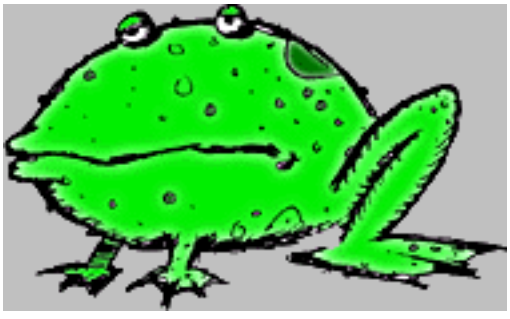
Ready, Set, Present!

a data presentation manual for volunteer water quality monitoring groups

written by
Jerry Schoen
Marie-Françoise Walk
and
Michele L. Tremblay



Massachusetts Water Watch Partnership
University of Massachusetts
Amherst, Massachusetts

Acknowledgments

This manual has been several years in the making. We are grateful to all those who supported us with funding, creativity, and collaboration over the years as we have researched the topic, borrowed examples and ideas from others doing data presentation, conducted workshops, and written shorter articles on the topic in various publications.

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To obtain a copy of this manual, contact:
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www.umass.edu/tei/mwwp

It's showtime!

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December 1999

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Table of Contents

Data Presentation Examples

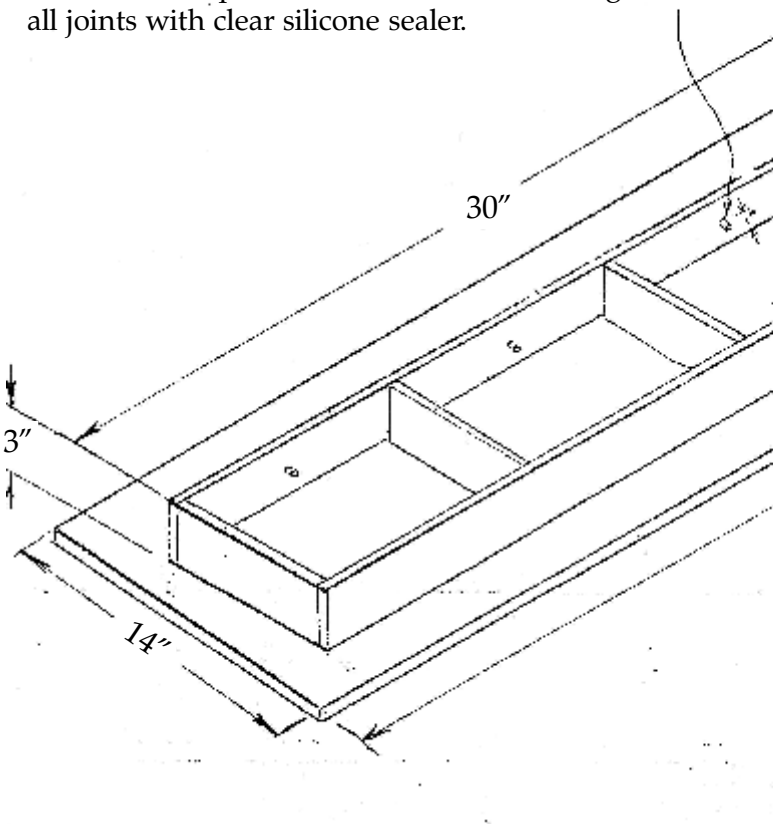
Keep in touch...

The data presentation examples shown in this manual are only a subset of many excellent outreach materials we have encountered in our research. We are always looking for new material. We plan to place outstanding examples in our upcoming Web Page version of the manual, and make them available in hard copy to those who request them. If you have ideas and examples you would like to share–or if you want to hear more about our ongoing research–by all means get in touch with us.

Appendix

Bugquarium Construction Plans

Drill hole for tubing and airstones 1″ up from base. Hole should equal outside diameter of tubing. Seal all joints with clear silicone sealer.



Material is 1/2″ thick clear acrylic plastic

Technical tips

Bugquarium

Here are some tips on how to prepare to use the bugquarium discussed in Chapter 5.

It typically takes 2 or 3 hours to collect the bugs–including travel time and assuming you are hitting 2 or 3 sites. Use your normal bug collecting equipment: nets, tweezers, and jars. Your collection strategy will vary depending on how you intend to display the critters. You may need to go to several sites if you are looking for representatives of clean and dirty water, headwaters and higher order streams, or ponds and rivers. Unless you know your sites well (including what bugs might be there that particular time of year) we highly recommend doing a trial collection a few days in advance, to ensure that you will be able to obtain a desired mix of bugs.

It's best to do it in the morning of the event, as the bugs may have trouble surviving the night if you get them the day before. If you must get them a day in advance, try to give them plenty of oxygen and keep them cold. You can place them in jar(s) in the refrigerator or in a large bowl with plenty of ice in the bowl. In either case, keep the lids off to allow for oxygen exchange. If you can, run tubes from an aerator into the jars to keep them oxygenated. Keep them in the water you collected them in. Chlorinated tap water will kill many of them. Finally, keep the dragonflies separate from the others, as they will eat their buddies. We can't vouch for the behavior of other predacious species, but we know of the dragonfly diet preference from past bugquarium experience!

How to produce a computer map as depicted in Example 8-11 (1996 prices)

Mixing media: These graphics have been presented with different "accessories:" photos of river uses and conditions and of pollution sources, charts of data values.
How produced: Watershed maps and hydrology data produced by MassGIS, using Arc Info software. CRWA used Corel Draw and ArcView software to combine data and maps into these graphics.
Materials used:

- CRWA purchased MassGIS data disk from State for $100 (contains many data layers).
- ArcInfo software (approximately $4000).
- Arc View 2.1 software (approximately $1000). As of printing, latest version is ArcView 3.2.
- Corel Draw (approximately $ 400).

Expertise required: A CRWA staff person with a background in computer cartography and experience in GIS and ArcInfo prepared these graphs. He attended a 2-day training seminar on ArcView, conducted by ESRI, the company that produces ArcView.
Helpful hints: Many universities, municipal or regional planning agencies have ArcInfo or similar GIS software. Ask them about access to their system. Some monitoring groups agree to sponsor a student intern to do GIS & mapping work for them. Colleges may be more willing to provide access to their computer system if you are working with a student, because of the educational opportunity you are providing.

References

Volunteer monitoring program development

Data to Information: A Guide for Coastal Water Quality Monitoring Groups In New Hampshire and Maine

Dates G. and Schloss J., 1998
University of Maine Cooperative Extension and ME/NH Sea Grant. 235 Jefferson Street, PO Box 309, Waldoboro, ME 04572. (207) 832-0343
Step-by-step information on data management, summary, interpretation, and reporting.

Program Organizing Guide

River Watch Network, 1995
River Watch Program of River Network, Vt office, 153 State Street, Montpelier, VT 05602 (802) 223-3840
A step-by-step guide for initiating and maintaining a community-based river monitoring program.

Speaking skills

The Audience, the Message, the Speaker

Hasling J., 1976
Book to prepare you for an oral presentation.

Giving Papers

Olsen Bruhns K., 1984
American Antiquity 49(1) pp. 154-161
A good article on giving oral presentation of scientific papers.

The Interpreter's Guidebook–Techniques for Programs and Presentations

Regnier K., M. Gross and R. Zimmerman, 1994
College of Natural Resources, Univ. of Wisconsin, Stevens Point, WI, 54481
Written for park interpreters, this handbook has good tips and information on giving a talk and preparing slide shows.

Persuasive Speaking: Making Effective Presentations

Esquire Video, 1985
A video that can be borrowed from a public library.

Principles of Speech Communication

Gronbeck B., K. German, D. Ehninger, and A. Monroe, 1992
Public speaking textbook.

ToastMasters International

(800) 444-1374
A club with chapters in most towns, "to provide a mutually supportive and positive learning environment in which every member has the opportunity to develop communication and leadership skills."

Writing guides

Creating Environmental Publications
Zehr J., M. Gross, and R. Zimmerman, 1994
College of Natural Resources, Univ. of Wisconsin, Stevens Point, WI, 54481
A guide to writing and designing for interpreters and environmental educators.

Making the Right Connections: a Guide for Nature Writers
Heinzman J., 1988
College of Natural Resources, Univ. of Wisconsin, Stevens Point, WI, 54481
The information is good for all writers.

New Guide to More Effective Writing
Gunning R., 1964
Old, but still relevant and full of good ideas about planning, organizing and writing clear and useful reports.

Water Quality Monitoring: Data to Action
Laughlin L. and H. Rosselli, 1994
Long Island Sound Task Force, 185 Magee Avenue, Stamford, CT 06902, (203) 327-9786
A handbook on how to write a scientific report, written specifically for water monitoring presentations and reports; includes examples of reports.

Graphics

Graphics Simplified
MacGregor A.J., 1979
How to plan and prepare effective charts, graphs, illustrations and other visual aids.

The Elements of Graphing Data
Cleveland W., 1985
A book on graphing methods.

Envisioning Information
Tufte E.R., 1990
Inspirational, no-nonsense approach to graphics.

An Inventory of the Ponds, Lakes, and Reservoirs of Massachusetts
Water Resources Research Center, 1972
Blaisdell House, UMass, Amherst MA 01003-0820

Making Effective Slides for Lectures and Teaching
Eastman Kodak Co. 1983
Kodak Publication No, M3-106. Rochester NY 14650
Good material for the do-it-yourself projects.

Data Management for Volunteer Monitors
Massachusetts Water Watch Partnership, 1997
Blaisdell House, UMass, Amherst MA 01003-0820 www.umass.edu/tei/mwwp
A how-to manual that includes instruction on developing graphics electronically.

Managing and Presenting Your Data
The Volunteer Monitor, Volume 7, No. 1, Spring 1995
1318 Masonic Ave, San Francisco CA 94117
This issue of the newsletter is dedicated to the topic of data management and presentation, and contains several good articles on graphics.

Media

Community Television: A Guide for Watershed Associations
Massachusetts Watershed Coalition, 1997
12 Mount Pleasant Avenue, Leominster MA 01453

How to Get on TV–A Guide for Non-profits
PHL17 Philadelphia 1995 5001 Wynnefield Ave Philadelphia PA 19131
A booklet on PSAs and how to get news coverage.

How to Tell and Sell your Story: A Guide to Media for Community Groups and Other Nonprofits
Center for Community Change 1997
202/807-6896 Washington DC

Media/Marketing Your Organization
http://www.rivernetwork.org/media.htm
A web site with valuable resources such as "telling your story to the media."

Public Relations and Communications for Natural Resource Managers
Fazio J. and D. Gilbert, 1981
Kendall/Hunt Pub. Co., Dubuque, Iowa
Identified ABCs of good exhibits.

Watershed Protection: Getting the Message Out
U.S.EPA OWOW, 1994
68-C3-0303 Tetra Tech, Inc. contract
A handbook with ready to use clip art, and chapters on creating brochures, posters, displays and working professional media.

What's News–Guide for Community Organizations
Daily Hampshire Gazette, 1988
Northampton, MA, 01601 (413) 584-5000
A guide to press releases, letters to the editor, and how to get information in that particular newspaper.

Exhibits

Arts Festival Work Kit
Pam Korza and Dian Magie, 1989
Arts Extension Service, Division of Continuing Education, UMASS/Amherst
413 545-2360 www.umass.edu/aes/catbooks.htm
Many examples and ideas documented in sample forms, checklists, and planning charts.

Signs, Trails, and Wayside Exhibits

Trapp S., M. Gross and R. Zimmerman, 1992 College of Natural Resources, Univ. of Wisconsin, Stevens Point, WI, 54481
An interpreter's handbook on sign making.

Miscelleanous

An Atlas of Massachusetts River Systems Environmental Designs for the Future

Bickford, W.E. and U.J. Dymon, editors, 1990
University of Massachusetts Press, Amherst, MA 01003
Includes background information on physical characteristics of Massachusetts watersheds.

Property Values and Lake Water Quality

Boyle, James and Bouchard, 1995
Presentation to "Enhancing the States' Lake Management Programs" conference, Chicago, sponsored by USEPA.

Watershed Clearinghouse

Massachusetts Water Watch Partnership, 1998
An MS-Access database of watershed-related outreach material available for watershed groups. Contact MassWWP for a copy of this run-time software (you don't need to have Ms-Access on your computer, but you must have a MS operating system): (413) 545-2842 or jschoen@tei.umass.edu.

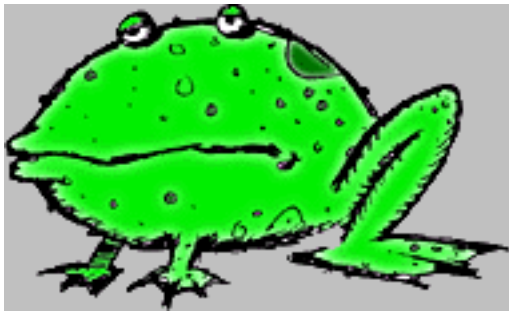
Useful contacts

Massachusetts GIS, Boston

(617) 727-5227
Julie.sweitzer@state.ma.us
www.magnet.state.ma.us/mgis/massgis.htm

Earth Science Information Office

(413) 545-0359
esic@tei.umass.edu
www.umass.edu/tei/esio
Good source for maps and aerial photos.



Show me the data!