THE AMERICAN WATER RESOURCES ASSOCIATION 1964-2014:
FIFTY YEARS DEDICATED TO WATER RESOURCES MANAGEMENT,
RESEARCH AND EDUCATION
Thank You to Authors

The American Water Resources Association (AWRA) Board of Directors and Staff are pleased to acknowledge Past Presidents Dr. David DeWalle (2006) and Dr. Jerry Rogers (1989) for their extraordinary efforts in the preparation of this history of our first 50 years.

David and Jerry are prime examples of the volunteers that have shared their time and expertise to continue to make AWRA a multidisciplinary water resources organization leader in the United States.

Gentlemen, We thank you very much.
THE AMERICAN WATER RESOURCES ASSOCIATION 1964-2014: FIFTY YEARS DEDICATED TO WATER RESOURCES MANAGEMENT, RESEARCH AND EDUCATION

David R. DeWalle\textsuperscript{1} and Jerry R. Rogers\textsuperscript{2}

Abstract

The mission of the American Water Resources Association (AWRA) to promote an improved understanding of water resources and related issues by providing a multidisciplinary forum for information exchange, professional development, and education has not changed over the 50 years of its existence. The AWRA multidisciplinary emphasis has drawn membership and clientele from a wide variety of water-related disciplines in academia, government and private industry and has allowed AWRA programs to rapidly adapt to emerging issues, changes in technology, and shifting needs of its members. AWRA programs have addressed broad traditional surface and groundwater hydrology issues as well as specific programs on water policy, GIS applications, climate change, integrated water resources management, agricultural hydrology, emerging contaminants and toxics, riparian management, and international water issues. Over the 50 years AWRA has sponsored 120 meetings and symposia in the United States and abroad with over 30,000 attendees. \textit{Water Resources IMPACT (IMPACT)} and the \textit{Journal of the American Water Resources Association (JAWRA)} have emerged as the major AWRA publications with the impact factor for \textit{JAWRA} currently ranking it in the upper third of peer publications. Being fundamentally a grass-roots organization, AWRA has benefitted from the efforts of over 200 volunteer members who have served as elected national officers, regional representatives, and editors during this time. AWRA also supports an extensive network of state sections and student chapters, annual awards, and student scholarships to help fulfill its mission. Sixteen different AWRA state and regional sections and 14 separate AWRA student chapters have received awards for excellence in water resources programming during this period. In recognition of outstanding service and achievements in water resources, AWRA has given over 300 AWRA awards to individuals and organizations. Student education in water resources has also been promoted by AWRA with over 39 scholarships awarded to undergraduate and graduate students during this period. This history updates and expands previous AWRA histories written for the 25\textsuperscript{th} and 40\textsuperscript{th} anniversaries and gives many of the details through remembered highlights from past presidents. The paper concludes with thoughts about future AWRA programming to meet the further challenges of the Twenty-First Century.

\textsuperscript{1} Prof. Emeritus, Environ. Sci. Mgt., Penn State, 311 Forest Resources Bldg., Univ. Park, PA 16802; drdewalle@psu.edu.

\textsuperscript{2} Prof. Emeritus, Civil/Environ. Engineering, U. of Houston, 12127 Old Oaks Dr., Houston, TX 77024; rogers.jerry@att.net.
Introduction

The history of the American Water Resources Association is being compiled to help celebrate the 50th Anniversary of AWRA for the period 1964-2014 and to update the record of the key events, decisions, and people involved in making AWRA the organization it is today. Earlier AWRA histories were written by Mary H. Marsh (1989) on the occasion of the 25th Anniversary and more recently by J. Paul Riley and Jerry R. Rogers (2004) for the ASCE publication *Water Resources and Environmental History* which updated the history of AWRA to 2003-04. Rogers (2014) also recently wrote an article about his recollections of the organization when he was a graduate student attending the First Annual Meeting of AWRA in 1965. In this AWRA history update we extend the record to 2014, the 50th Anniversary year, and include written summaries of activities and reflections by all 12 AWRA presidents during the period 2003 to 2014. While the history text that follows discusses many of the details of AWRA history, tables are also given in the Appendix which document:

- AWRA Officers and Editors 1964-2014 (Appendix Table A)
- AWRA Meetings 1964-2014 (Appendix Table B)
- AWRA Award Winners 1964-2014 (Appendix Table C)
- Pictures of AWRA past presidents and their affiliations (Appendix Figure 1)

The Beginnings: 1964-1965

The concept behind the American Water Resources Association was developed by Sandor Csallany, a refugee who had arrived in New York City with his wife, Agnes, after fleeing from Hungary to Austria when the revolution of 1956 was suppressed. Csallany secured a position with the Illinois State Water Survey in Urbana, Illinois, and sought the help of Robert W. Finfrock, a local, civic-minded attorney, to incorporate the American Water Resources Association as a non-profit scientific association. Articles of Incorporation for AWRA were filed in the office of the Illinois Secretary of State on March 17, 1964, and the Certificate of Incorporation was issued on March 23, 1964. The three incorporators of record were Robert Finfrock, Sandor Csallany, and colleague Icko Iben, who for his role as an incorporator and his early contributions to the organization is viewed by many as a co-founder.

The purposes of AWRA as given in the Articles of Incorporation were as follows:

I. Advancing the science and technology of water resources by:
   a. Encouraging water resources development and other original work.
   b. Encouraging the preparation of original papers on water resources.
   c. Holding meetings for the presentation and discussion of original papers and participating in international congresses.
   d. Compiling papers and reports and experiences of value to scientists.
   e. Developing and promulgating standards, codes, formulas, and recommended practices.
   f. Offering rewards and other honors to encourage contributions to the science and technology of water resources.
   g. Furthering the purposes of the Association's library, of which the library of this society forms a part.

II. Enhancing the status of the Association by:
b. Cooperating with educational institutions in the maintenance of high standards of education.
c. Requiring a high standard of ethical practice by members of the Association.
d. Encouraging the personal and professional development of young scientists.
e. Supporting activities looking to the increased importance of water resources research.

III. Increasing the usefulness of the Association:
   a. Cooperating with other engineering and technical societies.
   b. Encouraging a high standard of citizenship among members.
   c. Encouraging members to participate in public affairs.
   d. Cooperating with governmental agencies in water resources matters.

Later these purposes were revised by the Board of Directors to read:

1. The advancement of water resources research, planning, development, management, and education.
2. The establishment of a common meeting ground for engineers and physical, biological, and social scientists concerned with water resources.
3. The collection, organization, and dissemination of ideas and information in the field of water resources science and technology.

The revised purposes of AWRA are an early expression of the desire to make AWRA a truly interdisciplinary organization inclusive of a variety of engineers and physical, biological, and social scientists.

Immediately after the issuance of the Articles of Incorporation, an announcement of the formation of the American Water Resources Association was widely distributed, both in the United States (U.S.) and abroad. The responses indicated a great deal of interest in this new organization. Meanwhile, a major effort was required to define AWRA's operations and, in particular, to organize the programs for publications and meetings. The first meeting of the Board of Directors was held on April 2, 1964. It was an organizational meeting, and matters requiring action were established and individual responsibilities outlined. At the second meeting of the Board on June 2, 1964, the by-laws were approved and officers elected. Finfrock was named Acting President; Iben, Vice President; Csallany, Secretary; and Harold Esker, Treasurer.

The first publication planned by AWRA was Hydata, which was to be a monthly index of the world's scientific literature in the field of water resources. Csallany and Iben chose to have Hydata as the first publication because it would fulfill a need and it could be offered almost immediately. In the months after the incorporation, a major effort was made to solicit the Table of Contents of all publications related to water resources, both domestic and foreign. Iben's linguistic skills facilitated getting the indexes of foreign language publications. The first issue of Hydata was available in early 1965, with Iben as Editor. It ceased publication in 1978. Hydata was resurrected in 1985 as Hydata News and Views, a monthly newsletter under the leadership of Editor S. Dhamothran. Hydata News and Views was replaced in 1999 by Water Resources IMPACT.

The first issue of the Water Resources Bulletin (Bulletin), the Association's journal, was published in March 1965. It was in the form of a 10-page newsletter. The Bulletin was dedicated primarily to the publication of original papers which were characterized by their broad approach to scientific and technical water problems. The Bulletin also carried important information about national and regional aspects of
water resources, book reviews, meetings, publications, and Association affairs. The promotion of papers with a broad approach to water problems in the Bulletin also reflected the early interdisciplinary focus for AWRA.

**The Early Years: 1965-1974**

The first office space for AWRA was in the home of several individuals. In the period from 1968 to 1974 the Association rented offices in two different buildings in Urbana, Illinois. AWRA’s first annual conference was held in December 1965 at the Center for Continuing Education at the University of Chicago. Nearly 200 members and guests attended the conference. The attendance was equal to about half the number of AWRA members in 1965. Thirty-three papers were presented in six general sessions. It is of passing interest to note the registration fee for this first conference was $5.00, $10.00 with the proceedings ($38 and $76 respectively in 2014 dollars). The Ladies' Program fee was $2.00 and student registration $1.00. The charge for the 389-page Conference Proceedings was $6.00. Those attending came from 40 states, the District of Columbia, Canada, Greece, and Taiwan. Participants represented educational institutions, local and federal government agencies, consulting firms, and other areas of the private sector. Disciplines represented included hydrology, geology, economics, geography, hydraulic engineering, civil and sanitary engineering, agriculture, forestry, meteorology, and law. The attendance at this first meeting was gratifying to those who had worked hard and diligently for the successful establishment of the American Water Resources Association. Certainly the wide representation of professions indicated the association had a strong initial appeal to many concerned with water resources both in the U.S. and abroad.

At the 1965 conference, it was announced Robert Finfrock had resigned as Acting President of AWRA, and Richard Harza of Harza Engineering Company was chosen to succeed him. The officers of the Board then were Harza, President; Iben, First Vice President and Editor-in-Chief; Finfrock, Second Vice President; Csallany, Secretary; and Esker, Treasurer. Also chosen as Directors were Kenneth Bowden and William R. (Randy) Boggess to replace Dorit Sandorfi and Laszlo Balogh who had been members of the Incorporating Board.

Before the election of officers at the conference, Harza and Bowden discussed AWRA at great length with Csallany, in particular to discern his goals for the Association and to determine that, in fact, it would be different from existing organizations. After much discussion they concluded Csallany envisioned it as a truly multi-disciplinary organization, one that would provide a common forum for individuals with varying interests in water resources. The establishment of the (1) Federal water resources research centers in each state, the formation of the (2) Water Resources Council and the related river basin commissions, the growing involvement in (3) water resources activities at all levels of government, and the beginning of the (4) International Hydrological Decade in 1965, were all indications AWRA would meet with general approval as an organization which would promote collaboration on water resources concerns at national and international levels.

The Second Annual American Water Resources Conference was also held at the University of Chicago on November 20-22, 1966. There was a nine-member program committee, chaired by Bowden, for this conference. There were more than 250 participants and 42 papers presented in five sessions. AWRA grew significantly in 1966 to nearly 1,000 members, more than double the 1965 membership of more than 400.

The Third Annual Conference of AWRA was held in San Francisco in early November 1967. AWRA’s first Symposium, on ground water hydrology, was held in conjunction with this conference. About 335 people
attended the two meetings. A measure of how quickly AWRA was establishing itself as a major participant in water resources issues is the fact that contributed papers for the conference and symposium came in "like a flood" and not all papers submitted could be accommodated.

At the Board of Directors’ meeting in San Francisco, several actions were taken to refine AWRA's governance and to improve its service to the water resources community. The first was the establishment of an Executive Committee as provided by the Constitution. The Board also established eight administrative and technical committees. These were Technical Program and Local Arrangement Committees for symposia or conferences; Finance and Audit Committees; Committee on National Cooperation; Committee on International Cooperation; Nominations Committee; Statutes and By-laws Committee; and Membership Committee. The Board also approved publication of Water Resources Abstracts. This journal was approved for publication beginning in 1968, and the guidelines for it were established.

In 1969 a change in the Constitution provided the Board of Directors could authorize the formation of sections and chapters. The purposes of sections and chapters were four-fold. First, they were to promote on a regional or local level the multi-disciplinary objectives of the Association. Second, they were to encourage membership in the Association. Third, they were to enhance communication on regional and local problems by sponsoring local conferences and seminars. Finally, they were to bring to the attention of the Board of Directors local interests, problems, and concerns.

The original constitution provided four membership categories: Members, Student Members, Corporate Members, and Honorary Members. In a 1969 revision of AWRA's Constitution, Fellow Members and Institutional Members were added. Honorary Members were to have attained acknowledged eminence in some branch of water resources science and/or technology. Fellow Members must have belonged to AWRA for at least ten consecutive years and served at least one year on any one of its committees or have been an officer or director.

There were continuing efforts made during this period to improve AWRA's operations. One significant improvement involved streamlining the procedure for selecting its officers and directors. Another was the appointment of a full-time Executive Director or Manager. A graduating student from Northern Illinois State University, Dana Rhoads, was selected for this position. A third was to move the headquarters to the St. Anthony Falls Laboratory at Minneapolis by the first of October 1974.

The second decade for AWRA started on a high note with its first full-time manager on board and a new home in an organization known internationally for its significant contributions to both education and research in the varying aspects of water resources management.

The Minneapolis Years: 1975-1981

In general, the Minneapolis years (1975-1981) were ones of growth. Membership increased by 31 percent and the Water Resources Bulletin circulation by 25 percent. There was an active publications program, with the Water Resources Bulletin being the principal publication. In this period the average number of papers per volume was 110. There were seven Annual Conferences and eight Symposia held in this same period. Conference attendance ranged from 281 (the Twelfth Conference, Chicago, 1976) to 950 (the Fourteenth Conference, Orlando, 1978). Attendance at Symposia averaged about 200. Among the significant changes in these years were:
• a revamping of some of the section and district boundaries;
• the positions of Canadian and International District Directors were abolished;
• early in 1976 Sandor Csallany announced he would not seek nor accept the nomination for another term in office as the General Secretary of AWRA;
• in 1976 Randy Boggess was elected to succeed Sandor Csallany as General Secretary;
• the publications Hydata and Water Resources Abstracts were discontinued in 1978 and 1980, respectively;
• in 1980 Dana Rhoads resigned as Executive Secretary of AWRA;
• Early in 1981 Kenneth D. Reid, CAE, was appointed as the AWRA Executive Director.

AWRA Comes of Age: 1982-1988

On the basis of a recommendation by then President Phillip Greeson and subsequent Board approval, the AWRA Headquarters was moved on October 26, 1982, to the Renewable Natural Resources Center in Bethesda, Maryland. The agreement with the Renewable Natural Resources Foundation (RNRF) was for the purchase of 1,400 square feet of office space. The move to Bethesda signaled the start of a strong period of growth for AWRA, orchestrated by Reid and a succession of vigorous and vibrant officers and directors and many others who have contributed their time and energies in many ways to the benefit of AWRA. Eight annual conferences were held from 1981 through 1988, as well as seven Symposia. Average attendance at Conferences was 340 and 210 for Symposia. The number of members increased by 35 percent from 1981 through 1988, and the Bulletin circulation was up 20 percent in the same period.

During 1985, AWRA President J. Paul Riley presided over the annual Conference and Ground Water Contamination/Reclamation Symposium in Tucson. A Tropical Hydrology Symposium and the Second Caribbean Islands Water Resources Conference was held at San Juan, Puerto Rico. AWRA sponsored an October technical tour (48 attendees) to four major cities in China, namely Guangzhou (Canton), Beijing, Guilin, and Xi'an. Meetings with technical counterparts and presentations were conducted at each of the cities. AWRA visited many historical sites, including the China Wall, the Forbidden City, the Terra Cotta Warriors, portions of the ancient Chinese canal system, and a ship tour on the River Li near Guilin.

In 1986 AWRA commissioned a survey of members. Its purpose was to determine member attitudes regarding the activities of the organization and its services, and to provide a focus for its future efforts. This survey provided useful information for AWRA's Long Range Planning Committee for its revised plan issued in January 1987. Some of the highlights of the survey were:

• Almost two-thirds of the respondents were focused in five areas of professional activity. They were civil engineering (24%), ground water hydrology (13%), surface water hydrology (12%), planning (8%), and water quality (6%).
• The Survey revealed the Bulletin was by far the most important service or product offered by AWRA. It was the major reason people join AWRA or renewed their membership. Hydata--News and Views was the second-highest rated service or product of AWRA.
• The major reason for attending a conference or symposium was "interesting topics on the program."
• No consensus could be reached on whether AWRA should adopt advocacy positions on water resources issues.
• It was concluded AWRA has a membership potential far beyond its current level. Further efforts to expand membership should be very carefully directed—concentrate on specific groups, maintain a consciousness of the interdisciplinary balance of AWRA, and ensure appropriate services are in place to retain newly recruited members.

During 1987 with Arlene L. Dietz as president, AWRA issued its first Long Range Plan; focused on defining staff responsibilities; and initiated a major membership outreach program which included the “calling card” sized membership form. With this mini-form all members were encouraged to invite colleagues into membership. It worked beyond our wildest dreams. A most creative AWRA Symposium—Monitoring, Modeling, Mediating Water Quality was offered in Syracuse, NY in 1987 where in one plenary session roles of the press and water resources professionals were reversed and at another role-playing exercises were introduced to solve scripted water resource problems. The theme of the 1987 Annual Meeting was Averting Water Crisis.


1988 During President Ray Hermann's 1988 term, the Association joined with the Water Pollution Control Association (now WEF) along with many other organizations to sponsor the "Water Quality 2000" effort to identify causes of and recommend solutions to water quality problems in support of the Clean Water Act. AWRA also established and awarded the Caulfield and Ackermann Medals. AWRA began an ad hoc committee of past presidents to refine and further define the roles of Association officers. AWRA suggested a past president's council be formed with a goal to reduce the AWRA mortgage.

1989 In 1989 with Jerry R. Rogers as AWRA President, the highlights included near-record annual attendance at two AWRA Conferences in Missoula, Montana (with the Headwaters Hydrology and Indian Water Rights as Symposia/Proceedings) and one in Tampa, Florida (hosted by the AWRA Florida Section), with a Wetlands Hydrology Symposium/Proceedings theme and the 25th Anniversary Celebration of AWRA. Most Past Presidents of AWRA formed a Presidential Procession entering the Tampa Hyatt Regency Ballroom for a memorable dinner with an AWRA birthday cake, an AWRA slide show, music and arrangements by Ken Reid and Mike Fink, and an address by the Florida Governor. The new AWRA Alabama Section held an educational conference at Gulf Shores, AL, with a co-incidental eclipse of the moon. Other new AWRA Sections included Tennessee and the re-activated AWRA Texas Section with annual conferences and Proceedings (1990-1994+) coordinated by T. Lynn Lovell, Marshall Jennings and Eve Kuniansky (U.S.G.S.-Austin), and John Grounds/Jerry Rogers.

1990 A focus on water policy issues and several changes in AWRA awards occurred during the presidency of Warren "Bud" Viessman, Jr. in 1990. The annual conference was held in Denver with a theme of the Science of Water Resources Models and Urban Hydrology. Two symposia were held: one in San Juan PR, dealing with Tropical Hydrology and one in Toronto, Canada with a focus on International Transboundary Water Resources Issues. Director of Operations, Michael J. Kowalski, joined the staff in 1990.

1991 President Peter Black changed the first Board meeting each year to January (with headquarters personnel) to facilitate annual planning in 1991. A spring picnic on the lawn of the RNRF was held for the tenth anniversary of Kenneth Reid joining AWRA. AWRA meetings were held in Cleveland, San Diego, and New Orleans during 1991.
1992 When David W. Moody was National President in 1992, AWRA maintained membership numbers and remained in relatively good financial condition, despite troubling times for the Nation's economy. Moody also emphasized developing partnerships with other professional organizations; expanding membership among non-traditional groups, such as state and local agencies and non-governmental organizations; fostering water education programs; and promoting cultural diversity within AWRA and the water resources profession.

AWRA applied for affiliation with the American Association for the Advancement of Science (approved by AAAS in February 1993) and joined the Coalition for Earth Science Education. AWRA's Water Education Initiative, led by Steve Vandas, helped the U.S. Geological Survey distribute a series of water posters for use in secondary schools. AWRA participated in international meetings in Dublin, Ireland and Rio de Janeiro, Brazil, in 1992. The International Affairs Committee, chaired by Ivan Johnson also examined how to best expand AWRA cooperation with other international bodies and play a larger role in the global water resources community.


1993 In 1993 with Chuck Mosher as president, four national meetings were convened: a GIS Symposium in Mobile, Alabama; two Symposia on Water Resources Education: A Lifetime of Learning and Changing Roles in Water Resources Management and Policy in Bellevue, Washington; and AWRA's 29th Annual Conference and Symposium on Groundwater and Water Reuse in Tucson, Arizona. Mosher chaired the two Symposia in Bellevue and he writes “survived only because of the superb assistance of Dr. Earl Spangenberg and Dr. Don Potts as technical chairs.”

At the AWRA Annual Conference, the Board decided to have three Vice Presidents; to work with Committees, Working Groups, and Sections and Chapters. An emphasis was placed on very broad themes for annual conferences so AWRA could attract a wide variety of water professionals. The Board also emphasized stronger participation in our conferences by working groups. The outstanding state section for the year was the Florida Section.

During the year, Dr. Bill Lord retired as Editor of the Bulletin and was replaced by Dr. Christopher Lant. Lant subsequently developed an excellent ‘Dialogue on Water Issues’ publication.

Overall, Chuck wrote “My favorite memories were the talented and creative AWRA members and staff. I enjoyed punning with the Board, especially Peter Black, and reading the witty Hydata captions written by Earl Spangenberg. I greatly benefited from the outstanding staff work of Ken Reid, Charlene Young, Mike Kowalski, Mike Fink, and Richard Stephens.”

1994 In 1994 AWRA celebrated its 30th Anniversary with Nancy C. Lopez as president. Ken Reid and his staff outdid themselves that year with four great meetings. The Annual Spring Symposium in Nashville addressed Responses to Changing Multiple-Use Demands: New Directions for Water Resources Planning and Management. In June 400 people gathered in Jackson Hole for the Annual Summer Symposium on the Effects of Human-Induced Changes on Hydrologic Systems. The big 30th anniversary celebration was in Chicago at the Annual Conference and Symposia, and the General Chairperson was Philip Greeson of the U.S. Geological Survey. Also, in 1994 AWRA conducted the Second International Conference on Ground Water Ecology in
Atlanta for the U.S. Environmental Protection Agency. We moved forward on other important fronts as well, including moving AWRA headquarters from the RNRF location to rental space in Herndon, VA in 1994.

Completing work started in 1993, we took steps to improve the timeliness and overall quality of the Bulletin. The new editor of the Bulletin, Christopher Lant of Southern Illinois University at Carbondale, established the section in the Bulletin called the "Water Policy Dialogue." A focus of President Nancy Lopez's term was to move AWRA into the information age, and Ken Lanfear with others stepped up to the plate to make it happen. In addition, AWRA began a project to use the multidisciplinary power of AWRA to prepare and distribute water resources issue papers.

On a sad note, we suffered a major loss in 1994 when Rich Herbert, AWRA's champion for the water education initiative, died of cancer. Notwithstanding his early passing, under Rich's innovative leadership AWRA worked with teachers organizations to make permanent advances in water resources education nationwide. The AWRA Richard A. Herbert Memorial Education Fund honors him.

1995 In 1995 major steps were taken to enhance cooperation among North and South American water scientists and organizations. The 1995 AWRA Annual Meeting was held in Houston, TX, with President John R. Wehle presiding and John Grounds as overall chairman. Two symposia were held in conjunction with the annual meeting: Ted Cleveland and Mark Loethan coordinated Symposia/Proceedings on Modeling and Flooding/Drainage and Jerry Rogers organized the North American Water Resources Symposia with speakers from Canada and Mexico. David Moody also led a meeting of the International Hydrologic Program Committee of the Organization of American States. Two narrated boat tours were hosted by the Port of Houston. A reconvened AWRA Conference (for 35 attendees) was held in Cancun, Mexico, with AWRA President John R. Wehle presiding (with Don Potts) over several more presentations on water issues in Mexico.

1996 During 1996 President Donald F. Potts led implementation of a Strategic Planning effort. Fundamental changes to AWRA were made following the planning process, including renaming the Water Resources Bulletin the Journal of the American Water Resources Association (JAWRA), involving serious discussions, including reorganization of the AWRA Executive Committee and Board. President Potts participated in AWRA meetings in New Orleans, Syracuse, Key West, RNRF, Ft. Lauderdale, and planning the first joint AWRA/Universities Council on Water Resources (UCOWR) meeting in Keystone, Colorado. In 1996 AWRA also officially began communications with members on the internet.

1997 The year 1997 with Stephan J. Nix as President was another turning point for AWRA. After many years of often-contentious discussion over making AWRA’s governance structure more effective, the Board of Directors was changed from a large geographically based group, to a smaller at-large group better structured to think and act strategically for the organization. In addition, the former “Working Groups” were reorganized into a smaller number of Technical Committees designed to meet specific, timely purposes. These changes required careful consideration and many modifications to the organization’s bylaws. All in all, this was a difficult effort made possible only by the open-mindedness and dedication of the 1997 Board members (and previous Boards that helped set the stage for these changes), and AWRA owes them a great deal. In the end, nearly all involved felt AWRA came out of 1997 better able to meet the challenges ahead. Many consider much of the success AWRA has experienced over the last several years and its current health as an organization stemmed from those changes. The year had two highly successful meetings. The first was the joint symposium with UCOWR in Keystone, CO, focused on water resources education, training, and practice. The second was the Annual Conference in Long Beach, California. During this conference, an important first
meeting was held to discuss the formation of a California Section. The newly organized Southern California Section hosted the very successful 2003 Annual Conference in San Diego, CA.

1998  Earl Spangenberg presided in 1998 for the first year of the reduced-size AWRA Board. The AWRA Board authorized the Water Resources IMPACT as AWRA's "news magazine for professionals" replacing Hydata News and Views. Three AWRA Meetings were held in Reno, Puerto Rico, and Alabama. Earl summarized his 1998 presidential year as part of: "continued growth and development of AWRA as an organization offering a variety of professional opportunities to a diverse audience."

1999  John J. Warwick's 1999 Presidency began with a letter to AWRA Members explaining why membership dues needed to increase from $90/year to $120/year. The AWRA Board in 1998 had just taken the bold yet necessary steps to increase membership fees. Fortunately, AWRA lost very few members and the organization was able to return to financial stability. The concept of "Strategic Doing" was the focus after several AWRA years of developing, revising, and otherwise fine tuning strategic plans. The entire AWRA Board took an active leadership role in defining future conferences from both a logistical and intellectual perspective. President Warwick noted: "As specific memories fade, one enduring feeling is the respect for and admiration of the AWRA headquarters staff led by Kenneth Reid."

A few other administrative changes also occurred in 1999. After five years at the Herndon, VA, location, AWRA headquarters was again moved to its current location in Middleburg, VA, where it has remained for nearly 15 years. In addition, AWRA headquarters staff was expanded to include a technical director. Dick Engberg was appointed to this position and has ably served in that capacity up to the time of this history update.

2000  In 2000, Janet L. Bowers presided over a symposium Water Resources in Extreme Environments hosted in Anchorage by the Alaska Section, with a wonderful once-in-a-life-time opportunity to visit Prudhoe Bay and the North Slope. Pictures of AWRA members standing on the ice-covered Arctic Ocean document this outstanding event. The AWRA Annual Conference was held in the opposite corner of the country, in Miami, hosted by the Florida State Section. The Board created and began presenting the new "Pyramid Award" to recognize achievements of outstanding young professionals. The first efforts to connect the AWRA technical committees via on-line communication were started to encourage and enhance member-to-member communication via the web-based medium. An outstanding event was the presentation of the American Society of Association Executives "Key Award" to our Executive Vice President Ken Reid for his career accomplishments. Janet L. Bowers participated in AWRA meetings in Washington D.C. and Green Bay, WI, and presented an AWRA approval letter to the new Philadelphia Metropolitan Area Section.

2001  Ken Reid celebrated his 20th Anniversary as Executive Director of the American Water Resources Association on May 1, 2001 with John S. Grounds III as National AWRA President. During 2001 AWRA initiated planning to facilitate a dialogue for a National Water Policy. The AWRA conference on Globalization and Water Resources: The Changing Value of Water at the University of Dundee, Scotland set AWRA as a world leader in water resources. With over 25 countries represented and 115 delegates attending, AWRA continued to build a legacy as a leading international water resources organization. President Grounds stated: "Our bequest was that of education. AWRA can improve the availability and quality of water by overcoming limitations of geography, politics, and society with successful solutions developed, implemented, and conveyed by our membership. The AWRA heritage will be defined by the customs such as the JAWRA with one in seven articles
authored outside of the U.S., entire editions of *IMPACT* dedicated to international affairs, special memberships to individuals in developing nations, or conferences expertly executed in a foreign land."

Other AWRA meetings presided over by John Grounds included: *Water Quality Monitoring and Modeling* in San Antonio, Texas; *Decision Support Systems for Water Resources Management* in Snowbird, Utah; the Annual Conference in Albuquerque, New Mexico; and the Board of Directors Meeting in New Orleans, Louisiana.

**2002** Kenneth J. Lanfear, 2002 AWRA President, noted the important *Water Resources Policy Dialogue* convened by AWRA in Washington D.C., with the support of 10 federal agencies and 25 non-federal agencies involved in water resources research, management, protection, and development. More than 260 water resources experts including senior representatives of the Administration, Congress, state and local officials, NGO officials, development groups, and concerned private citizens met for two days to review challenges and discuss what Congress and the Administration could do from a policy perspective to address a looming water resources crisis. AWRA’s reputation for objective, multidisciplinary themes served well in attracting an outstanding array of high-power participants. AWRA made progress with involving citizens’ watershed groups in its 2002 Annual Conference. 2002 also was the year AWRA inaugurated the International Electronic Membership, a low-cost service for citizens and residents of developing nations. This was made possible by *JAWRA* becoming fully available online with the August 2002 issue.

**2003-2014: Fulfilling the AWRA Mission**

**Overview.** Although AWRA programs during 2003-2014 leading up to the 50th anniversary year continued to be quite diverse, emphasis was placed on national and global water resources policy and integrated water resources management. This emphasis was in recognition of AWRA’s role in maintaining a strong linkage between water resources research and outreach programs and the development of effective water resources legislation and management practices at the national and global levels. The focus on water policy began in 2002 with a *Water Resources Policy Dialogue* convened in Washington, D.C. that was mentioned in the previous section. During 2003-2014 a second *Water Policy Dialogue* was held in 2005 in Tucson, AZ followed by a third Dialogue with Congressional staffers in Arlington, VA in 2007, and a fourth Dialogue in Washington, D.C. in 2008. These policy dialogues culminated in AWRA drafting and adopting several water policies used by Congress to help guide U.S. water policy legislation.

Integrated Water Resources Management (IWRM) also emerged as a major focus of AWRA programming during this period which unified many of the themes of meetings related to water governance (2004), institutions for sustainable management (2005), adaptive management (2006, 2009), trans-boundary water issues (2006), and IWRM (2010, 2011, 2014). The focus on policy and IWRM enhanced AWRA’s international participation and cooperation. Representatives from AWRA played significant roles in meetings held in Japan (2003), Scotland (2004), Mexico (2006), Turkey (2009), Puerto Rico (2010), Brazil (2011), South Korea (2010-11), France (2012), and China (2013) during this period.

AWRA programming along more traditional themes was also well represented during this period. Five GIS symposia were held during this period (2004, 2007, 2010, 2012, 2014), continuing AWRA leadership in GIS applications to water resources. Two symposia were also held on climate change impacts on water resources (2009, 2011) and several more were held which focused on riparian ecosystems (2004, 2008), Everglades restoration (2005, 2006), agricultural hydrology (2003, 2013), emerging contaminants (2007, 2012), and
environmental flows/healthy forests=healthy waters (2013). Annual conferences were regularly scheduled during election week in November with anywhere from 2-4 symposia in spring and summer. Attendance at annual conferences averaged about 450 and specialty conferences at about 200 with variations due to the nature of the program, location, and other factors such as government shut-downs. Roughly half of the attendees were non-members during this period suggesting broad appeal of conference programming. A complete list of meetings is given in Appendix Table B.

Interest in both of AWRA’s publications remained high during the entire period even though both publications experienced changes in editors. Earl Spangenberg, the only editor IMPACT ever had, retired from his position in 2013 and was ably replaced by long-time contributor Eric Fitch. JAWRA editorship also changed in 2006 when Ken Lanfear replaced John Warwick and Laura Helsel and the Association hired a staff member to manage the journal for the first time. This position in various forms was previously housed at the incumbent editor’s institution and this change will allow for continuity of journal management during editorship changes and the retention of legacy knowledge. In 2007 publication of JAWRA was switched to Blackwell Publishers (later acquired by John Wiley and Sons) which enhanced online availability. Surveys consistently showed members continue to rate AWRA publications as one of or the major benefit of membership. JAWRA achieved a citation impact factor of 2.074 in 2013 which placed the journal in the top third of ranked water resources and multidisciplinary geosciences journals. JAWRA Editor Ken Lanfear announced his intention to retire at the end of 2014 after 9 years of service. Longtime AWRA member and prominent research scientist Dr. Parker J. Wigington Jr. has been appointed by the AWRA Board of Directors to serve for a 3 year term as Editor-in-Chief beginning January 1, 2015.

Membership in AWRA has been stable to slowly declining since 2000, with total membership of about 2100 in 2013. Historically, despite the major impact of its programs, AWRA was never a large organization. Peak membership, of about 3500, occurred in 1991. In recent years many options for membership have been created (regular, online only, student, career transitional, retired, international electronic, and organizational associate) to meet member needs and advances in technology. Declines in regular membership have been increasingly offset by gains in other membership types. Of total memberships, roughly equal proportions of members come from the consulting, governmental, academic, and non-profit sectors.

Leadership of AWRA continued to give high priority to communicating with members as well as attendees at conferences and symposia. AWRA board members also redoubled efforts to encourage state and regional sections and student chapters by appearing at their meetings. Outstanding sections and chapters awards were also given regularly along with student scholarships. Interest remained high in AWRA programs with the 2013 Annual Conference in Portland, OR drawing a near record attendance of 530. All of these activities would not have been possible without the outstanding leadership from elected members of the AWRA Board of Directors as well as the guidance of AWRA Executive Vice President Ken Reid and Technical Director Dick Engberg, and the small but highly efficient and helpful AWRA staff. Communications on technical water issues were also enhanced by the growing use of AWRA webinars available online to members and non-members alike. Additionally, with authors’ permission, power-point presentations from meetings have been available online in recent years as a member benefit. More details on these programs and other presidential activities and perspectives are given in the summaries written by the presidents of AWRA during 2003-2014.
Presidential Summaries

2003  Jane L. Valentine was AWRA President in 2003. The 2003 AWRA Annual Conference was held in San Diego, CA (with 478 registrants); the spring conference on Agricultural Hydrology was held in Kansas City, MO (with 259 attendees); and the summer AWRA Conference Watershed Management for Water Supply Systems was held in N.Y., New York (with 260 registrants). Important achievements during 2003 were the initiation of improved access to career planning information for members and the publication of articles with a historical perspective in Impact. President Valentine noted the opportunity for professional development during her years of AWRA service due to attendance at leadership workshops and learning about running an organization through planning meetings related to budgets and membership, and various opportunities to communicate with members at meetings, online and in Impact magazine articles. She particularly enjoyed interactions with AWRA staff and fellow board members when she wrote, “Charlene Young and Ken Reid were a great source of support and encouragement. I will always cherish those experiences and insights gained. My thanks to Richard Engberg, Ken Lanfear, Mike Kowalski, Charlene Young, Pat Reid, and Harriet Bayse for their assistance and encouragement.”

2004  Robert J. Moresi was the 2004 President of AWRA. During his term, AWRA conducted a Specialty Conference in Nashville, TN (294 attendees) on the application of Geographic Information Systems (GIS) to water resources management problems; a Specialty Conference on Riparian Ecosystems in Olympic Valley, CA (230 people); and a second International Specialty Conference on Water Governance in Dundee, Scotland. AWRA's 40th Annual Conference was held in Orlando, FL (499 attendees). In addition, planning was begun to have AWRA participate in the Fourth World Water Forum in Mexico in 2006. Under Mr. Moresi's leadership, AWRA took a critical look at our governance and financial strength. Numerous changes were incorporated into the financial procedures, management processes, and governance to meet changing times and assure AWRA leadership as a multidisciplinary organization into the future. During the 2004 year, the leadership took initial steps to develop a ten-year plan for meeting member needs and began assessing a new branding message which remains AWRA's brand today.

2005  In 2005, many associations found themselves questioning the viability of face-to-face conferences and printed publications during a 21st Century in which electronic communication was touted as "the future" for the exchange of information and ideas. AWRA was no exception. Dr. Melinda (Mindy) Marsh Lalor, the 2005 national President, and the AWRA leadership discussed these topics in depth, and examined options within the framework of AWRA's commitment to Community, Conversation and Connections. Procedural changes were recommended for JAWRA and IMPACT to ensure the timely review and dissemination of information. Conference formats were modified to include more time and opportunities for informal discussions and personal interactions to strengthen the camaraderie and professional relationships through which new ideas and linkages flourish.

Two spring specialty conferences were held in 2005. The first, Water Policy Dialogue II, was held in Tucson, AZ and followed up a highly successful previous event in Washington, D.C. (237 attendees). The second, Everglades Restoration, was held in West Palm Beach, FL to address specific needs of those involved with or interested in this massive project (311 attendees). A summer specialty conference in Honolulu, HI focused on Institutions for Sustainable Watershed Management (102 attendees). The 2005 Annual Water Resources Conference, held in Seattle, included an AWRA Leadership Development Workshop, and was hosted by the AWRA Washington State Section (537 attendees).
2006  AWRA leadership in multidisciplinary water resources research, management, and education continued in 2006 during the presidency of David R. DeWalle. Major accomplishments included a broadly-focused Annual Conference in Baltimore (501 registrants) in November 2006 and several specialty conferences scattered throughout the year. In March 2006 AWRA continued its promotion of international water programs by arranging a session on Trans-boundary Water Resources Management at the Fourth World Water Forum in Mexico City. In recognition of AWRA’s international presence at this and earlier meetings, AWRA was elected to the Board of Directors of the World Water Council. A May 2006 specialty conference on GIS and Water Resources held in Houston, TX (293 registrants) enhanced AWRA prominence in promoting applications of geographic information system methods to water resources issues. A ground-breaking June 2006 specialty conference on Adaptive Management and Water Resources held in Missoula, MT (347 people) was one of the first to focus upon applications of adaptive management principles to water resources. Finally, AWRA in cooperation with the South Florida Water Management District was strengthened with co-sponsorship of the Second Everglades Restoration Conference in Ft. Lauderdale in September 2006, which followed a highly successful initial Everglades restoration conference in 2005.

Through the editorial leadership of John Warwick and Laurel Helsel, JAWRA showed positive growth in impact factor and was again rated as one of the most important benefits of membership. Long-time editor of AWRA’s Impact magazine, Earl Spangenberg, insured publication of a steady stream of timely, solution-oriented articles and news about emerging and practical water resources problems.

In 2006 AWRA recognized New Jersey as the outstanding State Section and the University of Washington won the outstanding Student Chapter. In 2006, AWRA’s Pyramid Award for Young Professionals was renamed the A. Ivan Johnson Award to honor a former AWRA leader who encouraged young professionals. President DeWalle participated in meetings of AWRA state sections in Tennessee and New Jersey.

2007  What a year! President Gerry Galloway wrote that 2007 started with the crunching of snow in Washington D.C. and ended with Native American drums pounding across the New Mexico landscape. Once again AWRA and its outstanding members came together to communicate, network, and continue to build our community of water resources leaders and to educate and inform those who must deal with water at the federal, state, and community level.

In January, AWRA brought together senior leaders in water resources from around the nation to hold the Third National Water Resources Policy Dialogue in Arlington, Virginia. In spite of a major snowstorm that slowed but did not stop attendees, over 150 experts assembled to review the two previous Policy Dialogues and to develop recommendations that would be sent to the President, Congress, and 50 state governors. As before, the attendees saw the need for development of a national water vision that would lead to policies, goals and objectives, better coordination and collaboration among federal agencies and between the federal and state level, attention to watershed-based planning, and effective use of the scientific talent and information available to the nation. Following dispatch of the letters to leaders, AWRA officers were invited to meet with White House officials and the staffs of both the Senate Majority Leader and the Speaker of the House of Representatives. Thirteen governors responded to the recommendations and offered their support to move water resource policy ahead. In November, the Congress passed a Water Resources Development Act that included the statement of a national policy for flood risk reduction, a small step forward.

In June, AWRA held a specialty conference on Emerging Contaminants in Vail, Colorado. Conference leaders Bill Battaglin and Dana Kolpin reported attendees shared a growing awareness that some of these contaminants can have human or ecological health effects and there is a clear need for both better understanding of their fate
in environmental systems and better communication of what the results of scientific investigations mean to the general public.

The annual meeting, held in Albuquerque, brought nearly 500 participants to New Mexico to profit from outstanding technical sessions and great opportunities to meet with each other and enjoy the flavor of the Southwest. Michael Campana led the conference organization and Karl Williard put together the technical program that included over 300 oral presentations in 81 sessions and 83 posters in six sessions. Conference abstract submissions led to the development of tracks in Climate Change, Water Quality, Transboundary Issues, Stormwater Management, TMDLs, Watershed Planning and Management, and Developing Countries. Tracks were also developed in in two new areas, Hydrophilanthropy and the Energy/Water Nexus, and were extremely well attended.

Ken Lanfear, the new editor of *JAWRA*, published six issues and initiated arrangements with John Wiley and Sons to shift publication efforts to that company and to begin release of electronic versions of the publication. Earl Spangenberg and his outstanding associate editors published six issues of *IMPACT*. As always, Ken Reid and the Middleburg AWRA staff provided the Association with another year of outstanding and enthusiastic support.

**2008** During the 2008 AWRA year, President Jane Offringa Rowan requested the National conference take place in post-Katrina New Orleans (394 registrants) even though the Florida State Section was planning the conference. The Florida folks graciously agreed because of their own parallel experiences from hurricane damage recovery. Focus would be on ecosystem restoration and coastal flood risk reduction and resiliency. The opening field trip included excursions to the large flood gates and levee systems designed and constructed by the U.S. Army Corps of Engineers Hurricane Protection Office. Other conferences Rowan attended included the GIS Conference in San Mateo, CA (304 people), which was impressive with the level of expertise and application of GIS software to water resource related projects. The Alabama State Section Conference in Perdido Beach included members and attendees from many backgrounds, including the state transportation agency with a range of discussions from wetland mitigation to the Alabama State Port Authority noting the importance of the port to the state. The Wisconsin State Section conference in Madison focused mostly on ground water modeling. The *Riparian Restoration Specialty Conference* in Virginia Beach/Newport News (310 registrants) featured many high quality presentations from all over the country, with heavy involvement from the U.S. Forest Service and other state and federal agencies, clearly representing the state of riparian restoration science. The final policy dialogue, *National Water Resources Policy Dialogue IV* was held in September in Washington, D.C. Finally, President Rowan worked with representatives of the U.S. Army Corps of Engineers to jointly develop programs related to integrated water resources management.

**2009** Gerald “Jerry” Sehlke was President of AWRA in 2009. Under his leadership on the Board and as President, AWRA began to focus more on the water policy-science interface. Historically, AWRA has been primarily a science and education based organization. AWRA began to focus more on “science in service of policy” (*i.e.*, helping inform state and national decision-makers relative to developing practical, scientifically-based policies for addressing the nation’s most significant water-resources issues). This included focusing AWRA’s *Fourth National Water Resources Policy Dialogue on Moving from Concepts to Action*. The Dialogue, hosted in 2008 by several members of the U.S. House of Representatives and co-sponsored by the Environmental and Water Resources Institute of the American Society of Civil Engineers and the National Wildlife Federation, was held in the Rayburn House Office Building, Washington, D.C. It included 25-30 water leaders from around the nation and congressional staff members who are active in water resources issues to discuss how the outcomes of the first three Dialogues might best be moved from concepts to legislative and executive action, and to inform the 2008 presidential campaigns. AWRA also developed an internet-based
“policy wiki” and held a national discussion among AWRA members and the public on whether the U.S. should develop a national water “vision” or policy to focus the management of water resources in the U.S. in the future.

In 2009 AWRA hosted three conferences: the Annual Conference was held in Seattle, WA (with 448 attendees); the spring specialty conference Managing Water Resources and Development in a Changing Climate was held in Anchorage, AK (with 241 registrants); and the summer Specialty Conference Adaptive Management of Water Resources II was held at Snowbird, UT (with 177 attendees). In addition, Ken Reid and a number of AWRA members/board members attended the 5th World Water Forum in Istanbul. AWRA and The Nature Conservancy played significant roles within “Theme 3” of the Forum which was focused on Collaborative Spirit Internationally. AWRA also played a lead role in the Day of the Americas, a regional preparatory meeting for the upcoming Forum.

2010  Ari M. Michelsen was AWRA President in 2010. His presidency marked the development and initial implementation of a five-year Strategic Plan to address the long-term needs of membership and the organization. Facilitated workshops designed to clearly define high priority objectives and goals were held in preparation for plan development. This strategic plan continues to be used and evolve. Implementation of this plan has allowed AWRA to better serve the needs of the organization’s members and attract new members. It has also resulted in increasing national and international visibility of AWRA, and access to AWRA.

Implementation of the Strategic Plan entailed many activities including a large survey of members and non-members to better understand and address member’s needs and preferences and the development of a series of AWRA policy statements prepared by the Policy Committee, Chaired by Brenda Bateman. The first two policy statements were adopted and published in 2010. The first recommends Organizing Water Related Decisions in a Hydrologic Context and the second recommends developing Sustainable Funding for Water-Resource Infrastructure.

Two additional policy statements were developed in 2010 and adopted by the Board the following year. The first recommend the use of Integrated Water Resources Management (IWRM) in water policies, planning, and programs. This reflects the multi-disciplinary nature of AWRA and built upon AWRA’s participation in the 5th World Water Forum in Istanbul, and in particular, its leadership in IWRM at the Forum. AWRA has subsequently expanded its contribution to the advancement of IWRM, by creating an award recognizing exceptional IWRM programs, conducting specialty conferences on IWRM in 2011 and 2014 Chaired by 2011 President Michael Campana, the Policy Committee publishing IWRM Case Studies: From Local Stewardship to National Vision in 2012 and leading the IWRM Priority Theme at the 6th World Water Forum in Marseille in 2013, including the need for integration of groundwater in IWRM by Michael Campana.

During 2010, AWRA continued development of a National Water Vision and Strategy policy statement for the use, protection, and management of water resources as a follow-up to AWRA’s four national Water Policy Dialogues and recommendations. Representing AWRA, Michelsen signed a Memorandum of Agreement with the South Korean Water Resources Association (KWRA), and was the keynote speaker at the KWRA annual conference in Daejeon City. (South Korea was later selected as host of the 2015 World Water Forum.) In other activities during 2010, Michelsen was invited to provide the introduction to a special supplement for the Los Angeles Times on Water Management and represented AWRA on the National Water Census Advisory and National Levee Safety Advisory Committees.
Three conferences were held in 2010: the Sixth Annual GIS Specialty Conference in Orlando, FL (with 303 registrants); an International Specialty Conference and 8th Caribbean Islands Water Resources Congress in San Juan, PR (with 91 in attendance, punctuated by Hurricane Earl); and a great Annual Conference in Philadelphia, PA (441 attendees), which included new programs for young professionals such as “Ask Me About?” and the “Mentor-Mentee” program. Since the conference was during Halloween the Board recognized the occasion by dressing in water resources costumes with awards and Poseidon as the Master of Ceremonies.

2011  
Michael E. Campana, long ago unmasked as a genuine 24/7 WaterWonk, realized his dream by serving as AWRA President in 2011, thus becoming the first unrepentant Tweeter and blogger (WaterWired) to serve in that position. He used the AWRA blog effectively to present his assorted messages, rants, and other superfluous information.

But enough already - what happened in 2011? The excellent strategic plan President Ari Michelsen (the recipient of the 2011 President’s Award) crafted in 2010 was updated. The Board adopted policy statements calling for: 1) development of a national water vision and strategy; and 2) adoption of Integrated Water Resources Management (IWRM) principles in the U.S. Plans were advanced for the AWRA presence – leader of the IWRM forces - at the Sixth World Water Forum in March 2012. In keeping with AWRA’s enhanced IWRM visibility it assumed a more prominent role as a partner in the UNESCO Category II Center, ICiWaRM – International Center for Integrated Water Resources Management – that is led by the USACE’s Institute for Water Resources. All marveled at the incredible acronym! AWRA also signed an Memorandum of Understanding (MOU) with the nascent nonprofit the Clean Water America Alliance (now known as the U.S. Water Alliance), led by former EPA Office of Water head Ben Grumbles. The MOU led to AWRA teaming with the Alliance and finally breaking into the webinar market with the three-part series Hydraulic Fracturing: Fresh Facts & Critical Choices, moderated by Grumbles and Campana and arranged by Dick Engberg. Campana traveled to Daegu, South Korea to keynote the annual meeting of the Korea Water Resources Association (KWRA) and Porto de Galinhas, Brazil to represent AWRA at the IWRA’s XIV World Water Congress. Both organizations are still on good terms with AWRA. The Annual Conference returned to Albuquerque, whose motto, ‘Next 17 Exits’, had attracted nationwide yawns. Previous Duke City meetings in 2001 and 2007 were chaired by Campana, but Stephanie Moore’s chairing of the 2011 meeting assured no yawns and plenty of cheers.

Specialty conferences tackled two pressing issues: the climate change – water nexus and IWRM. The first issue was addressed in the Spring Specialty Conference, Managing Climate Change Impacts on Water Resources: Adaptation Issues, Options & Strategies, which convened in April at Baltimore’s Sheraton Inner Harbor Hotel, just a long outfield throw from the Baltimore Orioles’ Camden Yards. Despite fear that Federal employees might be precluded from attending for want of a Federal budget (an event that never materialized), the meeting went off nary a hitch and generated much discussion and enthusiasm. Chair Mark Dunning and Technical Co-Chairs Jerry Sehlke and J. Rolf Olsen earned kudos for masterminding this event. The Summer Specialty Conference, conceived and chaired by Campana with substantial help from John Tracy and Ari Michelsen, was humorously but aptly dubbed Integrated Water Resources Management: The Emperor’s New Clothes or Indispensable Process? A cadre of IWRM aficionados met in the gorgeous Wasatch Mountains at Snowbird, UT to debate the efficacy and applicability of IWRM and significance of the conference title. This conference was a landmark for two reasons: 1) it was AWRA’s first foray into the IWRM conference realm and arguably the first such international conference on the topic; and 2) it featured a very successful ‘embedded’ symposium organized by outside groups, the Symposium on Collaborative Modeling as a Tool to Implement IWRM. The conference, buoyed by the symposium, was a resounding success and attracted much attention. A second IWRM specialty conference was held in Reno in June 2014 with John Tracy
as the Chair and Campana as Technical Chair. The symposium concept resurfaced at the 2013 Annual Water Resources Conference in Portland, OR, co-chaired by Campana and Policy Committee Chair Brenda O. Bateman.

Under Ken Lanfear’s able editorship JAWRA continued its inexorable rise in the journal equivalent of the polls. Earl Spangenberg and his crew ensured IMPACT chronicled its usual spectrum of controversial water topics: climate change impacts, disaster management, IWRM, hydraulic fracturing, water trading, and historical aspects. As usual, the indefatigable Ken Reid, the remarkable AWRA staff, and Board colleagues covered the President’s foibles. What more could anyone have wanted?

2012  William A. Battaglin was the 2012 President of AWRA. During his term AWRA held a Specialty Conference titled GIS and Water Resources VII in New Orleans which had 250 participants. We then held our first Specialty Conference doubleheader with Contaminants of Emerging Concern II followed immediately by Riparian Ecosystems IV in Denver which together had 230 participants. The 48th Annual Conference was held in Jacksonville and had 350 participants. President (or President-elect), Battaglin attended and/or made presentations at AWRA State Section sponsored conferences in Utah, Florida, Montana, Alaska, Colorado, and Alabama. During his term, AWRA Board members and staff worked to: implement our Strategic Plan, develop new ideas and programs for growing membership, start a webinar series, make changes to AWRA bylaws to increase the amount of scholarship funds available for distribution from the Herbert Fund, develop a Memorandum of Understanding with the Canadian Water Resources Association, start the process of invigorating our technical committees, and continue our leadership role in promoting Integrated Water Resources Management. AWRA played a significant role in program development and participated on several levels at the 2012 World Water Forum in France. During his 3 years on the AWRA Executive Committee Bill led “fun runs” in Albuquerque, Denver, Jacksonville, St Louis, and Portland.

2013  In 2013, Carol R. Collier of the Delaware River Basin Commission was the President of AWRA. It was an exciting year starting with a Strategic Board Retreat led by Harrison Coerver, author of The Race for Relevance. Based on the retreat discussions, the Board focused on increasing the value of the organization to our members and building on the IWRM theme by prioritizing the following actions.

- Increased contact and outreach with members as well as State Sections and Student Chapters through the Connections and Catalyst newsletters, President’s letters, social media, and blog posts. Carol was able to attend State Section meetings in New Jersey, Delaware, Pennsylvania, Philadelphia Metropolitan Area, Utah, and Montana; the Mid-Atlantic States conference; and the Water for Mega Cities meeting in Beijing, China.
- Expanded the conference experience through webinars and taping of key conference presentations. This was especially important due to the many restrictions on travel and conference budgets at all levels of government, as well as in the private sector.
- Knowing the importance of technology and electronic outreach, the Board worked with staff to upgrade the AWRA website, including interactive capabilities.
- Updated our Technical Committees by surveying the membership as to interests and establishing the following six (6) committees, each with accountability and a Board Liaison: Policy, International, Flowing Waters, Future Risk, IWRM, and Technology.
- Initiated a Member Value Proposition Study with Marketing General, Inc. (MGI).
• Kicked off the development of a National IWRM Awards Program and IWRM Certification Program for projects and programs, funded by the USACE.

• On February 7, 2013 Richard “Dick” Engberg convened the AWRA 50th Anniversary Committee to initiate planning through monthly teleconferences. Members of the committee were D. Watt, L. D. James, S. Nix, E. Spangenberg, A. Dietz, M. Dunning, D. DeWalle, J. Rogers with R. Engberg serving as chair.

It was also the year Earl Spangenberg decided to retire from the role of Editor-in-Chief of Water Resources IMPACT magazine. Although it was bittersweet to see Earl retire, the seat was ably filled by Eric Fitch. JAWRA increased its impact factor to 1.956, which was a huge accomplishment.

AWRA staff and conference committees were incredibly busy with the following successful events:

• Spring Conference – Agricultural Hydrology, St. Louis, MO (199 attendees)
• Summer Conference – 2 parts: a) Environmental Flows (92 attendees) and b) Healthy Forests = Healthy Waters, Hartford, CT (99 attendees)
• International Conference – Water for Mega Cities: Challenges and Solutions, co-hosted with Beijing Hydraulic Engineering Society, Beijing, China (28 Delegates)
• Annual Conference with record breaking number of abstract submittal and attendees, Portland, OR (530 attendees)
• Building on two Case Study Reports produced by the Policy Committee (Case Studies in Integrated Water Resources Management: From Local Stewardship to National Vision and Proactive Flood and Drought Management: A Selection of Applied Strategies & Lessons Learned from around the United States), we had a series of webinars that were very popular, with every phone line taken.

The message of the year was “AWRA is needed now, more now than ever.”

2014  C. Mark Dunning: As I write this in mid-March of 2014 many of our 2014 achievements have yet to reach fruition. Nevertheless, we have gotten off to a good start and are looking forward to a full and exciting year that will be highlighted by the celebration of AWRA’s 50th anniversary. Our year began with the AWRA Winter Board of Directors Meeting in January. As in years past we have an extremely well-qualified Board which is eager to get things done to ensure AWRA remains the pre-eminent water resources organization, as well as an outstanding staff that keeps everything moving. Building on the extensive strategic planning undertaken by President Carol Collier in 2013, the Board adopted six strategic focus areas to concentrate on in 2014:

• Extending AWRA’s position as the leader in Integrated Water Resources Management
• Improving AWRA’s technical committees
• Improving AWRA’s public presence and public recognition and appreciation of AWRA as a resource for multi-disciplinary water resources information
• Understanding and improving AWRA’s “value proposition” to its members and customers
• Developing metrics for better understanding AWRA performance in meeting membership and financial goals
• Re-examining AWRA’s vision and mission statement

Each of these focus areas has a task force, led by a Board member, and is following a plan of action to achieve a series of “results goals.” Progress is being reported on in periodic update meetings to be held throughout the year.

We have three exciting conferences planned for the year:

• Spring Specialty Conference in GIS and Water Resources, May 12 -14, in Salt Lake City, UT
• Summer Specialty Conference on Integrated Water Resources Management, June 30 – July 2, in Sparks (Reno), NV
• Annual Conference, Nov 3 – 6, Tysons Corner, VA (Washington, D.C. area)

There are also changes in our publications in 2014. Long-time editor of Impact magazine, Earl Spangenberg, retired after producing many excellent issues of AWRA’s popular consumption magazine. Eric Fitch took the helm as editor. His first issue, in January 2014, which focused on “AWRA at 50: The Future of Water Resources in the United States” was terrific, and no doubt is the harbinger of many excellent issues to come. Ken Lanfear, the editor of AWRA’s professional journal, JAWRA, who has accomplished so much in making JAWRA the outstanding publication that it is, announced his retirement effective December 2014. The AWRA Board has selected Dr. Parker J. Wigington Jr. to fill Ken’s big shoes.

Future Outlook

Over the five decades of its existence, the American Water Resources Association has evolved into an organization highly respected both nationally and globally for the quality of its multidisciplinary water resources publications, meetings, and other educational outreach programming. As in the past, the greatest challenge for the future is to expand membership and continue to improve the value of programs for the members at the national, state, and local levels. Since members have regularly rated AWRA publications as the most important benefit from membership, continued growth in quality of JAWRA and IMPACT obviously must be ensured. AWRA must redouble efforts to explore new partnerships with the national/international water community and governmental agencies to further enhance program quality and scope to respond to shifts in water issues. Finally, as technology allows, AWRA must also provide more efficient, cost-effective ways of communicating with clientele and members such as the recently employed webinars and online power point presentations from meetings. With these goals in mind, the grass-roots, multidisciplinary structure and function of AWRA as an organization have enabled AWRA to respond to the changing societal needs in the past and this resiliency and adaptability should serve the organization well in the future.

Acknowledgments

In addition to the many volunteer members who served AWRA in various capacities during these 50 years, the accomplishments described in this history would not have been possible without AWRA’s efficient, pleasant, dedicated, and knowledgeable administrative staff. Though many of these staff members are mentioned in the text by the past presidents and not all past staff members are mentioned here, we offer some further recognition of the role of current staff in this history. Executive Vice President, Kenneth D. Reid, has provided skillful administrative leadership over all AWRA functions including meetings/symposia, finances,
personnel, publications, office management, and membership since 1981, or over 33 years. He has been aided since 1999 by Technical Director, Richard A. Engberg, who assists on technical water issues related to publications, webinars, meeting/symposia water programs, other special projects like arrangements for the 50th anniversary year, as well as providing general staff support when needed. Michael J. Kowalski has served as Director of Operations including all things related to finances and budgets since 1990. Patricia A. Reid has been the Program Coordinator since 1995. She works with members in abstract submission and development of programs for annual meetings and symposia. Gary Whitton has served as AWRA Webmaster since 1999. Susan Scalia has been JAWRA Managing Editor since 2006 and works closely with current Editor Ken Lanfear. Charlene E. Young has assisted with publications in several capacities since 1977. Jacque Towner has been Office Manager since 2005 and Christine McCrehin joined the staff as Membership Services Manager in 2012. Combined, these people deserve much of the credit for the success of AWRA.

More AWRA History


APPENDICES

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## Appendix Table A. AWRA Officers and Editors 1964-2014

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<th>Year</th>
<th>President</th>
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<tr>
<td>1968</td>
<td>Garald G. Parker, Sr</td>
<td>2011 - Michael E. Campana</td>
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<td>1969</td>
<td>Edward Silberman</td>
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<td>1971</td>
<td>Arleigh H. Laycock</td>
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2009 - Ari M. Michelsen
2010 - Michael E. Campana
2011 - William A. Battaglin
2012 - Carol R. Collier
2013 - C. Mark Dunning
2014 - John C. Tracy

Vice President
1964-1970 - Icko Iben
1966-1967 - Robert W. Finfrock
1968 - Edward Silberman
1969 - William R. Boggess
1970 - Arleigh H. Laycock
1971 - William Whipple, Jr.
1972 - Kenneth Bowcock
1973 - Reuben J. Johnson
1974 - James C. Warman
1975 - Thad G. McLaughlin
1976 - Murray W. Wiggins
1977 - Daniel D. Evans
1978 - Richard C. Tucker
1979 - Kenneth D. Schmidt
1980 - Phillip E. Greeson
1981 - Melvin W. Anderson
1982 - David A. Rickert
1983 - J. Paul Riley
1984 - Albert Rango
1985 - Arlene L. Dietz
1986 - Raymond Herrmann
1987 - Jerry R. Rogers
1988 - Warren Viessman, Jr.
1989 - Peter E. Black
1990 - David W. Moody
1991 - Charles D. Mosher
1992 - Nancy C. Lopez
1993 - John R. Wehle

Vice President for Committees
1994 - Donald F. Potts
1995-1997 - John J. Warwick

Vice President for Working Groups
1994-1996 - Wade L. Nutter
1997 - Isabel B. Gonzalez-Jettinghoff

Secretary
1964-1970 - Sandor C. Csallany
1977-1982 - William R. Boggess
1983 - Albert Rango
1984-1985 - Charles D. Mosher
1986-1988 - S. Dhamotharan
1989-1991 - Nancy C. Lopez
1995-1996 - Nancy E. Driver
1997 - Gregory J. Westfall

Treasurer
1968-1970 - G. Sprugel
1971-1974 - J.C. Gilbreth
1974-1982 - Mary H. Marsh
1983-1987 - Gary C. Taylor
1987-1989 - David W. Moody
1990-1994 - Kenneth J. Lanfear
1995-1997 - Janet L. Bowers

Secretary/Treasurer
1998 - Janet L. Bowers
1999-2000 - Isabel B. Gonzalez-Jettinghoff
2001-2006 - D. Briane Adams
2007-2011 - Robert J. Moresi
2011-2015 - David R. Watt

Director-at-Large
1966-1968 - William R. Boggess
1969-1971 - Kenneth L. Bowden
1972-1974 - N.L. Drobny
1975-1977 - Richard C. Tucker
1978-1980 - David A. Rickert
1981-1983 - Jerry R. Rogers
1984-1986 - Randy J. Charbeneau
1987-1989 - L.M. Blain
1990-1992 - Jeffrey T. Armbruster
1996-1997 - Michael C. Yurewicz
Director – Pacific Northwest
1967 - A. J. Dolcini
1968-1970 - T.R. Walenta
1971-1973 - S.P. Gessel
1974-1976 - F.H. Hahn
1977-1979 - J.E. McCall
1980-1982 - C.R. Collier
1983-1986 - C.S. Allred
1987-1989 - D.E. Anderson
1990 - Charles D. Mosher
1991-1995 - Richard F. Dworsky
1996-1997 - Jacqueline E. Hightower

Director – Pacific Southwest
1970-1972 - H.O. Banks
1973-1975 - Daniel D. Evans
1976-1978 - Kenneth D. Schmidt
1979-1981 - L.G. McMillion
1982-1984 - M.M. Mooradian
1985-1990 - H.B. Osborn
1991-1996 - Don W. Young
1997 - Diana L. Weigmann

Director – Mountain
1967 - Gerald G. Parker
1971-1973 - Thad G. McLaughlin
1974-1976 - W.D. Striffler
1977-1979 - P.A. Rechard
1980-1982 - John P. Riley
1983-1985 - Ray Herrmann
1986-1988 - Richard A. Herbert
1989-1991 - B. Van Haveren
1992-1993 - Donald F. Potts
1994 - R.C. Sidle
1995-1997 - Robert C. Ward

Director – West North Central
1967-1969 - J.W. Howe
1970 - F. Foley
1971-1974 - S.N. Davis
1975-1980 - A.M. Gebbard
1981-1983 - D.J. Anderson
1984-1986 - P.A. Bloomgren
1987-1990 - Kenneth N. Brooks
1990-1992 - J.N. Leete
1993-1995 - R.H. Hotchkiss
1996-1997 - Susan S. Seacrest

Director – West South Central
1967-1969 - J.C. Gilbreth
1970-1972 - L.E. Mack
1973-1975 - J.E. Caffey
1976-1978 - J.R. Rogers
1979-1981 - M. Bates
1982-1984 - T.L. Lovell
1985-1987 - Joy A. Bartholemew
1988-1990 - D.D. Adrian
1991-1993 - K.F. Steele
1994-1996 - Juan B. Valdes
1997 - John S. Grounds III

Director – East North Central
1966-1968 - K.L. Bowden
1969-1971 - R.A. Deininger
1972-1974 - G. Karadi
1975-1977 - H.C. Preul
1978-1980 - R.S. Gemmell
1981-1986 - N.Earl Spanganberg
1987-1992 - Vladimir Novotny
1993-1995 - D.D. Baumann
1996-1997 - G. Nicholas Textor

Director – East South Central
1967-1969 - James C. Warman
1970-1972 - P.E. LaMoreaux
1973-1975 - M.S. Priest
1979-1981 - J.A. Gordon
1982-1984 - V.E. Wiedeman
1985-1986 - Gerald G. Parker, Jr.
1986-1987 - Alfred M. Duda
1988-1990 - Fred Quinones
1991-1993 - E. Burkett
1994-1996 - Ralph H. Brooks
1996-1997 - Dennis H. Block

Director – Middle Atlantic
1970 - William Whipple
1971 - N.L. Barbarossa
1971-1974 - Leonard B. Dworsky
1975-1977 - M.L. Granstrom
1978-1980 - David J. Allee
1981-1986 - Peter E. Black
1987-1989 - W.H. Lee
1990-1991 - Stephan J. Nix
1992 - David C. Yaeck
1993-1995 - D.A. Haith
1996-1997 - Willliam R. Bauersfeld

**Director - Chesapeake**
1977-1979 - Phillip E. Greeson
1980-1982 - Donald R. Wiesnet
1983-1985 - J.C. Kammerer
1986-1988 - Madge O. Ertel
1989-1991 - J.P. Deason
1995-1997 - Kenneth J. Lanfear

**Director - South Atlantic**
1970-1972 - Reuben J. Johnson
1975 - L. Jahn
1976 - L.D. James
1976-1978 - Ronald M. North
1979-1980 - Melvin W. Anderson
1981 - A. Kreitman
1982-1984 - T.N. Debo
1988-1990 - Wade L. Nutter
1991-1993 - David Fisk
1994-1996 - D. Briane Adams
1997 - Gerald E. Seaburn

**Director - New England**
1967-1969 - W.C. Kennard
1973-1975 - J.A. Baker
1976-1978 - Milt Potash
1979-1981 - G.L. Byers
1982-1984 - L.R. Johnston
1985-1987 - E.A. Cassell
1988-1990 - Milt Potash
1991-1993 - J.C. Clausen
1994-1996 - Mike Yurewicz
1996 - Delbert F. Downing
1997 - Keith W. Robinson

**Director - Canada**
1967-1969 - Arleigh H. Laycock
1970-1972 - J.P. Bruce
1973-1975 - Murray M. Wiggins
1976-1978 - M. Hendler
1979-1981 - F.J. Quinn

**Director - International**
1967 - W.D. Rose
1968-1970 - J. Otnes
1971-1973 - J.C. Ringenoldus
1974-1976 - A. Santiago-Vazquez

**Director**
1998-1999 - Dennis H. Block
1998-2000 - Patricia H. Lodge
1998 - Diana L. Weigmann
1998 - Gregory J. Westfall
1998 - Michael C. Yurewicz
1999-2000 - David R. DeWalle
1999-2000 - Kathryn J. Hatcher
1999-2001 - Jane L. Valentine
2000-2002 - Robert J. Moresi
2000-2002 - Ronald A. Yates
2001 - David R. DeWalle
2001-2003 - Melinda M. Lalor
2001-2003 - Parker J. Wigington, Jr.
2002-2003 - Kenneth H. Reckhow
2002-2004 - Claire Welty
2003-2005 - Jane O. Rowan
2003-2005 - Gerald Sehlke
2003-2007 - William A. Battaglin
2004-2006 - Robert Beschta
2004-2006 - David R. Watt
2005-2007 - Tamim Younos
2006-2008 - Faye Anderson
2006-2008 - Ari M. Michelsen
2007-2009 - Mary Theresa Flynn
2007-2009 - Thomas E. Johnson
2008-2009 - Michael E. Campana
2008-2013 - Martha B. Corrozi Narvaez
2010 - Rafael E. Frias III
2009-2011 - Carol R. Collier
2009-2011 - Karl W.J. Williard
2010-2012 - Kenneth A. Carper
2010-2012 - C. Mark Dunning
2011-2013 - Martha B. Corrozi Narvaez
2011-2013 - Laurel E. Stadjuhar
2012-2013 - John C. Tracy
2012-2014 - John Wells
2013-2015 - Rafael E. Frias III
2013-2015 - Noel Gollehon
2014 - Lisa Beutler
2014-2016 - Brenda O. Bateman
2014-2016 - L. Donald Duke

Editor/Editor-in-Chief - *Water Resources Bulletin* or (after 1979) *JAWRA (Journal of the American Water Resources Association)*
1970-1972 - A.I. Kashef
1972-1973 - William R. Boggess

1982-1986 - Milt Potash
1986-1990 - Richard H. McCuen
1990-1990 - Dale E. Meredith
1994-2001 - Christopher L. Lant
2002-2006 - John J. Warwick
2006-present - Kenneth J. Lanfear

Editor - *HYDATA-News & Views*
1982-1985 - Dhamo S. Dhamotharan
1986-1998 - N. Earl Spangenberg

Editor-in-Chief - *Water Resources IMPACT*
1999-2013 - N. Earl Spangenberg
2014 - Eric Fitch
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<td></td>
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<td>Symposium on Managing Water Resources During Global Change</td>
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<td>1993</td>
<td>Mobile, AL</td>
<td>Symposium on Geographic Information Systems and Water Resources</td>
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<td>Bellevue, WA</td>
<td>Symposium on Water Resources Education: A Lifetime of Learning and Changing Roles</td>
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<td></td>
<td>Tucson, AZ</td>
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<td>Symposium on Effluent Reuse Management</td>
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<td>1994</td>
<td>Jackson Hole, WY</td>
<td>Symposium on Effects of Human-Induced Changes on Hydrologic Systems</td>
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<td>Nashville, TN</td>
<td>Symposium on Changing Demands, Changing Responses – New Directions in Water</td>
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<td>Resources Planning and Management</td>
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<td>Chicago, IL</td>
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<td>Symposium on National Water Quality and National Water Quality Assessment Program</td>
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<td>1995</td>
<td>Salt Lake City, UT</td>
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<td>Honolulu, HI</td>
<td>Symposium on Water Resources and Environmental Hazards: Emphasis on Hydrologic and</td>
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<td></td>
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<td>Cultural Insight in the Pacific Rim</td>
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<td>Symposium on Water Management in Urban Areas/Western Hemisphere</td>
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<td>Symposium on Advances in the Development and Use of Models in Water Resources</td>
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<td>1996</td>
<td>Syracuse, NY</td>
<td>Symposium on Watershed Restoration Management: Physical, Chemical, and Biological</td>
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<td>New York City Water Supply Studies</td>
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<td></td>
<td>Symposia on GIS and Water Resources</td>
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<td>1997</td>
<td>Keystone, CO</td>
<td>Symposium on Water Resources Education, Training and Practice: Opportunities for</td>
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<td>the Next Century</td>
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<td></td>
<td>Long Beach, CA</td>
<td>1997 Annual Conference</td>
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<td></td>
<td></td>
<td>Symposium on Conjunctive Use of Water Resources: Aquifer Storage and Recovery</td>
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1998 Reno, NV Specialty Conference on Rangeland Management and Water Resources
San Juan, PR 3rd International Symposium on Tropical Hydrology and Fifth Caribbean Islands Water Resources Congress
Point Clear, AL 1998 Annual Conference

1999 Atlanta, GA Specialty Conference on Potential Consequences of Climate Variability and Change to Water Resources of the United States
Bozeman, MT Symposium on Science into Policy: Water in the Public Realm Symposium on Wildland Hydrology
Seattle, Washington 1999 Annual Conference Watershed Management to Protect Declining Species

2000 Anchorage, AK Specialty International Conference on Water Resources in Extreme Environments
Portland, OR Specialty International Conference on Riparian Ecology and Management in Multi-Land Use Watersheds
Miami, FL 2000 Annual Conference

2001 San Antonio, TX Spring Specialty Conference on Water Quality Monitoring and Modeling
Snowbird, UT Summer Specialty Conference on Decision Support Systems for Water Resources Management
Albuquerque, NM 2001 Annual Conference

2002 New Orleans, LA Spring Specialty Conference on Coastal Water Resources
Keystone, CO Summer Specialty Conference on Ground Water/Surface Water Interactions
Philadelphia, PA 2002 Annual Conference

2003 Kansas City, MO Spring Specialty Conference on Agricultural Hydrology and Water Quality
New York, NY International Congress on Watershed Management for Water Supply Systems
San Diego, CA 2003 Annual Conference

2004 Nashville, TN Spring Specialty Conference on GIS and Water Resources III
Olympic Valley, CA Summer Specialty Conference on Riparian Ecosystems and Buffers: Multi-Scale Structure, Function and Management
Orlando, FL 2004 Annual Conference

W. Palm Beach, FL Spring Specialty Conference on Everglades Restoration
Honolulu, Hawaii Summer Specialty Conference on Institutions for Sustainable Watershed Management
Seattle, Washington 2005 Annual Conference

2006 Houston, Texas Spring Specialty Conference on GIS and Water Resources VI
Missoula, Montana Summer Specialty Conference on Adaptive Management of Water Resources
Ft. Lauderdale, FL Second Everglades Restoration Conference
Baltimore, Maryland 2006 Annual Conference

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<tr>
<th>Year</th>
<th>Location</th>
<th>Event</th>
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<tr>
<td>2008</td>
<td>Vail, Colorado</td>
<td>Summer Specialty Conference on Emerging Contaminants</td>
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<td>Albuquerque, NM</td>
<td>2007 Annual Conference</td>
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<td>2008</td>
<td>San Mateo, CA</td>
<td>Spring Specialty Conference on GIS and Water Resources V</td>
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<td></td>
<td>Virginia Beach, VA</td>
<td>Summer Specialty Conference on Riparian Ecosystems and Buffers: Working at the Water’s Edge</td>
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<td>Washington, DC</td>
<td>National Water Resources Policy Dialogue IV</td>
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<td>New Orleans, LA</td>
<td>2008 Annual Conference</td>
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<td>2009</td>
<td>Anchorage, AK</td>
<td>Spring Specialty Conference on Managing Water Resources and Development in a Changing Climate</td>
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<td>Snowbird, UT</td>
<td>Summer Specialty Conference on Adaptive Management of Water Resources II</td>
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<td>Seattle, WA</td>
<td>2009 Annual Conference</td>
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<td>2010</td>
<td>Orlando, FL</td>
<td>Spring Specialty Conference on GIS and Water Resources VI</td>
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<td></td>
<td>San Juan, PR</td>
<td>Summer Specialty Conference on Tropical Hydrology</td>
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<td></td>
<td>Philadelphia, PA</td>
<td>2010 Annual Conference</td>
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<tr>
<td>2011</td>
<td>Baltimore, MD</td>
<td>Spring Specialty Conference on Managing Climate Change Impacts on Water Resources</td>
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<td></td>
<td>Snowbird, UT</td>
<td>Summer Specialty Conference on Integrated Water Resources Management</td>
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<td></td>
<td>Albuquerque, NM</td>
<td>2011 Annual Conference</td>
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<td>2012</td>
<td>New Orleans, LA</td>
<td>Spring Specialty Conference on GIS and Water Resources VI</td>
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<td></td>
<td>Denver, CO</td>
<td>Summer Specialty Conferences on Emerging Contaminants II and Riparian Ecosystems IV</td>
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<td></td>
<td>Jacksonville, FL</td>
<td>2012 Annual Conference</td>
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<td>2013</td>
<td>St. Louis, MO</td>
<td>Spring Specialty Conference on Agricultural Hydrology and Water Quality II</td>
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<td></td>
<td>Hartford, CT</td>
<td>Summer Specialty Conferences on Environmental Flows and Healthy Forests = Healthy Waters</td>
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<tr>
<td></td>
<td>Beijing, China</td>
<td>International Specialty Conference on Water for Mega-Cities</td>
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<td></td>
<td>Portland, OR</td>
<td>2013 Annual Conference</td>
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<td>2014</td>
<td>Salt Lake City, UT</td>
<td>Spring Specialty Conference on GIS and Water Resources VIII</td>
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<tr>
<td></td>
<td>Reno, NV</td>
<td>Summer Specialty Conference on Integrated Water Resources Management</td>
</tr>
<tr>
<td></td>
<td>Tyson’s Corner, VA</td>
<td>2014 Annual Conference</td>
</tr>
</tbody>
</table>
### Appendix Table C. AWRA Awards 1964-2014

**HONORARY MEMBER** – Honorary Members of AWRA are elected in recognition of eminence in a branch of water resources science and technology. An Honorary Member is entitled to all privileges of the Association. Members are:

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
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<tbody>
<tr>
<td>1966</td>
<td>Charles R. Pettis</td>
</tr>
<tr>
<td>1970</td>
<td>Charles V. Theis</td>
</tr>
<tr>
<td>1971</td>
<td>Abel Wolman</td>
</tr>
<tr>
<td>1972</td>
<td>Raymond L. Nace</td>
</tr>
<tr>
<td>1973</td>
<td>William C. Ackermann</td>
</tr>
<tr>
<td>1974</td>
<td>Luna B. Leopold</td>
</tr>
<tr>
<td>1974</td>
<td>Thomas Maddock, Jr.</td>
</tr>
<tr>
<td>1975</td>
<td>Stanley A. Cain</td>
</tr>
<tr>
<td>1975</td>
<td>Frank J. Trelease</td>
</tr>
<tr>
<td>1975</td>
<td>Frederick J. Clarke</td>
</tr>
<tr>
<td>1976</td>
<td>Eugene P. Odum</td>
</tr>
<tr>
<td>1976</td>
<td>Maurice Kelso</td>
</tr>
<tr>
<td>1977</td>
<td>Leo Roy Beard</td>
</tr>
<tr>
<td>1978</td>
<td>F. Herbert Bormann</td>
</tr>
<tr>
<td>1978</td>
<td>Gene E. Likens</td>
</tr>
<tr>
<td>1979</td>
<td>Ven Te Chow</td>
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<tr>
<td>1980</td>
<td>Walter Langbein</td>
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<tr>
<td>1981</td>
<td>F. Herbert Bormann</td>
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<tr>
<td>1982</td>
<td>Gene E. Likens</td>
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<td>1983</td>
<td>Irving K. Fox</td>
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<tr>
<td>1983</td>
<td>Don Kirkham</td>
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<tr>
<td>1983</td>
<td>John Hewlett</td>
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<td>1983</td>
<td>S. W. Lohman</td>
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<tr>
<td>1985</td>
<td>John C. Rodda</td>
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<tr>
<td>1986</td>
<td>John R. Philip</td>
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<td>1989</td>
<td>András Szöllösi-Nagy</td>
</tr>
<tr>
<td>2001</td>
<td>Miguel A. Marino</td>
</tr>
<tr>
<td>2006</td>
<td>Loïc Fauchon</td>
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<tr>
<td>2009</td>
<td>Benedito F.P. Brago</td>
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<tr>
<td>2010</td>
<td>Vijay P. Singh</td>
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<tr>
<td>2011</td>
<td>Keith W. Hipel</td>
</tr>
</tbody>
</table>

**FELLOW MEMBER** – Fellow Members of AWRA are elected in recognition of membership in the Association for at least 10 consecutive years, service as an Officer or Director or on a Committee for one year, and an eminent record in a branch of water resources science or technology. Members are:

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<tr>
<th>Year</th>
<th>Name</th>
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<tr>
<td>1974</td>
<td>Arleigh H. Laycock</td>
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<td>1974</td>
<td>Garald G. Parker</td>
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<td>1974</td>
<td>William R. Boggess</td>
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<td>1974</td>
<td>Edward Silberman</td>
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<td>R. W. Finfrock</td>
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<td>1974</td>
<td>Richard D. Harza</td>
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<td>1975</td>
<td>A. I. Kashef</td>
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<tr>
<td>1975</td>
<td>William S. Butcher</td>
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<td>1975</td>
<td>Joe C. Gilbreth</td>
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<td>1975</td>
<td>Neil L. Drobney</td>
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<td>1976</td>
<td>A. Ivan Johnson</td>
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<td>1976</td>
<td>William Whipple, Jr.</td>
</tr>
<tr>
<td>1976</td>
<td>Reuben J. Johnson</td>
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<td>1976</td>
<td>Kenneth L. Bowden</td>
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<td>1977</td>
<td>Ernest L. Gambell</td>
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<td>1977</td>
<td>Sandor S. Csallany</td>
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<td>James C. Warrenman</td>
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<td>1978</td>
<td>David M. Hershfield</td>
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<td>1978</td>
<td>James E. Caffey</td>
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<td>1979</td>
<td>Thad G. McCaughin</td>
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<td>1980</td>
<td>Murray M. Wiggins</td>
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<td>1980</td>
<td>Ronald M. North</td>
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<td>1981</td>
<td>Daniel D. Evans</td>
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<td>Allan M. Gebhard</td>
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<td>1982</td>
<td>Milton Potash</td>
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<td>Richard C. Tucker</td>
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<td>David J. Allee</td>
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<td>1974</td>
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<td>Phillip E. Greeseon</td>
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<td>1985</td>
<td>Melvin W. Anderson</td>
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<td>1986</td>
<td>David A. Rickert</td>
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<td>1986</td>
<td>Kenneth D. Schmidt</td>
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<td>1986</td>
<td>Vijay P. Singh</td>
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<td>H. J. Colenbrander</td>
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<td>1987</td>
<td>J. Paul Riley</td>
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<td>Peter E. Black</td>
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<td>Arlene L. Dietz</td>
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<td>Charles Mosher</td>
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<td>Charles W. Welby</td>
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<td>Marshall E. Jennings</td>
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<td>Raymond Herrmann</td>
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<td>Richard H. McCuen</td>
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<td>1992</td>
<td>Jerry R. Rogers</td>
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</table>
| 1992 | Warren "Bud" Viessman | Icko Iben Award – The Icko Iben Award was established in 1971 to recognize persons who have made outstanding contributions to the promotion of communication among the various disciplines concerned with water resources problems. It honors the late Dr. Icko Iben, a co-founder of AWRA, who contributed extensively during his lifetime to the understanding and communication between those involved in the diverse disciplines related to water resources. Recipients are:

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<td>Henry P. Caulfield, Jr.</td>
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<td>Ruth Patrick</td>
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<td>1977</td>
<td>Theodore M. Schad</td>
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<td>Michael J. Sale</td>
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<td>Donald F. Potts</td>
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<td>John J. Warwick</td>
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<td>1982</td>
<td>John J. Warren</td>
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<td>1984</td>
<td>Donald L. Bowers</td>
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<td>1985</td>
<td>Douglas L. Kane</td>
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<td>1990</td>
<td>Kenneth J. Lanfear</td>
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<td>2009</td>
<td>Robert J. Moresi</td>
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<td>2004</td>
<td>Richard A. Engberg</td>
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<td>John R. Wehle</td>
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<td>John S. Grounds III</td>
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<td>2006</td>
<td>Janet L. Bowers</td>
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<td>Kenneth J. Lanfear</td>
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<td>2009</td>
<td>Lorne Everett</td>
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<td>Robert J. Moresi</td>
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<td>Alfred Duda</td>
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<td>2010</td>
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<td>Stephan J. Nix</td>
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<tr>
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<td>Jane O. Rowan</td>
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<tr>
<td>2012</td>
<td>Gerald Sehlke</td>
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<td>2013</td>
<td>Ari M. Michelsen</td>
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<tr>
<td>2013</td>
<td>Tamim Younos</td>
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<td>2014</td>
<td>Amvrossios C. Bagtzoglou</td>
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WILLIAM R. BOGGESS AWARD - The William R. Bogges Award is given to the author or authors of the paper, published in JAWRA during the preceding year, that best describes, delineates, or analyzes a major problem or aspect of water resources from either a theoretical, applied, or philosophical standpoint. Established in 1973, the Award honors William R. "Randy" Bogges, a member of AWRA, one of the first Directors, and a former President of the Association, who has also made significant contributions to AWRA as an Editor of the Water Resources Bulletin (now Journal of the American Water Resources Association, JAWRA). Recipients are:

Helen M. Ingram - 1973
David A. Rickert - 1974
William J. Schneider - 1974
Andrew M. Spieker - 1974
Naghu Nath Singh - 1975
Kenneth P. Wilkinson - 1975
Louis Koenig - 1976
Stanley A. Changnon - 1977
Virginia Carter - 1978
Mary Keith Garrett - 1978
Patricia T. Gammon - 1978
William Whipple, Jr - 1979
William B. Lord - 1980
Frederick B. Lotspeich - 1981
Thomas C. Winter - 1982
Alfred M. Duda - 1983
A. Ian McLeod - 1984
Keith W. Hipel - 1984
Fernando Camacho - 1984
Eric G. Richard - 1985
John D. Bredehoef - 1985
Martha Gilliland - 1986
C. Tim Osborn - 1987
John E. Scheffter - 1987
Leonard Shabman - 1987
David R. Maidment - 1988
Douglas T. Shaw - 1988
Nancy E. Driver - 1989
Gary D. Tasker - 1989
Stanley A. Changnon - 1990
William E. Easterling - 1990
Frank A. Ward - 1991

Ernest T. Smerdon - 1989
William Goldfarb - 1990
Richard A. Herbert - 1991
Robert A. Young - 1992
Evon C. Vlachos - 1993
Charles W. Howe - 1994
Helen Joyce Peters - 1995
David J. Allee - 1996
Alan P. Covich - 1997
Jerry R. Rogers - 1998
Nancy C. Lopez - 1999

Robert A. Brown - 2004
R. César Izaurralde - 2004
David M. Legler - 2004
Norman J. Rosenberg - 2004
Raghavan Srinivasan - 2004
Allison M. Thomson - 2004
Julio L. Betancourt - 2005
Stephen T. Gray - 2005
Stephen T. Jackson - 2005
P. Kyle House - 2006
Sarah E. Null - 2007
Jay R. Lund - 2007
Richard B. Alexander - 2008
Elizabeth W. Boyer - 2008
Richard A. Smith - 2008
Gregory E. Schwarz - 2008
Richard B. Moore - 2008
Dustin Garrick - 2009
Katharine Jacobs - 2009
Gregg Garfin - 2009
Martin Doyle - 2010
Lauren Patterson - 2010
Deborah Elcock - 2011
Richard D. Horan - 2012
James S. Shortle - 2012
Martin W. Doyle - 2013
Kathleen M.B. Boomer - 2014
Thomas E. Jordan - 2014
Lewis Linker - 2014
Zhi-Jun Liu - 2014
James Reilly - 2014
Gary Shenk - 2014
Alexey A. Voinov - 2014
Donald E. Weller - 2014
PRESIDENT’S AWARD FOR OUTSTANDING SERVICE – The President’s Award was established in 1979 to recognize those who have made significant contributions to AWRA. Recipients are:

Mary H. Marsh - 1979
Dana C. Rhoads - 1980
William R. Boggess - 1981
A. Ivan Johnson - 1982
Phillip E. Greeson - 1985
Kenneth D. Schmidt - 1986
Peter E. Black - 1987
Richard A. Herbert - 1989
Charlene E. Young - 1990
N. Earl Spangenberg - 1991
L. M. Buddy Blain - 1992
Kenneth J. Lanfear - 1993
William C. Ackermann - 1988
William Whipple, Jr. - 1989
Dale H. Twachtmann - 1990
Edgar A. Imhoff - 1991
Dayle E. Williamson - 1992
Harry E. Schwarz - 1993
Karen L. Lant - 1994

WILLIAM C. ACKERMANN MEDAL FOR EXCELLENCE IN WATER MANAGEMENT – This Award was established in 1988 to honor the late William C. Ackermann, an individual who achieved eminence and compiled a distinguished record in the design and implementation of exemplary water management practices at the state, regional, and local government levels. The first Ackermann Medal was presented posthumously to Mrs. Margaret Ackermann and family at AWRA’s Annual Conference in Milwaukee in 1988. The Medal is awarded each year to an individual who has achieved eminence in exemplary water management practices at the state, regional, or local levels. Recipients are:

William C. Ackermann - 1988
William Whipple, Jr. - 1989
Dale H. Twachtmann - 1990
Edgar A. Imhoff - 1991
Dayle E. Williamson - 1992
Harry E. Schwarz - 1993

SANDOR C. CSALLANY INSTITUTIONAL AWARD FOR EXEMPLARY CONTRIBUTIONS TO WATER RESOURCES MANAGEMENT – This Award was established in 1991 and is awarded (at such time as there are qualified nominees) to a water resources institution that has achieved a status of eminence in some aspect of managing the nation’s waters. Recipients are:

Sandor C. Csallany - 1992
Chesapeake Bay Foundation - 1994
USGS/RASAProgram - 1995
Calleguas Municipal Water District - 1996
Civil Engineering Department, Colorado State University - 2001
Great Lakes and Ohio River Division Water Management Team - 2002
Las Virgenes Municipal Water District and Triunfo Sanitation District - 2004
Cambridge Water Department - 2010
Department of Hydraulic and Water Resources, Budapest University of Technology and Economics - 2014

HENRY P. CAULFIELD, JR., MEDAL FOR CONTRIBUTIONS TO NATIONAL WATER POLICY – This Award was established in 1988 to honor an individual whose record of achievements and contributions in setting, designing, and implementing water resources practices at the national level have been extraordinary. The first presentation of the Caulfield Medal was made to Henry P. Caulfield, Jr., at AWRA’s 1988 Conference in Milwaukee. The Medal is presented annually to an individual who has achieved eminence in shaping the nation’s national water policy. Recipients are:

Henry P. Caulfield, Jr. - 1988
Gilbert E. White - 1989
Theodore M. Schad - 1990
Luna B. Leopold - 1991
R. Frank Gregg - 1992
Leonard B. Dworsky - 1994
Warren "Bud" Viessman Jr.-1996
Leo M. Eisel - 2004

Richard A. Engberg - 2007
Steven L. Stockton - 2011
Brenda Ortizgo Bateman - 2013

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MARY H. MARSH MEDAL FOR EXEMPLARY CONTRIBUTIONS TO THE PROTECTION AND WISE USE OF THE NATION’S WATER RESOURCES – This Award was established in 1991 and is awarded annually (or at such time as there are qualified nominees) to an individual who has achieved a status of eminence in some aspect of public service related to water resources education and/or management. Recipients are:

Susan S. Seacrest - 1994  Carol R. Collier - 2007
Cathleen C. Vogel - 1996  Marsi A. Steirer - 2013

A. IVAN JOHNSON OUTSTANDING YOUNG PROFESSIONAL AWARD– This Award (formerly the Pyramid Award) was established in 2000 and recognizes and encourages young professionals as the future leaders of water resources research, management, and education. It will be given annually (or at such time as duly qualified candidates are identified) to a young professional who has demonstrated outstanding achievements, talents, and leadership potential through their professional activities related to water resources. Recipients are:

Karl W.J. Williard - 2002  Martha B. Corrozi - 2007

DAVID R. MAIDMENT AWARD FOR EXEMPLARY CONTRIBUTIONS TO WATER RESOURCES DATA – This Award (formerly the Award for Exemplary Contributions to Water Resources Data) was established in 2008 and is presented to an individual or institution achieving a status of eminence in some aspect of the provision of data describing the nation’s waters. Recipients are:

Susan K. Greelee - 2008  Jeffrey Simley - 2012
David R. Maidment – 2010  Sandra Fox - 2014

INTEGRATED WATER RESOURCES MANAGEMENT (IWRM) PROJECT AWARD – An IWRM approach to water resources has been a hallmark of AWRA since its establishment. Therefore, in 2012 AWRA established an award that recognizes outstanding IWRM work on a water resources project in consulting, government, nonprofit, or academia. This award is presented annually, or at such time as there are qualified nominees to an interdisciplinary team. The recipients are:

Yakima River Basin Water Enhancement Project Workgroup - 2012
Texas Alliance for Water Conservation Project – 2013
Santa Ana River Watershed One Water One Watershed Plan - 2014

OUTSTANDING STATE SECTION AWARD – This Award is given in recognition of a Section’s activities in advancing water resources knowledge in the Section; number, type, and scope of Section activity; special activities of unusual note; and number of National members in the Section. Recipients are:

Florida State Section - 1975  Arizona State Section - 1989  Florida State Section - 2004
Florida State Section - 1979  Florida State Section - 1993  Colorado State Section - 2008
National Capital Section - 1981  Florida State Section - 1996  Indiana Water Resources Association - 2010
Washington State Section - 1982  Florida State Section - 1997
Utah State Section - 1983  Florida State Section - 1998
New Jersey State Section - 1985  Montana State Section - 2000  Florida State Section - 2012
Louisiana State Section - 1986  Alaska State Section - 2001  Colorado State Section - 2013
Colorado State Section - 1987  Florida State Section - 2002
Florida State Section - 1988  Florida State Section - 2003  Florida State Section - 2014
OUTSTANDING STUDENT CHAPTER AWARD – This Award is presented to the AWRA Student Chapter which has been most active in advancing water resources knowledge in their respective Chapter, State, and Section. Recipients are:

Univ. of Wisconsin-Stevens Point - 1983
University of Arizona - 1984
Univ. of Wisconsin-Stevens Point - 1985
University of Arizona - 1986
University of Minnesota - 1987
Northern Illinois University - 1988
Univ. of Wisconsin-Stevens Point - 1989
Utah State University - 1990
Pennsylvania State University - 1991
Pennsylvania State University - 1992
Univ. of Wisconsin-Stevens Point - 1993
University of Nevada-Reno - 1994
Univ. of Wisconsin-Stevens Point - 1995
University of Nevada-Reno - 1996
Cahaba/Warrior Student Chapter (University of Alabama) - 1997
Penn State - 1998
Univ. of Wisconsin-Stevens Point - 1999
University of Florida - 2000
University of Washington - 2001
Salt City (SUNY-ESF) - 2002
Salt City (SUNY-ESF) - 2003
Virginia Tech - 2004
University of Wisconsin-Stevens Point - 2005
University of Washington - 2006
University of Wisconsin-Stevens Point - 2007
University of Florida - 2008
University of Wisconsin-Stevens Point - 2009
University of Utah - 2010
Southern Illinois University Carbondale - 2011
Oregon State University - 2012
Oregon State University - 2013
Texas A&M University - 2014

RECIPIENTS OF RICHARD A. HERBERT MEMORIAL SCHOLARSHIPS

Seton P. Claggett - 1996
Julie E. Blue - 1996
Sharla Benjamin Lovern - 1997
Suzanne Perlifsh Wechsler - 1997
Paul Juckom – 1998
Benjamin S. Levy – 1998
Theresa Margaret Barber - 1999
Linda Barker Moran - 1999
Michael Seider - 2000
Kurt C. Kelsey - 2000
Carl J. Legleiter - 2001
Christine May - 2001
Tess Wynn - 2002
Jon E. Schoonover - 2003
Michelle Soupir - 2004
Jessica Jensen - 2004
Christy Jo Geraci - 2005
Michael G. Zelazo - 2005
Joshua Allen Joseph, Jr. - 2006
Ann Marie Larquier - 2006
Musawenkosi Clive Mlambo - 2007
Samuel F. Werner - 2007
Kathleen Rugel - 2008
Veronica Alba - 2008
Laura Christianson - 2009
Celso Ferreira - 2010
TylerAnthony Groh - 2010
Daniel Stanaway - 2011
Victoria Bertolami - 2011
Kimberly L. Ogren - 2012
Katherine Elizabeth Boone - 2012
Amy Hetherington - 2012
Luke Pangle - 2012
Spencer Schnier - 2013
Gabrielle Ostermayer - 2013
Matt Ellison - 2013
Abigail Charest - 2013
Karen Jackson - 2013
Samuel Woolford - 2013
Natalie Nelson - 2014
Emma Mendelsohn - 2014
Peter Bauson - 2014
Asia Dowtin - 2014
Willa Paterson - 2014
Ariel Nauth Edwards - 2014
Appendix Figure 1. Pictures of AWRA Presidents with Affiliations During Time in Office
AWRA would like to acknowledge, with gratitude, the contributions made by its presidents over the past 50 years. The unique talents, strengths, insights and perspectives of these men and women have helped to shape our progress and determine the Association’s role in the water resources community, and in addressing the unique challenges of the 21st Century.

“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it is the only thing that ever has.”

—Margaret Mead
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For more than 25 years, the MPX Group has printed AWRA's conference programs and since its first issue, Water Resources IMPACT. AWRA has depended on the MPX Group to meet tight deadlines, some of which were next to impossible, and appreciates that they have always come through, producing high-quality finished products.

AWRA members and staff gratefully thank the MPX Group for their support and generosity at this special time in AWRA's history.