

September 2014 | Volume 16 | Number 5

RIVER BASIN COORDINATION

AWRA

Community, Conversation, Connections

AMERICAN WATER RESOURCES ASSOCIATION



If you're waiting for a sign that you should join AWRA, THIS IS IT!

Join AWRA today for 50% off of our regular membership price. For the remainder of 2014, new members can join AWRA for 50% off of regular rates.

Scan the QR code below to visit our website. See who we are and what we do. Then join our growing cohort of thought leaders creating integrated and multidisciplinary change in water resources management.



www.awra.org

JOIN. PARTICIPATE.

CHANGE WATER RESOURCES MANAGEMENT - FOREVER.

RIVER BASIN COORDINATION

E. TIM SMITH

Associate Editor ~ etsmithsiri@aol.com

This issue concerns the various methods used to coordinate work in the river basins of the nation. The Delaware River Basin Commission is a federal-state partnership under public law. In the Ohio River Basin, ORSANCO is one of the earliest efforts to coordinate planning and management for a region. The Tennessee Valley Authority is a unique federal agency with many responsibilities. The Missouri River Basin Association is a partnership of states and tribes for a large region. The Colorado River Basin Study is carried out by the Bureau of Reclamation for a large area. The Columbia River Gorge Commission operates under public law in a scenic region of the nation.

FEATURE ARTICLES

3 The Delaware River Basin Commission: A Unique Partnership ... Clarke D. Rupert

The history of the Delaware River Basin Commission since 1961 shows how it has coped with such water management problems as pollution, floods, and droughts.

7 ORSANCO: Sixty-Six Years of Collaborative Management of Water Quality ... Peter A. Tennant and Samuel A. Dinkins

The Ohio River Valley Water Sanitation Commission is one of the oldest such authorities in the nation. It has worked under a compact structure to address pollution and other forms of water quality impairment.

10 Tennessee Valley Authority's Innovative Management of the Tennessee River as an Integrated System ... Duncan J. Mansfield

The Tennessee River Authority is a unique government agency dating from the FDR era. In carrying out a mission of integration resource management, it operates hydroelectric power stations for a wide area.

13 History and Activities of the Missouri River Association of States and Tribes (MoRAST) ... J. Michael Hauden

The Missouri River Association of States and Tribes coordinates partner organizations to address a wide variety of problems, such as sediment control and water supply.

16 Moving Forward: The Future of the Colorado River Basin ... Carly Jerla and Pam Adams

The Colorado River Basin covers a large region and touches many states. Planning for the future will involve careful decisions to balance water supply and demand.

19 Columbia River Gorge National Scenic Area ... Darren J. Nichols and Michele M. Dailey

The Columbia River Gorge encompasses regional economic demands within a spectacular scenic environment. The challenge of balancing competing needs for resources continues to generate important public policy issues.



Volume 16 • Number 5 • September 2014

Other features in this issue ...

AWRA BUSINESS

- 12 Advertising Opportunities in IMPACT
- 15 Highlights of August 2014 Journal of the American Water Resources (JAWRA) Papers
- 18 Scheduled AWRA Meetings to be Held in 2014 & 2015 ... Mark Your Calendars!
- 22 AWRA 2015 Summer Specialty Conference: A Review
- 27/ Herbert Scholarship Award Winners for
- 28 2014-2015 Announced
- 29 AWRA's 2014 Annual Spring Specialty Conference Student Presenter Competition Winners Announced
- 30 An Oversight Corrected
- 30 Send Us Your Feedback for This Issue
- 30 AWRA 2014 Executive Committee
- 30 Topic for November 2014 IMPACT
- 31 CALL FOR ABSTRACTS ... 2015 AWRA Spring Specialty Conference
- 32 REGISTRATION FORM ... 2014 AWRA Annual Water Resources Conference
- 33 PROGRAM-AT-A-GLANCE ... 2014 AWRA Annual Water Resources Conference
- 34 Why You Should Become a Member of AWRA Today

▲ OPINION/INFO COLUMNS

- 23 The New Economy of Water ... Drought Intensity Highlights Importance of Market Transfers to California ... Clay J. Landry
- 24 What's Up With Water ... Water, Genghis Khan, and Lessons From Mongolia ... Eric J. Fitch
- 25 <u>President's Message</u> ... AWRA 2015 Spring Specialty Conference "Water for Urban Areas: Managing Risks and Building Resiliency"... C. Mark Dunning

(Opinions expressed by our columnists are their own and do not represent the opinion or position of AWRA.)

- ▲ WATER RESOURCES PUZZLER26
 Answers30
- **ADVERTISERS**
- Dynamic Solutions International, LLC . . . 6 GoldSim Technology Group, LLC 28







A Bi-Monthly Publication of the AMERICAN WATER RESOURCES ASSOCIATION

AMERICAN WATER RESOURCES ASSOCIATION
4 West Federal Street • P.O. Box 1626
Middleburg, VA 20118-1626
(540) 687-8390 / Fax: (540) 687-8395
E-Mail: info@awra.org • Homepage: www.awra.org

EDITOR-IN-CHIEF ERIC J. FITCH

Associate Professor of Environmental Science and Leadership Chair, Department of Biology and Environmental Science Director, Environmental Science Program Marietta College ~ 215 Fifth St. ~ Marietta, Ohio 45750 (740) 376-4997 ~ Fax: (740) 376-4753 E-Mail: fitche@marietta.edu

TO PLACE AN AD IN THIS PUBLICATION CONTACT CHARLENE E. YOUNG

Phone/Fax: (256) 650-0701 E-Mail: charlene@awra.org

Water Resources IMPACT is owned and published bi-monthly by the American Water Resources Association, 4 West Federal St., P.O. Box 1626, Middleburg, Virginia 20118-1626, USA. The yearly subscription rate is \$80.00 domestic and \$95.00 for international subscribers. For the International Priority Shipping Option, add \$50.00 to the international subscription rate. Single copies of IMPACT are available for \$15.00/each (domestic) and \$20.00/each (international). For bulk purchases, contact the AWRA Headquarters (HQ) office.

CLAIMS FOR MISSING ISSUES should be sent to the AWRA office in Middleburg, Virginia. No claim allowed for (1) insufficient notice of address change; (2) issues lost in the mail unless claimed within (a) 90 days for U.S.A., or (b) 180 days for other countries, from last day of month of publication; or (3) such reasons as "missing from files."

IMPACT is a magazine of ideas. Authors, Associate Editors, and the Editor-in-Chief work together to create a publication that will inform and will provoke conversation. The views and conclusions expressed by individual authors and published in Water Resources IMPACT should not be interpreted as necessarily representing the official policies, either expressed or implied, of the American Water Resources Association.

Mention of any trademark or proprietary product in works published in the *Water Resources IMPACT* does not constitute a guarantee or warranty of the product by the American Water Resources Association and does not imply its approval to the exclusion of other products that may also be suitable.

Contact the AWRA HQ office if you have any questions pertaining to your membership status. For information on advertising rates and deadlines, contact Charlene Young at the e-mail address or phone number given above.

POSTMASTER: Send address changes to *Water Resources IMPACT*, American Water Resources Association, 4 West Federal St., P.O. Box 1626, Middleburg, VA 20118-1626. Copyright © 2014 by the American Water Resources Association.

• VOL. 16 • NO. 5 • SEPTEMBER 2014 • ISSN 1522-3175

ASSOCIATE EDITORS

JOE BERG

(jberg@biohabitats.com) Biohabitats, Inc. ~ Baltimore, Maryland

MAE A. DAVENPORT

(mdaven@umn.edu) University of Minnesota ~ St. Paul, Minnesota

JONATHAN E. JONES

(jonjones@wrightwater.com) Wright Water Engineers ~ Denver, Colorado

CLAY J. LANDRY

(landry@waterexchange.com) WestWater Research ~ Boise, Idaho

RICHARD H. McCUEN

(rhmccuen@eng.umd.edu) University of Maryland ~ College Park, Maryland

E. TIM SMITH

(etsmithsiri@aol.com) Sustainable Water Resources Roundtable

TECHNICAL DIRECTOR

RICHARD A. ENGBERG

(dick@awra.org) American Water Resources Association Middleburg, Virginia

SUBSCRIPTION RATES WATER RESOURCES IMPACT

WATER RESOURCES IMPACT	
Domestic	\$80.00
FOREIGN	\$95.00
FOREIGN AIRMAIL OPTION	\$50.00
SINGLE COPIES AVAILABLE	
Domestic	\$15.00
International	\$20.00
CONTACT THE AWRA HQ OFFICE FOR	
ADDITIONAL INFORMATION OR TO SUBSCRIE	<u>BE</u>

Have Questions About IMPACT? Contact AWRA HQ Phone • (540) 687-8390 / Fax 13 • (540) 687-8395 By E-Mail • info@awra.org

Check Out Our Home Page At www.awra.org

Cover photo: Columbia River Gorge, Multnomah Falls. Courtesy of Richard A. Engberg.



AWRA . . . Community, Conversation, Connections