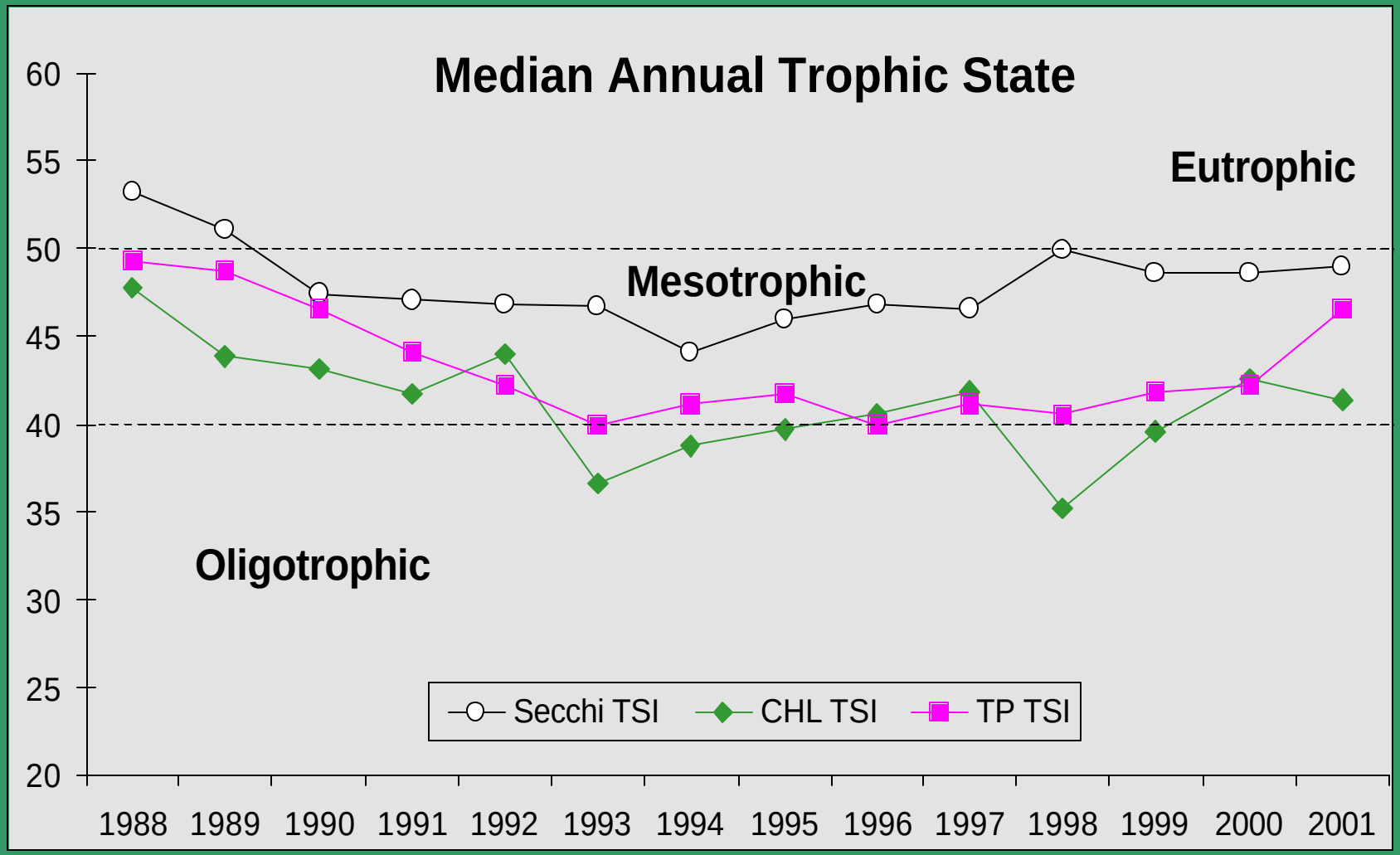


Distribution of Lakes by TSI

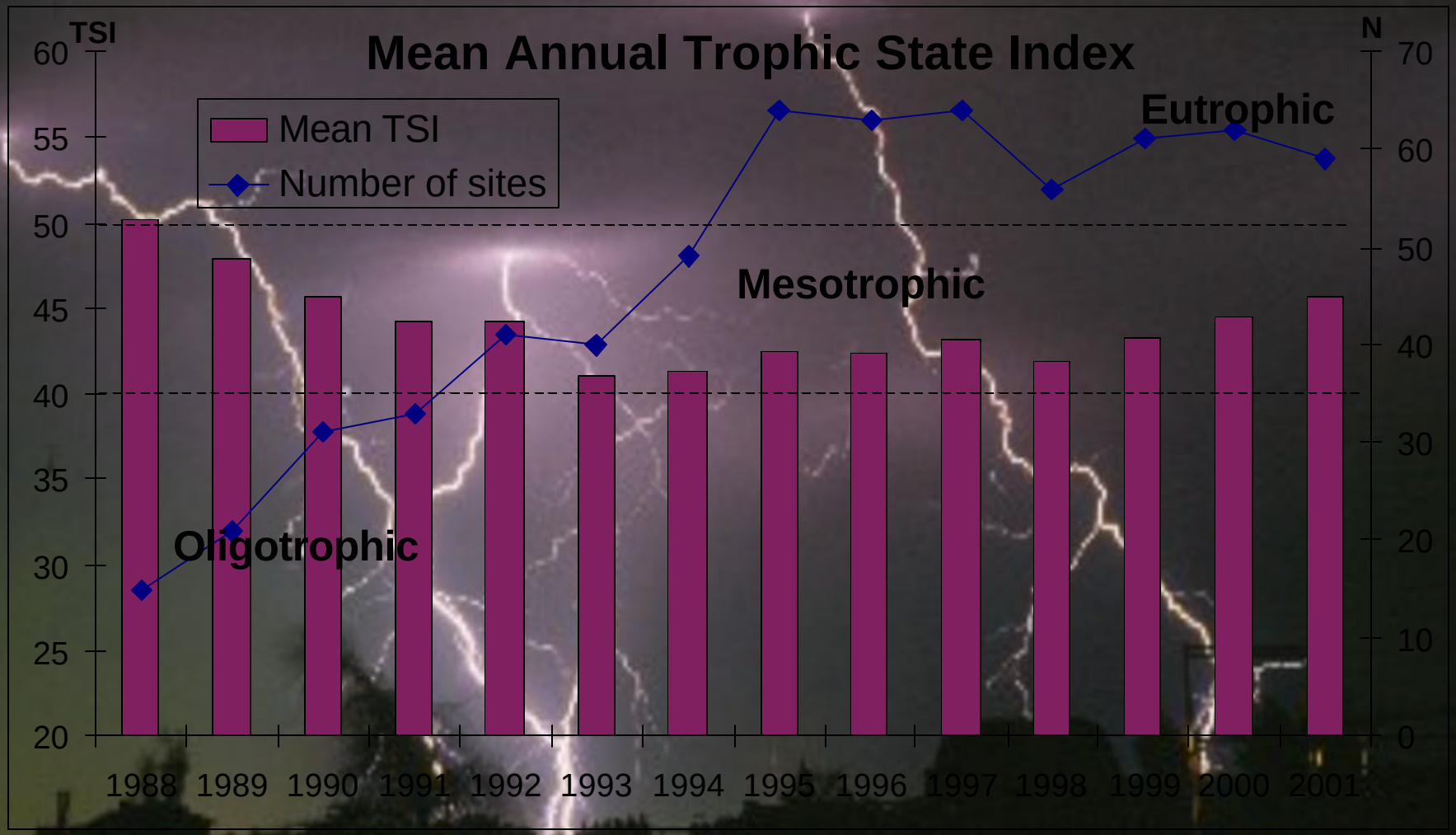


URIWW Locations with 3 or more years of data only

Trophic State Comparison



Overall WQ Trends



URIWW Locations with 3 or more years of data

By linking with Extension, Volunteer Water Quality Monitoring Programs:

- Gain valuable water quality data
- Educate the public on water quality or watershed issues
- Encourage citizens to adopt “lake-friendly” behaviors
- Bring university science to the community and the community to the university

Thank you for your attention

Please contact us to learn more:

Kelly Addy, **kaddy@uri.edu**

Linda Green, **lgreen@uri.edu**

Elizabeth Herron, **emh@uri.edu**

Kris Stepenuck, **kris.stepenuck@ces.uwex.edu**

Please visit our website:

www.usawaterquality.org/volunteer