



Volume XXVIII, Number 1

# Water Quality Matters

Summer 2005

The Newsletter of the Water Quality Section of the American Fisheries Society

## President's Message

By *Georgina Lampman*

### Hello Water Quality Section Members!

Can you believe that it's already the middle of 2005? We're gearing up for the Society meeting in Anchorage. This issue of Water Quality Matters has our ballot for Section elections. My term as Section President is almost up. Where did the time go?

Unlike previous years, this past year has focused on economic growth and the proposal for a resource policy at the Society level to address it. Some of you may be asking why the Water Quality Section is participating in such discussions. I know that some of you are probably reacting as I initially did. I'm certainly no expert in the field; I don't remember having Econom-

ics courses as part of the college curriculum for Wildlife and Fisheries Biology, and I tend to tune out the stock market report on CNN, not that I'd understand it if I'd paid attention.

Let's think about it. We all know as fisheries professionals that we cannot manage for the fish and other aquatic resources by limiting our area of analysis to the habitat unit or water's edge of the unit of study. In stream systems, for example, instream effects on aquatic communities can initiate upstream and downstream, from cold spring groundwater inflow, to nutrient recycling from the oceans. In addition, we know that aquatic

*(continued on page 2)*

### Water Quality Section Officers

#### President

Georgina Lampman, USFS  
(801) 625-5358  
glampman@fs.fed.us

#### President-elect

Lou Reynolds, EPA  
(304) 234-0244  
reynolds.louis@epa.gov

#### Past-President

Larry Brown, USGS  
(916) 278-3098  
lrbrown@usgs.gov

#### Secretary-Treasurer

John Meldrim,  
(630) 790-4129  
john.w.me.drim@earthlink.net

#### Editor

Gregg Lomnický  
(541) 754-4472  
lomnický.gregg@epa.gov

### Mission Statement

The objectives of the Water Quality Section are to:

(1) maintain an association of persons involved in the protection of watersheds, water quality, and aquatic habitat and in the abatement of water pollution and aquatic habitat and watershed deterioration.

(2) encourage improved professional and technical standards in the investigation, abatement, and regulation of water pollution, aquatic habitat, and watershed problems.

(3) objectively focus attention on aquatic habitat, watershed, and water quality concerns, and improve methods for addressing relevant issues by conducting workshops and projects, collecting and assembling information for publication and distributing results to Society members and the public.

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communities are affected by the condition of the landscape of the drainage, from natural upland ecosystems to urban communities, and from water withdrawals for irrigation to industrial effluents piped into the water. As our Section's comments on the proposed EPA rules relating to air quality standards and mercury emissions, influences can come from effluent into non-hydrologic systems and influence areas outside of immediate drainages.

With this broad perspective of aquatic professionals, who can't help but be ecosystem thinkers in the truest sense, it is only a short step to understand that, like the physical influences, the broad perspective of economic influences is related to the fish and other aquatic resources. We already know that human uses of the land in a drainage can affect its aquatic communities and habitats. We know that human needs outside of the drainage can affect those same aquatic communities and habitats. We also know that economic conditions outside of the immediate vicinity will affect what those human requirements are. For example, how often have we heard that the price of your favorite midnight snack is going up because of the price of fossil fuel needed to transport the ingredients to the manufacturing plant, transport the snack to the store, and run the generators providing electricity to the store? How often have we also heard this used as rationale behind increasing other energy production efforts, which history shows can affect our aquatic communities and habitats

of interest.

Though simplistic, the above example demonstrates how real or perceived economic influences at multiple scales are important to understand when it comes to our aquatic resources. Whether global or local, multi-resource or single resource, identifying which perspective is better is part of the debate and probably has no single answer. I am guessing that there will be a need for both. I have worked in small rural communities, with people whose livelihoods depend not only on the local resources but the global influences on those resources and their businesses. If those folks had to close up shop, what would come into those areas instead? Will the resources be better or worse off? Could a broader perspective help position our resources and such communities to be able to respond to the change agents that can make or break the intricacies of ecosystem interactions and interdependence? This is all part of the debate on which the Section has embarked.

Of course, everyone in the Section does not suddenly have to become an expert in macroeconomics. I believe that the success of this Section has resulted from its wide range of expertise, allowing us to keep the broad perspective of influences on aquatic communities, perhaps better than any other Section in the Society. I know that I am perfectly content with leaving the detailed discussion to the experts, such as our committee who worked on the economic growth proposal that we recently forwarded to the

Resources Policy Committee. It is, however, incumbent upon me to read the proposal, ask questions, participate in discussion even from a lay perspective, and vote when asked as the policy development procedure continues. I ask all of you to consider doing the same.

With that, I will end my last President's message for Water Quality Matters. Before I close, I want to thank Larry Brown for his mentorship when I took office as President-Elect in 2001 and John Meldrim for his patience during my on-the-job training for the business end of the Section. In September I will be handing over the gavel to the very capable Lou Reynolds, to whom I say, "Lou, you have one of the most sharp and active minds in the Society. Go forth!" **(Lou was appointed to the office vacated by Tom Simon. See following page)**

To all of you, it's been a privilege. Thank you for your support and enthusiasm. See you in Anchorage!  
-Georgina Lampman

Deadline for Fall 2005  
Newsletter

November 4th, 2005

Contact: Gregg Lomnicky  
Editor

lomnicky.gregg@epa.gov

## *NEW PRESIDENT-ELECT*

### *Lou Reynolds*

Thomas Simon has resigned from the office of President-Elect of the American Fisheries Society Water Quality Section.

For this situation, the Section's by-laws provide the following: "Section 9. In the event of a vacated position, the Section's Officers shall appoint a qualified replacement to complete the unexpired term." The remaining officers -- Larry Brown (Past President), John Meldrim (Secretary-Treasurer), and Gina Lampman (President) -- have decided to appoint Lou Reynolds to complete the President-Elect term and ascend to the Presidency at the upcoming business meeting in Anchorage 2005. Lou had already been accepted as a qualified candidate for the president-elect ballot. Lou accepted the appointment on 26 May 2005. A special election will be held for the president-elect of the new term.

Please join me in thanking Lou for agreeing to step up to fill the vacant President select office and to be the incoming President of the Section at the 2005 Section business meeting.

**Congratulations Lou!**

*The following statement was submitted before Lou was appointed President-Elect. Lou still wanted to share his thoughts with the incoming Section.*

### **Candidate Statement**

I am a fisheries biologist working for EPA Region Three's Freshwater Biology Team in Wheeling, West Virginia. I received my B.S. from Allegheny College in Meadville, Pennsylvania, and did graduate work at Oregon State University. I have worked as a field biologist in Oregon, Wisconsin, and Pennsylvania, and for a variety of agencies. My work focused on fish sampling methodology and application of fish

IBI. I have been a member of AFS for the past ten years but am new to the Water Quality Section. I am co-chairing a symposium for the 2005 AFS annual meeting entitled "Habitat – what is it and how is it measured" that is sponsored by the WQS and the International Association of Fish and Wildlife Agencies.

If elected I would emphasize four major goals for the Water Quality Section.

1. To accomplish these goals, we need better communication and member involvement. I support continued efforts to grow our section through the student chapters. Also, I believe we must continue development of the website and refinement of the newsletter. Finally, I would like to foster more active involvement of Section members through electronic users groups and action items to alert members of issues that concern them.

2. I advocate use of IBI and more diagnostic fish assemblage assessment tools at the state level. By focusing efforts on macroinvertebrate and fish assemblages, many states have accomplished important tasks, but many other states do not sample fish assemblages. I feel that our Section could assist states in obtaining or reallocating funds to more thoroughly assess aquatic resources.

3. All aspects of fish habitat (chemical, physical, biological) are of concern for WQS members. As president, I will actively participate in the National Fish Habitat Initiative. The Initiative is the beginning of a process to discuss habitat and how it relates to fisheries and will require continued discussion and implementation of recommendations.

4. Finally, the Water Quality Section should actively support the use of science in decision making by federal and state agencies. I will forcefully work to encourage our Section and the parent society to accomplish this goal. Further, when sound science supports or refutes actions that are being taken at the federal or state level, we must call attention to this and notify others of our positions.

## Water Quality Section Sponsored Books - Updates

by Bob Hughes and Larry Brown

### **Historical Changes in Large River Fish Assemblages of the Americas,**

by J.N. Rinne, R.M. Hughes, and B. Calamusso, eds.

Page proofs for all 28 chapters of this WQS-sponsored book have been completed and revised by the authors and editors. It is now undergoing a final review by the AFS Book Production Manager and will go to press in May with an expected August publication date.



### **Effects of Urbanization on Stream Ecosystems**

by L.R. Brown, R.M. Hughes, R. Gray,  
and M.R. Meador, eds.

As human populations continue to grow, the effects of urbanization on streams and other habitats will become increasingly important to aquatic resource managers. Urbanization of watersheds is almost invariably accompanied by loss and

alteration of aquatic habitats, two of the most frequently mentioned causes for losses of aquatic biota. Based on a symposium held at the American Fisheries Society Annual Meeting 2003, this book includes a variety of case studies addressing the effects of urbanization on stream ecosystems at geographic locations ranging from Brazil to Southern California to New York. Of special interest is a group of five papers resulting from an interdisciplinary comparative study of urbanization in Boston, Massachusetts, Birmingham, Alabama, and Salt Lake City, Utah. These papers address regional variations in study design and responses of habitat, benthic algae, benthic macroinvertebrates, and fish to urban development. This volume will be a valuable resource for anyone with an interest in urbanization and will benefit scientists and resource managers currently addressing the effects of urbanization on streams in their own area. We expect the book to be out late in 2005.

## WATER QUALITY SECTION SPONSORED SYMPOSIA AT THE 2005 AFS ANCHORAGE MEETING

### **Title: Connections Between Economic Growth and Fish Conservation**

**Organizers: Brian Czech & Bob Hughes**

Description: The objectives of this symposium are (1) to illustrate the connections between economic growth and declines in fisheries and fish assemblages by using examples from the Pacific Northwest and (2) to propose what the AFS might do about the conflict between economic growth and fish conservation. Although we have at least 100 years of fisheries data demonstrating how the growth of economic sectors in the aggregate is associated with the collapse of numerous fisheries and fish assemblages, fish biologists continue to overlook macroeconomics and ecological economics in their assessments and conservation efforts. This is largely the result of our education; few fisheries programs have macroeconomics or ecological economics in their curricula. Meanwhile, govern-

ment policies based on conventional microeconomics assume economic growth is necessary to pay for environmental (and fisheries) protection. This creates a serious contradiction that will not be remedied until ecological economists and fisheries ecologists clarify the conflict between economic growth and fish conservation. To begin that process, we have assembled a diverse set of speakers to describe the conflict from various perspectives. The speakers represent a mosaic of natural resource institutions, scientific disciplines, and economic perspectives. This mosaic will produce a symposium that will be of value to the AFS community and help infuse public policy with principles conducive to fish conservation.

### **Title: Habitat--what is it, how is it measured, and how do fish assemblages respond to it?**

**Organizers: Lou Reynolds & Bob Hughes**

Description: The objective of this symposium is to move towards national agreement on physical habitat monitoring objectives, measurements, and indicators. The National Fish Habitat Initiative is a program devised to focus national attention and resources to improve aquatic habitat health. However, despite 100 years of aquatic monitoring, aquatic ecologists still lack alternative standard methods for assessing physical habitat structure. Varied objectives, measurements, and indicators hinder national, state, and regional assessments, analyses, and generalizations. Conversely the APHA, AWWA, and WEF, beginning in 1906, are now on their 20th edition of standard methods for the analysis of water and waste water. Thus, there is little wonder that far more resources are employed in assessing and regulating chemical habitat than physical habitat, despite the fact that physical habitat now

limits fish assemblages in more North American lotic systems than does chemical habitat. This will not change until we arrive at standard methods for physical habitat, and fish assemblages will continue to suffer in the interim. To begin that process, we have assembled representatives from major federal agencies and key researchers to present their approaches for monitoring physical habitat and linking physical habitat indicators with fish assemblage responses. The speakers represent a mosaic of natural resource agencies, scientific disciplines, and nations. As suggested by the meeting theme, it is our hope that this mix will produce a symposium that will be of value to persons attending the session and to the greater AFS community in our continuing efforts at rehabilitating and protecting fish assemblages.

## CAST YOUR VOTE TODAY

### 2005 Ballot For AFS-WQS Officers

#### CANDIDATES

- Secretary/Treasurer

John Meldrin                       Write-in \_\_\_\_\_

Send your vote by email to Georgina Lampman at [glampman@fs.fed.us](mailto:glampman@fs.fed.us)

or by snail mail to :                      Georgina Lampman  
U.S. Forest Service  
Region 4 - Biophysical Resources  
324 25th Street  
Ogden, UT 84401

Ogden FAX number:                      (801) 625-5756

## Water Quality Section Business Meeting in Anchorage

We expect that the WQS Business Meeting will be a lunch meeting on Tuesday, September 13, 2005. Stay tuned for details. John Meldrim has suggested that we might anticipate a buffet-style lunch featuring local seafood, but the details still need to be worked out. Whatever the menu item, feel free to come and eat while you help conduct the business of the Section. According to the AFS website, the meeting will be held in the Spruce Room of the Hilton from 12-2 pm. The date, time, and place of the business meeting will also appear in your printed program at the Annual Meeting. **Please Attend!**

## INTERNATIONAL MEETINGS - By Bob Gray

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### 2005

**Sixth Conference on Fish Telemetry.** Sesimbra, Portugal. June 5-11. Contact: [fish telemetry@fc.ul.pt](mailto:fish telemetry@fc.ul.pt); [www.6thfish telemconf.com](http://www.6thfish telemconf.com).

**Seventh International Marine Biotechnology Conference.** Newfoundland and Labrador, Canada. June 7-12. Contact: Marie Lanouette; (613) 993-1414; [imbc2005@nrc-cnrc.gc.ca](mailto:imbc2005@nrc-cnrc.gc.ca); [www.imbc2005.org](http://www.imbc2005.org).

**Fourth World Recreational Fisheries Conference.** Trondheim, Norway. June 12-16. Contact: 47 7380 1621; [wrcf2005@nina.no](mailto:wrcf2005@nina.no); [www.nina.no/wrcf2005/](http://www.nina.no/wrcf2005/).

**MARE (Centre for Maritime Research) – People and the Sea III: New Directions in Coastal and Maritime Studies.** Amsterdam, The Netherlands. July 7-9. Contact: Iris Monnereau; +31-20-527-0624; [imonnereau@marecentre.nl](mailto:imonnereau@marecentre.nl).

**29th Annual Larval Fish Conference.** Barcelona, Spain. July 11-14. Contact: [www.larvalfishcon.org](http://www.larvalfishcon.org).

**Seventh International Congress on the Biology of Fish.** St. John's, Newfoundland, Canada. July 18-22. Contact: Bill Driedzic; [wdriedzic@mun.ca](mailto:wdriedzic@mun.ca).

**Fish Habitat, Ecology and Conservation, Annual Symposium of the Fisheries Society of the British Isles.** Bangor, Wales, United Kingdom. July 18-22. Contact: Jenny Marshall; [hsc0118@bangor.ac.uk](mailto:hsc0118@bangor.ac.uk).

**Second North American Lake Trout Symposium.** Yellowknife, Northwest Territories, Canada. August 16-19. Contact: Dave Tyson; [tyson@dfo-mpo.gc.ca](mailto:tyson@dfo-mpo.gc.ca), [www.laketroutsymposium2005.ca/](http://www.laketroutsymposium2005.ca/).

**2005 International Symposium on the Biology and Management of Coregonid Fishes.** Olsztyn, Poland. August 21-27. Contact: [www.uwm.edu.pl/wosir/ISBMCF/](http://www.uwm.edu.pl/wosir/ISBMCF/).

**The Fourth International Marine Bioinvasions Conference.** Wellington, New Zealand. August 23-26. Contact: [jcarlton@WILLIAMS.EDU](mailto:jcarlton@WILLIAMS.EDU).

### 2006

**2006 International Symposium on Society and Resource Management.** Vancouver, British Columbia, Canada. June 3-8. Contact: Robert Ditton; (978) 845-9841; [r-ditton@new.tamu.edu](mailto:r-ditton@new.tamu.edu).

Water Quality Section -AFS  
c/o Gregg Lomicky  
200 SW 35th St.  
Corvallis, OR 97333

ADDRESS SERVICE REQUESTED