

W A T E R R E S O U R C E S

# IMPACT

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WATER  
AND  
FOOD

## AWRA

*Community, Conversation, Connections*

AMERICAN WATER RESOURCES ASSOCIATION



**AWRA**  
Community, Conversation, Connections

# 2013 MEMBERSHIP APPLICATION

(for full year membership January 1 – December 31)

Complete & fax to (540) 687-8395, or mail it to the address below  
Payment must accompany application and be made in US dollars drawn on US bank.

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Country: \_\_\_\_\_  
Is this your  Home address or  Business address?  
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## Membership Options

- Regular Member (IMPACT print/JAWRA online) .....\$165
  - Receive JAWRA Print .....\$25
- Online Only Member (IMPACT/JAWRA online) .....\$135
- Transitional Member (IMPACT print/JAWRA online) .....\$100
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- Student Member (IMPACT print/JAWRA online) .....\$30
- Associate Member – One office .....\$500
- Associate Enterprise Member – All offices .....\$2000
- Membership Certificate (optional) .....\$11

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## JOB TITLE (circle one)

- JT1 Management (Pres, VP, Div Head, Sect Head, Manager, Chief Eng)
- JT2 Engineering (Non-mgmt; i.e., Civil, Water Resources, Planning)
- JT3 Scientific (Non-mgmt; i.e., chemist, biologist, hydrologist, etc.)
- JT4 Marketing/Sales (Non-mgmt)
- JT5 Faculty
- JT6 Student
- JT7 Attorney
- JT8 Retired
- JT9 Computer Scientist (GIS, modeling, etc.)
- JT10 Elected/Appointed Official
- JT11 Volunteer/Interested Citizen
- JT12 Non-Profit
- JT13 Other: \_\_\_\_\_

## DISCIPLINE (circle one)

- AG Agronomy
- BI Biology
- CH Chemistry
- EC Economics
- ED Education
- EG Engineering
- FO Forestry
- GR Geography
- GE Geology
- GI Geographic Info. Systems
- HY Hydrology
- JR Journalism
- LA Law
- LM Limnology
- OE Oceanography
- PH Physics
- PS Political Science
- PB Public Health
- SO Soil Science
- OT Other: \_\_\_\_\_

## EMPLOYER (circle one)

- CF Consulting Firm
- EI Educational Institution (Faculty/Staff)
- ES Educational Institution (Student)
- LR Local/Regional Gov't Agency
- SI State/Interstate Gov't Agency
- IN Industry
- LF Law Firm
- FG Federal Government
- RE Retired
- NP Non-Profit Organization
- OT Other: \_\_\_\_\_

## How did you learn about AWRA?

- Promotional Mailing  Word of Mouth
- AWRA Website  Other: \_\_\_\_\_

## What's your reason for joining?

- Info from Journal/IMPACT  Networking
- Conference Discount  Technical Committees
- Other: \_\_\_\_\_

Did someone recommend that you join AWRA? Who?  
\_\_\_\_\_



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## EDUCATION (circle one)

- HS High School
- AA Associates
- BA Bachelor of Arts
- BS Bachelor of Science
- MA Master of Arts
- MS Master of Science
- JD Juris Doctor
- PhD Doctorate
- OT Other: \_\_\_\_\_

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Water and Food ... nothing in nature is more important to human survival except air and warmth. This issue of *Water Resources IMPACT* focuses on the relationship between these two critical resources. Our articles touch on the roles of weather and climate, especially drought, on the ability of humans to produce food. Management of water resources on a regional basis in North America and Southeast Asia are discussed. One article focuses on how water is packaged for convenience, but not necessarily for the common good. Finally, there is a somewhat dystopian speculative piece on what happens when crises start to converge, perhaps in the not too distant future. From center to periphery, from past to future, this issue covers topics under this great umbrella and it is our hope that you will find interest and knowledge awaiting within.

### FEATURE ARTICLES

#### 3 Impacts of Drought on Food Production in the Midwest ... *Brian A.Fuchs and Denise Gutzmer*

Drought in the Midwest is not a new phenomenon, but research may be indicating that the U.S. is moving into a drought period of increased duration and intensity in the area. With special emphasis on the drought conditions of 2010 and 2011, the authors present findings that may have strong negative impacts on the long term national food security.

#### 6 Food Security and Vulnerability in the Lower Mekong River Basin ... *Lilao Bouapao and Karlyn Eckman*

The Mekong is one of the world's great rivers (listed as tenth longest in the world) and provides water necessary for sanitation and raising food for tens of millions of people. Fed by glacial melt from the Tibetan Plateau, the Mekong is vulnerable to flood, drought, and pollution. Thus the food supply for the region is vulnerable as well. The authors explore these vulnerabilities for the near and longer term.

#### 10 Voluntary Conservation Works and Further Water Quality Gains Can Be Achieved ... *Thomas W. Christensen*

The Natural Resource Conservation Service (NRCS) has as its prime mission assisting farmers and ranchers in adopting techniques that would help them conserve water and protect fertile soils and freshwater sources. The author shares some of the cutting edge programs and activities that continue to assist the agricultural community in this vital mission.

#### 15 Bottled Water: Panacea or a Plague? ... *Caitlin A. Grady and Tamim Younos*

Nothing speaks to modern convenience like bottled water. Everyone needs water, but there isn't necessarily water where and when you need it. Authors explore the dark side of this convenience and why what has become for many in the developed world an automatic reflex, grabbing a bottle of water, may instead become a topic for more thoughtful consideration of alternatives.

#### 18 Climate Change, Water Resources, and Food Supplies: Current Demands and Future Crisis ... A Cautionary Tale ... *Eric J. Fitch*

There are times in life when there are more questions than answers on even the most important questions. Here the author explores the implications of "crisis" that are being approached largely as separate, but which are inextricably linked, and what are the implications for the future.

WATER RESOURCES

# IMPACT

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