

# **Ready, Set, Present!**

*a data presentation manual for  
volunteer water quality monitoring groups*

*written by*  
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Marie-Françoise Walk  
*and*  
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**Massachusetts Water Watch Partnership**  
University of Massachusetts  
Amherst, Massachusetts

# Acknowledgments

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[www.umass.edu/tei/mwwp](http://www.umass.edu/tei/mwwp)



It's showtime!

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# Table of Contents

- Chapter 1 Show time!**
- The world's a stage...
  - Planning goals
  - How to use this manual
  - Before you begin
  - Data to action process
- Chapter 2 Developing a Data Presentation Plan**
- Focus your message
  - A mixed message?
  - Opportunities
  - Targeting audiences
  - Make a list, check it twice
  - Show me the data!
  - The "IEP" package
  - Data strategy
  - Motivation strategies
  - Audience preferences
  - Don't keep it a secret
  - Timing is everything!
  - Plant a seed or close the sale?
- Chapter 3 Graphics and Other Visual Tools**
- When to use graphics
  - Maps
  - Charts
  - What makes a good graphic?
  - Scale considerations
  - Tailor graphics to audience and venue
  - Photographs
  - Slides and overheads
- Chapter 4 Say it in Print**
- Characteristics of the medium
  - The IEP factor in print
  - Scientific reports
  - Informal reports
  - Newsletters
  - Brochures
  - Flyers
  - Fact sheets and backgrounders

## **Chapter 5 Exhibits**

- Event exhibits
- Poster presentations
- On-site exhibits
- Building blocks of an exhibit
- How much will it cost?
- Show me the data!

## **Chapter 6 Public Presentations**

- Public testimony
- Organization-sponsored events
- Dinner talks
- Ways to show data

## **Chapter 7 Reaching Your Audience Through the Media**

- Audience
- Printed media
- Electronic media
- Press releases
- Press conferences
- PSAs

## **Chapter 8 Off the Beaten Path...**

- Data in the great outdoors
- Interactive data presentations
- Do it yourself data
- Recycle that data!
- And did we mention...?
- Props

## **Chapter 9 Ready, Set, Present!**

- A simple plan
- Package the data
- Basic components
- Ready, set, present!

## **Appendix**

Bugquarium construction plans

Technical tips:

    Bugquarium use

    Producing a web map

Audience characteristics matrix

Comparison of presentation media

References

# Data Presentation Examples

<b>Chapter 3</b>	<b>Graphics</b>	
	1. Maps for local and “outsider” audiences	Page 4
	2. Map showing emergent vegetation	4
	3. Map used in newspaper story	5
	4. Hand-drawn map with universal symbols	5
	5. Basic rules for legible graphs	7
	6. Line graph implying continuous trend, one site over time	8
	7. Bar chart showing how to portray Secchi depths	9
	8. Horizontal orientation on bar chart	9
	9. 3-D bar chart	10
	10. Pie chart	10
	11. Linked, stacked bar charts	11
	12. Proper scale use, pH example	12
	13. Proper scale use, phosphorus example	13
	14. Dealing with outlying data	14
	15. Whisker and box plot	15
	16. Modified Secchi disk bar chart	16
	17. Scanned photograph as half-tone	21
<b>Chapter 4</b>	<b>Print materials</b>	
	1. Excerpt from a technical report (prepared by a lake group)	5
	2. Water quality index used in an informal report	8
	3. Use of sidebar to highlight findings	9
	4. Showing multi-site, multi-date data, using bar charts	11
	5. Data presented in a newsletter	12
	6. Brochure example	14
	7. Data in a flyer	18
	8. Fact sheet	19
	9. Backgrounder	20
<b>Chapter 5</b>	<b>Exhibits</b>	
	1. On-site exhibit	3
	2. On-site Secchi disk results display	3
	3. Another Secchi disk on-site display	4
	4. Tri-fold exhibit format	5
	5. Sample exhibit layout	6
	6. Bugquarium (event exhibit)	7
	7. Report graph reformatted for an exhibit	8, 9
<b>Chapter 6</b>	<b>Public presentations</b>	
	1. Press coverage of a group’s annual meeting	4
	2. Numbered slide	7
	3. Storyboard for a slide show	7

<b>Chapter 7</b>	<b>Media</b>	
	1. Human interest story	2
	2. Newspaper factoid	5
	3. Press release that uses data	8
	4. Public service announcement	10
<b>Chapter 8</b>	<b>Off the beaten path</b>	
	1. River model at a festival	1
	2. Data at a river site	3
	3. Outdoor book mounted on pole	3
	4. Aquatic Jeopardy: a participatory live presentation	4
	5. The lake game	5
	6. Mystic River mural	6
	7. Using an empty store front	7
	8. Acid rain exhibit	8
	9. T-shirt data	9
	10. Flags used as Web hot buttons	10
	11. Water quality displayed by river reach	11
	12. Virtual tour of the Los Angeles river	12
	13. Transparency and color graph	13
	14. Educational diagram displayed on the web	14
	15. Web diagram of lake stratification	14
	16. Recycled soda bottles display aquatic plants	16
	17. Embedded rock and substrate jars	17

## **Keep in touch...**

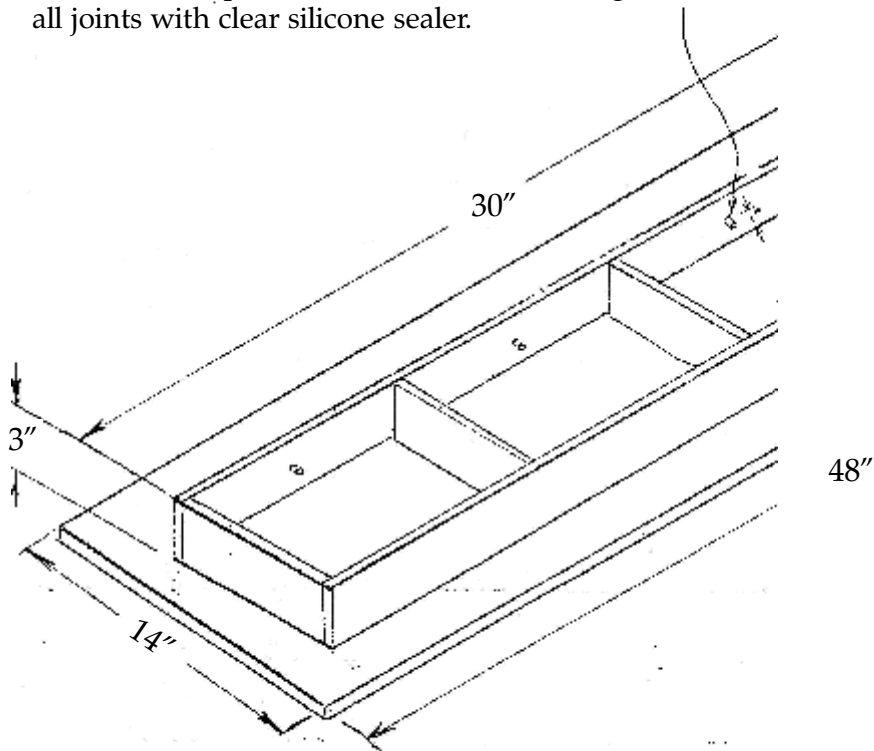
The data presentation examples shown in this manual are only a subset of many excellent outreach materials we have encountered in our research. We are always looking for new material. We plan to place outstanding examples in our upcoming Web Page version of the manual, and make them available in hard 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.

82



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](http://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.rivernetnetwork.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](http://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.

**Miscellaneous**

*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](http://www.magnet.state.ma.us/mgis/massgis.htm)

*Earth Science Information Office*

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



Show me the data!