ALABAMA /MISSISSIPPI SECTION of the AWWA
October 6–8, 2002
Annual Section Meeting
Perdido Beach Resort, Orange Beach, Alabama
Malcolm Pirnie provides independent judgment in offering a comprehensive array of services for the management, planning, design, construction and operation of effective and efficient drinking water systems.

Malcolm Pirnie, Inc.
2170 Highland Avenue, Suite 250
Birmingham, AL 35205
(205) 930-5700

Malcolm Pirnie, Inc.
6360 I-55, Suite 250
Jackson, MS 39211
(601) 352-7020

Offices Nationwide
www.pirnie.com
Trustees of Alabama-Mississippi Section
of American Water Works Associations

Keith Lowery.................................................Chair
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Jim Nelson..................................................Past Chair
Allen & Hoshall – Jackson, MS
Denson Robinson..........................................Director
City of Madison, Madison, MS
Tom Walters..............................................Secretary-Treasurer
CH2M Hill – Montgomery, AL
Ken McClellan.............................................Trustee-at-Large (MS)
Culkin Water District – Clinton, MS
Randy Chafin..............................................Trustee-at-Large (AL)
Birmingham Water Works – Birmingham, AL
Chuck Lott..................................................Trustee-at-Large (MS)
Neel-Schaffer, Inc. – Jackson, MS

Committees and Chairs

Advancement.................................Chuck Henderson
Audit......................................................Keith Lowery
Education/Program.........................Jim Miller/Tony Owens & Bill Moody
Entertainment...............................Ken McCool
Exhibit..................................................Wynn Echols
Fuller Award........................................Ken McCool
Hospitality/Host...............................Wynn Echols
Manufacturers & Assoc. (MAC)...........Scott Carpenter
Legislative Affairs (MS)......................John Milner
Legislative Affairs (AL)......................K. Mark Parnell
Local Arrangements..........................C. T. Switzer
Membership......................................Lamar Heffner
PIPELINE..........................Diane Bailey
Registration.................................Jason Carter
Resolution......................................Sally Berry
Safety...........................................Drennen Walker
Small Systems...............................Joey Roberson
Time & Place.................................Bob Giglio
Nominations.............................Bob Giglio
Water for People........................Don Busic

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Malcolm Pirnie................................Insid...
Hope everyone had a great summer. With this passing season, also goes the visit to the beach with family and friends and the enjoyment of just relaxing and in my wife’s case, soaking up the sun. Well, even though this season is gone for another year, remember that it will come again.

In the meantime, although we have a lot of work to do, fortunately we have another opportunity to gather with our friends in the early fall each year to gain valuable knowledge that we can use each day to keep our drinking water of the highest quality, safe and dependable. October 6–8, 2002 representatives of the drinking water industry – operators, managers, board members, engineers, suppliers, manufacturers and others – in Alabama and Mississippi will congregate as we have for the last 54 years, for the AWWA AL-MS Annual Conference which this year is being held in Orange Beach.

Hopefully you have finalized plans to meet with us and be infused with new ideas in a multitude of areas such as water treatment, operation, finances, regulations, safety, etc., that will allow you to excel in the particular area of the drinking water industry in which you are involved.

See you in Orange Beach.....where we will collectively strive to improve and advance drinking water in Alabama and Mississippi.
W ell, the 2002 annual conference in New Orleans has come and gone and it appears that everyone in attendance had a great time and really enjoyed the technical sessions and the professional development (partying). My hat is off to AWWA National for a job well done.

Even though some of our associate members may choose not to renew their membership (we hope they will renew) the total membership for AWWA is up, in excess of 57,000 members for 2002.

If you have not attended a Vulnerability Assessment seminar you need to do so as soon as one becomes available in your area. AWWA is working hard on a national level to stay on top of any and all rules and regulations that may change concerning vulnerability. There are several web sites that can keep you up to speed on what is going on concerning this hot topic. Diane Bailey, our new PIPELINE editor, will be listing some of the sites in PIPELINE along with other interesting topics.

Looking for a way to show your customers that you are the best that you can be? AWWA is offering Accreditation of Water and Wastewater Utilities. A short power point presentation will be running during registration in Perdido please take a few minutes to review this information and give us your feedback.

As mentioned earlier there are numerous web sites that can be reached by going to www.awwa.org or by logging on to our site at www.almsawwa.net these are great resource sites for just about any issue facing the water industry.

Mr. Terry Rolan, vice president from North Carolina, will be our visiting national representative in October. We look forward to visiting with and entertaining Terry and his lovely wife Linda while showing them a warm Alabama/Mississippi welcome.

Keith and his team are working hard to bring a first class program to Perdido, October 7, 8, & 9, 2002. Looking forward to seeing you there.

Denson
August 20, 2002

George W. Bush, The President of the United States
1600 Pennsylvania Avenue, N.W.
Washington, DC 20500

Dear Mr. President:

The American Water Works Association (AWWA), the largest drinking water association in the world, understands your reasons for rejecting part of the FY 2002 emergency supplemental appropriations bill. However, drinking water security is essential to national security, and we hope that your administration will work with Congress to provide funds to drinking water utilities for assessing their security needs and preparing emergency response plans.

As you know, drinking water systems serving over 3,300 people are required to prepare vulnerability assessments and emergency response plans by the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (PL 107-188). Many water utilities have been doing this work anyway since September 11. However, doing this planning on the ambitious timeframe and in the manner specified by the law is beyond the means of many water systems. We believe the national interest, as well as the principle of “no unfunded federal mandates,” justifies federal support for these security efforts.

Moreover, large utilities (those serving over 100,000 people) have already been offered federal support for their vulnerability assessments and emergency response plans. The vast majority of the Nation’s public water systems serve a population less than 100,000 people and are now faced with an ambitious federal mandate without the federal funding that was authorized in PL 107-188. Public water systems want to do vulnerability assessments and emergency response plans, but many will need federal assistance to get them done.

AWWA has estimated that $450 million is needed to provide vulnerability assessments for the public water systems covered by PL 107-188. About $53 million has been made available so far and directed to the Nation’s largest water systems. We urge the federal legislative and executive branches to work together to provide these funds, to assist water utilities in carrying out these important responsibilities.

We look forward to your support and to working with you and the Congress to ensure that all water systems have the resources they have been promised to carry out the security responsibilities they have so willingly accepted.

Respectfully yours,

Howard Neukrug
Chair, AWWA Water Utility Council

Lynn Stovall, President
ALABAMA/MISSISSIPPI SECTION WELCOMES AWWA NATIONAL REPRESENTATIVE

An AWWA member for 29 years, Terry Rolan is currently an AWWA Vice-President and Director of the North Carolina Section, where he has also served as chair, Board member, and secretary-treasurer. Rolan has chaired committees on finance, government affairs, Fuller award, building task force, and archives and history, and has served on numerous others.

At the Association level, Rolan served on the Administrative & Policy Council and the Water Utility Council for six years, including as vice-chair (1993 to 1995). His committee memberships include strategic planning, membership, young professionals, residuals management research, surface water, sludge disposal, dependable yield, membership, and source water protection. As a Vice-President, he automatically serves on the Association's Board of Directors and Executive Committee.

Rolan is a recipient of the Fuller Award, Honorary Membership in AWWA, and the Water Environment Federation's Bedell Award.

He is employed as the environmental resources director for the city of Durham, North Carolina. Rolan is active with the Awwa Research Foundation and a past board trustee, as well as a past board member of Water Environment Federation. He is also involved with numerous other water industry associations in North Carolina and holds the highest level of certification in North Carolina for both water and wastewater plant operations.
ALABAMA-MISSISSIPPI SECTION
AMERICAN WATERWORKS
ASSOCIATION
2002 ANNUAL CONFERENCE
OCTOBER 6-8, 2002 - PERDIDO BEACH RESORT
ORANGE BEACH, ALABAMA
GENERAL REGISTRATION
(Non-exhibitor)

Please complete and return with registration fees to:
AL/MS AWWA, 2170 Highland Ave. South, Suite 250, Birmingham, Alabama 35205

Name: ___________________________ Name/Nickname for Badge: ___________________________

Spouse’s Name: __________________ Name/Nickname for Badge: __________________________

Home Address: ___________________ City: ______________ State: __________ Zip: ___________ Home Phone: ___________

Firm/Municipality/Organization: __________________ Address: ____________________________

City: ___________________________ State: ______________ Zip: ____________ Phone: _____________

Date: ___________________________ AWWA Membership Number: __________________________ E-mail Address: ____________________________

Is this your first time to attending the Alabama-Mississippi Section AWWA conference? __________ Spouse’s __________

*************************************************************************************************************************************************

<table>
<thead>
<tr>
<th>Description</th>
<th>Fee</th>
<th>Selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWWA Member (Utility, Government)</td>
<td>$293.00</td>
<td>☐</td>
</tr>
<tr>
<td>AWWA Member (Manufacturer, Supplier, Consultant, Contractor)</td>
<td>$343.00</td>
<td>☐</td>
</tr>
<tr>
<td>Non-member (includes a 1 year membership to AWWA)</td>
<td>$415.00</td>
<td>☐</td>
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<tr>
<td>Spouse</td>
<td>$115.00</td>
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<tr>
<td>Golf Tournament Registration</td>
<td>$90.00</td>
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<tr>
<td>Golf Tournament Hole Sponsorship</td>
<td>$203.00</td>
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<tr>
<td>Golf Tournament Team Sponsorship (see attached form)</td>
<td>$363.00</td>
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<tr>
<td>Sponsor Donation</td>
<td>$____</td>
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</table>

Total Fee Enclosed $____

Please make checks payable to: AL/MS Section, AWWA
*************************************************************************************************************************************************

If paying by credit card, please fill out the following information: Master Card ☐ Visa ☐

Credit Card Number: ___________________________ Expiration Date: ___________________________

Signature: ________________________________

*************************************************************************************************************************************************

Cancellations after October 1, 2002 are not refundable

If you have any questions, please contact Jason Carter or Ashley Anthony (205) 930-5700 or Fax (205) 930-5707. Hotel Reservations must be made directly with the Perdido Beach Resort, 22700 Perdido Beach Blvd., Orange Beach, AL 36561. [Phone (251) 981-8811 Fax (251) 981-5672 Toll-free 1-800-634-8001 - $105.00 Single or Double] To acquire hotel accommodations online go to www.perdidobeachresort.com, click on “reservations”, type in the special group code (SAW1002) and continue to select your preferred accommodations.

Hotel Reservations must be made by Sept. 6, 2002.
ALABAMA-MISSISSIPPI SECTION
AMERICAN WATERWORKS
ASSOCIATION
2002 ANNUAL CONFERENCE
OCTOBER 6-8, 2002 – PERDIDO BEACH RESORT
ORANGE BEACH, ALABAMA
EXHIBITOR’S REGISTRATION

Please complete and return with registration fees to:
AL/MS AWWA, Jim House & Assoc. P.O. Box 320129 Birmingham, Alabama 35232

Exhibitor 1: ___________________________ Name/Nickname for Badge: ___________________________
Exhibitor 2: ___________________________ Name/Nickname for Badge: ___________________________
Spouse: ___________________________ Name/Nickname for Badge: ___________________________
Home Address: ___________________________ City: _______________ State: _______________ Zip: _______________ Home Phone: _______________
Firm/Municipality/Organization: ___________________________ Address: ___________________________
City: _______________ State: _______________ Zip: _______________ Phone: _______________
Date: _______________ AWWA Membership Number: ___________________________ E-mail Address: ___________________________

Is this your first time to attending the Alabama – Mississippi Section AWWA conference? _______ Spouse’s _______

**********************************************************************************************************

(For additional booth, use duplicate of this registration form – please complete and return one registration form per booth desired)
Exhibitors Registration (booth and conference registration) ___________________________ After ___________________________ Sept. 7, 2002
Exhibitor Guest Registration ___________________________ $ 600.00 ___________________________ Free ___________________________
Spouse ___________________________ $ 115.00 ___________________________ $ 90.00 ___________________________ $ 200.00 ___________________________
Golf Tournament Registration ___________________________ $ 115.00 ___________________________ $ 90.00 ___________________________ $ 200.00 ___________________________
Golf Tournament Hole Sponsorship ___________________________ $ 200.00 ___________________________ $ 300.00 ___________________________
Golf Tournament Team Sponsorship (see attached form) ___________________________ $ 360.00 ___________________________
Conference Sponsor Donation ___________________________ $ ________ ___________________________ $ ________

Total Fee Enclosed $ ________

**********************************************************************************************************

Please make checks payable to: AL/MS Section, AWWA

**********************************************************************************************************

If paying by credit card, please fill out the following Information: Master Card ___________ Visa ___________
Credit Card Number: ___________________________ Expiration Date: ___________________________

**********************************************************************************************************

Signature: ___________________________

**********************************************************************************************************

Cancellations after October 1, 2002 are not refundable

If you have any questions, please contact Wynn Echols or Cindy Keenum (205) 392-6302 Fax (205) 392-6209. Hotel Reservations must be made directly with the Perdido Beach Resort, 27200 Perdido Beach Blvd., Orange Beach, AL. 36561. [Phone (251) 981-9811 Fax (251) 981-5672 Toll-free 1-800-634-8001 - $105.00 Single or Double] To acquire hotel accommodations online, go to www.perdibeachresort.com, click on “reservations”, type in the special group code (SAW1002) and continue to select your preferred accommodations.

Hotel Reservations must be made by Sept. 6, 2002
### MONDAY MORNING (OCTOBER 7, 2002)

<table>
<thead>
<tr>
<th>TIME</th>
<th>OPENING SESSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 AM</td>
<td>Opening Remarks &amp; Invocation</td>
</tr>
<tr>
<td>8:05 AM</td>
<td>Welcome - Mayor of Orange Beach</td>
</tr>
<tr>
<td>8:15 AM</td>
<td>AWWA Representative - Terry Roland</td>
</tr>
<tr>
<td>8:45 AM</td>
<td>Alabama Office of Water Resources - Trey Glen</td>
</tr>
<tr>
<td>9:30 AM</td>
<td>EPA Representative - David Perker</td>
</tr>
<tr>
<td>10:15 AM</td>
<td>Break</td>
</tr>
<tr>
<td>10:30 AM</td>
<td>Alabama Update</td>
</tr>
<tr>
<td>10:45 AM</td>
<td>Mississippi Update</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>Business Session</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>STROLLING LUNCH IN EXHIBIT HALL</td>
</tr>
</tbody>
</table>

### MONDAY AFTERNOON (OCTOBER 7, 2002)

<table>
<thead>
<tr>
<th>TIME</th>
<th>SESSION A</th>
<th>SESSION B</th>
<th>SESSION C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 PM</td>
<td>Ion Exchange Processes</td>
<td>Water Rates *</td>
<td>Subject TBA</td>
</tr>
<tr>
<td></td>
<td>Matthew Rowland (Orica/Watercare)</td>
<td>Peter Lucas (Alabaster WWA)</td>
<td>William Moody (M.D.P.H.)</td>
</tr>
<tr>
<td>1:45 PM</td>
<td>Security and Vulnerability Assessments</td>
<td>Chlorine Dioxide, an Alternative to Lower Disinfection By-Products</td>
<td>Monitoring - Present and Future</td>
</tr>
<tr>
<td></td>
<td>Terry Oden</td>
<td>Maurice Gutierrez &amp; Dr. Anthony Plochelli (Vucan Chemical)</td>
<td>Tam DeLoach (A.D.E.M.)</td>
</tr>
<tr>
<td>2:30 PM</td>
<td>Microfiltration Technology</td>
<td>Managing Customer Relations thru Customer Value *</td>
<td>Compensation Planning for Utilities*</td>
</tr>
<tr>
<td></td>
<td>Craig Justice (Hayward)</td>
<td>Terry Stripling</td>
<td>Steve Cordry (Cordry &amp; Assoc.)</td>
</tr>
<tr>
<td>3:30 PM</td>
<td>ICE CREAM SOCIAL AND TACTICAL DEMONSTRATION</td>
<td></td>
<td>* Recommended for Board Members</td>
</tr>
</tbody>
</table>

*Recommended for Board Members*
## TUESDAY MORNING (OCTOBER 8, 2002)

<table>
<thead>
<tr>
<th>TIME</th>
<th>SESSION A</th>
<th>SESSION B</th>
<th>SESSION C</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 AM</td>
<td><strong>Design/Build - A Win-Win Alternative</strong>&lt;br&gt;Scott Cummings (Ch2MHil')</td>
<td><strong>Security Issues</strong>&lt;br&gt;Clyde Lutrell (AMBS, Inc.)</td>
<td><strong>Drought Planning in Alabama</strong>&lt;br&gt;Leslie Durham, P.E. (Off. of Water Resources)</td>
</tr>
<tr>
<td>8:45 AM</td>
<td><strong>Energy Savings thru Well Pump Management</strong>&lt;br&gt;J. Patrick Scott (Layne Christensen)</td>
<td><strong>Updated Financial Mgmt for the Business End of the Pipe</strong>&lt;br&gt;Dale Fowler</td>
<td><strong>Use of Coldwater Spring as a Raw Water Supply</strong>&lt;br&gt;Ron Harris (Paul B. Krebs &amp; Assoc.)</td>
</tr>
<tr>
<td>9:30 AM</td>
<td><strong>S.C.A.D.A. Security</strong>&lt;br&gt;Cole Appelman (Malcolm-Pinney)</td>
<td><strong>Exploding the Myths about Chloramine Disinfection</strong>&lt;br&gt;Tim Brodner (Malcolm-Pinne)</td>
<td><strong>Water Reservoir Development and Permitting</strong>&lt;br&gt;Paul Kilotz (Malcolm-Pinney)</td>
</tr>
<tr>
<td>10:15 AM</td>
<td><strong>Dealing with the Press</strong>&lt;br&gt;Chris Wadde, VP for News&lt;br&gt;(The Anniston Star)</td>
<td><strong>Impact of Mixing Chlorine with Chlorine Dioxide on THM's</strong>&lt;br&gt;Doug Rittmann</td>
<td><strong>Ultraviolet Disinfection in Drinking Water Treatment</strong>&lt;br&gt;David Tomwich (Trojan UV)</td>
</tr>
<tr>
<td>11:00 AM</td>
<td><strong>Remote Meter Reading</strong>&lt;br&gt;Jay Wood (Central Supply Co.)</td>
<td><strong>Security Issues</strong>&lt;br&gt;Marion Cain (DOJ Center for Domestic Preparedness)</td>
<td><strong>Subject TBA</strong>&lt;br&gt;Mike MacIndoe (Barge-Waggoner)</td>
</tr>
<tr>
<td>12:00 PM</td>
<td><strong>JOINT LUNCHEON FOR PLATINUM DONORS</strong></td>
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</table>

## TUESDAY AFTERNOON (OCTOBER 8, 2002)

<table>
<thead>
<tr>
<th>TIME</th>
<th>SESSION A</th>
<th>SESSION B</th>
<th>SESSION C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 PM</td>
<td><strong>Development of a Groundwater Well Field – A Case Study</strong>&lt;br&gt;Paul Roeback (Paul B. Krebs &amp; Assoc.)</td>
<td><strong>Membrane Processes</strong>&lt;br&gt;Samantha Kendrick (Zenon Environmental)</td>
<td><strong>Age-Dating and Other Geological Techniques</strong>&lt;br&gt;Bob Kidd (U.S.G.S.)</td>
</tr>
<tr>
<td>1:45 PM</td>
<td><strong>Repair of Landfill Leachate Springs at a MSW Landfill in L.A.</strong>&lt;br&gt;Peter Drums F.G. (Gallet &amp; Assoc.) and Billy McSpadden, P.E.&lt;br&gt;(Henderson Eng.)</td>
<td><strong>Uses and Benefits of Chlorine Dioxide</strong>&lt;br&gt;Albert Massey</td>
<td><strong>Automation in Wet Chemistry</strong>&lt;br&gt;Scott Schroeder (Lachat Instruments)</td>
</tr>
<tr>
<td>2:30 PM</td>
<td><strong>Cryptos &amp; Giardia (or) Enhanced Coagulation</strong>&lt;br&gt;John Sparks</td>
<td><strong>Alabama One Call</strong>&lt;br&gt;Michele Dory, Loss Control Specialist</td>
<td><strong>Well Site Selection</strong>&lt;br&gt;Matt Reed (Layne Christensen)</td>
</tr>
<tr>
<td>3:15 PM</td>
<td><strong>Impact of Filter Water Temperature on Backwash Performance</strong>&lt;br&gt;Bob Boreman (Malcolm-Pinney)</td>
<td><strong>The ICAM Toolkit: Using Software Technology to Manage WTP Assets</strong>&lt;br&gt;Josh Crowe (CH2MHil)</td>
<td><strong>How Niceville Combined Two Projects into One through Creative Design of an Elevated Water Tank</strong>&lt;br&gt;Max Mobley (Polif Eng) &amp; Don Nason (CB&amp;I)</td>
</tr>
</tbody>
</table>

* Recommended for Board Members
AWWA
Alabama/Mississippi Section
Water For People Benefit
Golf Tournament Registration

October 6, 2002
11:30 a.m. Shotgun Start

Glenlakes Golf Club
9530 Clubhouse Dr
Foley, AL 36535-9326
Phone: (251) 955-1221

4-Man Scramble Team Prizes
3 Closest to the Pin Prizes
3 Longest Drive Prizes
3 Longest Putt Prizes
Door Prizes

$80 per person Entry Fee

Please make check payable to AL/MS AWWA and send to:
Jason Carter, 2170 Highland Ave. So., Suite 250, Birmingham, AL 35205

Name_________________ Handicap_________________

Name_________________ Handicap_________________

Name_________________ Handicap_________________

Name_________________ Handicap_________________

Lunch Provided

All proceeds go to “Water for People”
Sign up for Team or Individual
Hole Sponsorships Available
For more information please contact Don Busic (205)-477-5791
The following water systems within the Alabama/Mississippi section of AWWA received safety awards as a result of the AWWA Safety Survey they completed for 2001. The surveys are sent by AWWA to all member utilities between October and December of each year. Be sure to look for your survey and maybe your system will be listed here next year. For more information you may contact Drennen Walker, Safety Chair for the Section at Leeds Water Works (205) 699-5151. The 2001 awards are as follows:

### MERIT AWARDS:

**Alabama**
- Albertville Municipal Utilities Board (Albertville)
- Athens Water Department (Athens)
- Dothan Water Department, City of
- Eufaula Water & Sewer Board (Eufaula)
- West Morgan-East Lawrence Water Authority

**Mississippi**
- No awards in this category.

### HONOR AWARDS:

**Alabama**
- Decatur Water Department (Decatur)
- Huntsville Utilities (Huntsville)

**Mississippi**
- No awards in this category.

### EXCELLENCE AWARDS

**Alabama**
- Clay County Water Authority (Lineville)
- Curry Water Authority (Jasper)
- East Cullman Water Systems, Inc. (Cullman)
- Eclectic Waterworks (Eclectic)
- Grand Bay Water Works Board, Inc. (Grand Bay)
- Hartselle Utilities (Hartselle)
- Jasper Water Works & Sewer Board (Jasper)
- Leeds Water Works Board (Leeds)
- Macon County Water Authority (Tuskegee)
- Madison County Water Department (Huntsville)
- Marbury Water System, Inc. (Marbury)
- Quint-Mal Water Authority (Highland Home)
- Riviera Utility Foley Utilities Board (Foley)
- Samson, City of
- Sandsprings Water Authority (Northport)
- Section-Dutton Water System (Rainsville)
- Sylacauga Utility Board (Sylacauga)
- Valley Water Authority (Guntersville)
- Walnut Hill Water Authority (Dadeville)
- West Autaugua Water Authority (Jones)

**Mississippi**
- Beaumont Utility System (Beaumont)
- Cleary Water, Sewer & Fire District (Florence)
- Edwards, Town of
- Kiln Water & Fire Protection (Kiln)
- Kosciusko Light & Water (Kosciusko)
- Newton, City of
- Northeast Copiah Water Association, Inc. (Crystal Springs)
- Pace, Town of
- Siloam Water Association #5 (West Point)
- Siloam Water Association #6-UNA System (West Point)
- Sontag-Wanilla (Sontag)
HIGHLIGHTS
BOARD OF DIRECTORS’ MEETING
June 16 and 20, 2002 – New Orleans, Louisiana

AWARDS
1. Approved revision to the George Warren Fuller Award allowing the award to be presented posthumously.
2. Approved revisions to the Section Small System Program Award adding a plaque to the award presentation, and stating that the awards committee shall consist of a chair and up to five other members appointed by the chair of the Small Systems Division. The committee shall exist and function as a working committee of the Small Systems Division.
3. Approved the following 2002 award winners:
   a. OpFlow Publications Award – Keith W. Hancock and Patricia Klonicki (Rocky Mountain Section)
   b. Small System Best Column Award – Gerald Gilnack (New York Section)
4. Approved revisions to the Exemplary Source Water Protection Award inserting language regarding section involvement.

BYLAWS/GOVERNING DOCUMENTS
5. Approved in second reading amendments to Bylaws Article II—Sections, allowing student members to hold elective office in the sections.
6. Approved amendments to Governing Documents Article IV—Administrative & Policy Council, Article V—Standards Council, Article VI—Technical & Educational Council, Article VII—Water Utility Council, Article VIII—Public Affairs Council, Article IX—Manufacturers/Associates Council, Article X—Divisions, Article XX—International Council as follows:
   a. Stating that the nomination of up to three candidates may not be required for vacancies where a qualified candidate is eligible for reappointment.
   b. Adding language stating that nominations for vacancies shall strive to achieve a balance of geographic distribution, professional qualifications, and diversity.
7. Approved amendments to Governing Documents Article IV—Administrative & Policy Council, Article V—Standards Council, Article VI—Technical & Educational Council, Article VII—Water Utility Council, Article VIII—Public Affairs Council, Article IX—Manufacturers/Associates Council, Article X—Divisions, Article XX—International Council as follows:
The vast majority of our projects comes as a result of repeat business. We hope that fact is indicative of the quality of work that we perform for our clients. After all, we pursue all of our projects in the same manner – with ongoing close coordination seven days a week – simply because that’s what the client deserves.

We perform all design work and preparation of plans and specifications in-house, including site design, structural, mechanical, electrical, hydraulic, and instrumentation. And for larger projects, we are able to utilize some of the best subconsultants found in our region.

So, if you’re one of our established clients in Alabama, Mississippi, Tennessee, or Georgia, thank you. We look forward to serving you in the years ahead. And we’re proud to earn your repeat business.

• WATER SUPPLY, TREATMENT, AND DISTRIBUTION
• WASTEWATER COLLECTION, PUMPING, AND TREATMENT
• SLUDGE HANDLING AND DISPOSAL
• SOLID WASTES DISPOSAL; LANDFILLS
• NATURAL GAS SYSTEMS
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• ASSISTANCE WITH REGULATORY AGENCIES
Rotary-action, pneumatic technology provides a simple, accurate and reliable alternative to controlling valves—answering the need for water works engineers to better control turbidity levels while reducing downtime and premature backwashes.

Under pressure from the mandates of the Safe Drinking Water Act, water works engineers and plant managers are now forced to scrutinize all elements of their potable water treatment operations, and none is more important than filtering. Water leaving this point must fall within mandated turbidity levels. Over the past decade, much attention has been directed at plant control systems to achieve these levels. Like putting a dashboard from a new Cadillac onto a Model T, harnessing these modern systems to antiquated valve actuators yields little gain if precise valve control cannot be reproduced reliably.

In recognition of this, water works engineers are now turning to a new generation of pneumatic valve actuators that are up to the task of executing the instructions of electronic control systems with the necessary precision to accurately control effluent flow. Surprisingly simple, but rugged in construction, this new breed of actuators is also meeting the need to reduce downtime, as some of the first ones to debut in 1981 are still in operation without needing a spare (new) part. A cost-savings factor of up to 40% when compared to electric actuators also helps to explain the widening acceptance of these new pneumatic actuators by plant engineers and managers faced with the responsibility of delivering potable water at a cost-effective rate. Additionally, the ‘fail safe’ (fail-closed or fail-open) feature that high-performance pneumatic actuators provide, protects the plant during a temporary or extended power outage.

In accelerating the need to accurately control filtering operations the search for simple, accurate, and reliable valve actuators has been prompted by the increasingly stringent mandates of the Safe Water Drinking Act, which calls for turbidity levels of 0.3 NTU (Nephelometric Turbidity Unit) or less. Since filtration is typically the final step (before storage) in most water treatment operations, any water leaving the filtration process should be well within turbidity limits. Hence, any efficiency gains in filter operation will help plant operators to not only meet federal clean-water requirements, but also help reduce plant-operating costs.

Plant managers know that a delicate balance must be struck by maintaining the design flow rate of the filter. As pointed out in the turbidity provisions of the EPA Guidance Manual (April 1999): The goal of maximizing water production may conflict with the objective of minimizing treated water turbidity. The operator must use good judgment in establishing operational goals and exercising process control to achieve optimal finished water quality production.

With the introduction of modern plant PLC (programmable logic controllers) and SCADA (supervisory control and data acquisition) systems, recommended process controls are already in place. Despite these gains, archaic valve actuation remains the weakest link in filtering operations.

“There are only certain ways you can achieve a lower turbidity, and the one that is important is accurate valve control,” says Rand Underwood, sales manager for K-TORK, a leading manufacturer of high-performance rotary actuators based in Dallas, Texas. “Valves with actuators receiving commands from the filter control system to properly execute the backwash option are pivotal in the process. If the effluent valve does not shut off, the backwash water containing the solids removed by the filter media will flow into the clear well and the measured turbidity levels will exceed the mandates. You have to have actuators that operate the valves precisely closed. There’s no point in having the best PLC system if the actuators it controls aren’t executing those instructions accurately and reliably.”

Since mixed-media filter performance is affected significantly by hydraulic characteristics, accurate valve control begins at the point of bed loading. Typical loading rates range from 2-8 gallons-per-minute (gpm) per square-foot of filter bed surface area. These rates must be carefully metered by the effluent valve because as the filter bed becomes dirty and clogged with solids, the resistance to flow rises. “When the filter media is fresh and clean it will pass more water than the specified design GPM, so you must close the effluent valve to the point where it only allows the flow rate that the filter media is designed to pass at that time,” says Underwood. “Turbidity-meter, or headloss DP instrumentation tracks the levels and determines the most appropriate time to trigger a backwash. Accurate valve actuation allows the PLC or SCADA system to maintain the correct flow rate until such time.”

As the media gets dirty near the end of the filter run and the filter becomes clogged, the effluent valve needs to open more. Ultimately flow will cease when the resistance to flow is greater than the gravitational force compelling it. As the “head” (hydraulic pressure) increases, solids particles are pushed further and further into the media bed. Solids will be driven completely through the bed and appear in the filtered water. Turbidity levels will increase and the filter controls will shut down the process.

“High turbidity levels are prevented by performing a backwash, but it is an expensive and time consuming process so you really don’t want to backwash until you have to,” notes Underwood. “That filter is out of commission during the backwash process,
and you’re having to do it with clean potable water that you just spent money cleaning. So the key to operational efficiency is to keep the flow at exactly the right levels and backwash when necessary determined by the filter control system and carried out by the actuators.”

The quality of the backwash process itself relies on proper valve actuation. The inlet valve that feeds water from the clarifier to the filter is closed. At the other end of the filter, the effluent valve that transfers water to the clear well must be closed. When the backwash water and air is pumped underneath the media, it must only be diverted through the drain valve and returned to the recycle or holding pond.

“Reliability is extremely important, for if the filter effluent valve actuation fails during a backwash, then you end up with a leakage of the backwash into the potable water stream and this results in non-compliance turbidity problems” cautions Underwood. “You can even disrupt a filter if you open a rate of flow backwash valve too quickly. The valves must be ramped up at the right speeds, to the right position, and then held there during the entire process.”

Because valve control accuracy and reliability play such an important role throughout all filtering operations and in meeting federally mandated turbidity levels, many older plants are currently involved in plant improvements and controls upgrading. In most instances, the original pipe galleries and valves will remain in place. However, a new control system is usually the first step to be implemented. This changeover immediately requires new actuators that interface with modern control systems. Yet, until recently, electric actuators were the primary actuators that came equipped to interface with the first electronic control systems.

The shortcomings of electric actuators In comparison to the old hydraulic or pneumatic cylinder power actuators they replaced, electric actuators seemed to be the only solution at the time. The first actuators were water-actuated cylinders fixed to the back end of a mounting plate, and had a lever on the cylinder shaft to push and pull the valve opened and closed. But it wasn't easy to mount input controls and feedback mechanisms onto this crude device to interface with the new control systems. Hence the progression from cylinders to electric actuators.

Yet, it didn’t take long for the shortcomings of electric actuators to become apparent to water-treatment plant operators-especially the repair and maintenance staff. The easily understood piston-actuator problems could be diagnosed and field-repaired by in-house maintenance personnel, but not so the more complex electric actuators. Another significant danger when electric actuators need servicing or replacing.

“Electric actuators are generally powered by 460 Volt, three-phase power, which can be lethal,” warns Underwood. Reciprocating pneumatics also fall short. Completely sidestepping the inherent problems of electric actuators, today’s pneumatic actuators offer simple and reliable performance, at a cost-effective price. Yet, certain mechanical insufficiencies inherent in the design of all reciprocating-cylinder actuators prevent them from meeting the precise control needs of today’s water treatment plants. For example, rack and pinion designs suffer from a common leak path at the O-ring shaft seals, which are subject to wear. The high-friction O-ring of the piston is also subject to wear. Side-load compensation pads also wear over time. Collectively, these items dictate regular maintenance, and hence, more plant downtime. (SEE FIGURE #1)

Typical piston actuator designs are also subject to heavy side load on the valve shaft. There are no travel adjustments, and the design introduces unnecessary hysteresis that greatly affects accuracy and accelerates wear. These actuators also require the periodic replacement of their high-friction, piston O-ring seals. Additionally, it is difficult to mount the control components that interface with the PLC or SCADA control system. (SEE FIGURE #2)

FIGURE #1: Rack and Pinion Design

“Electric actuators are very complicated and the end user has a difficult time repairing them,” notes Underwood. “They generally have to be serviced by a factory representative in the field or at the factory.

FIGURE #2: Piston Actuator Design

Both his time - and the parts - are expensive. Yet, the real loss results from having the filter down. Factory technicians must be scheduled for a maintenance visit to a plant that may be delayed for days.”

Another significant problem with many electric valve actuators is that they do not offer a fail-safe condition. The primary reason filter galleries flood occurs during a power loss, which cause the electric actuator to hold its last position. But water treatment-being the dynamic process that it is-cannot tolerate a steady state for long.

“Most electric actuators have a hand wheel override mechanism, but once the power goes out, water will tend to overflow and flood the filter pipe gallery unless the valves move to a fail-safe position,” notes Underwood. Additionally, when the filter galleries overflow, electric actuators are submerged in water and subsequently end up damaged. Replacement is an expensive process, as electric actuators cost up to 40% more than their pneumatic counterparts. Still, Underwood pointed out another significant danger when electric actuators need servicing or replacing.

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The scotch yoke actuator design features more working parts, and is typically too large to fit into the cramped quarters of the filter pipe gallery. These actuators also require maintenance of their piston-ring seals. (SEE FIGURE #3)

“Traditional piston-style actuators convert linear motion to rotary motion by means of cranks, gears, or levers,” points out Underwood. “But this conversion creates unwanted hysteresis, side-loads, pinch points, high friction, and torque loss. As a result, control-accuracy suffers and a higher level of maintenance is required.”

A simple, new option in the form of pneumatic rotary actuators. Rotary actuators were first introduced to the United States from Europe in the early nineteen-seventies. Now manufactured by K-TORK, based in Dallas, TX, these rotary actuators meet American Water Works Association standards and are finding themselves as the new option of choice for new facilities as well as plant upgrades.

The majority of this newfound success stems from the K-TORK actuator’s simple design, which utilizes only one moving part. By scribing an arc, all torque forces directed to the valve remain constant from fully open to fully closed. Absent the need to convert linear motion to rotary, “pinch points” are avoided. Given a smaller torque-to-size ratio, compact vane actuators can fit into the tight quarters of filter galleries and still exert a tremendous amount of force on ¼-turn valves, for instance.

The vane design also ensures accurate control and no hysteresis. Because no O-ring seals are needed, vane actuators can provide years of service in demanding, high-cycle, fast-operation and critical modulating applications—allowing water treatment engineers to carefully control turbidity levels. (SEE FIGURE #4)

One vane actuator manufacturer, K-TORK, even designs-in a “default” setting to protect treated water in the event that a power grid goes out. The actuator can be set to a plant operator’s specification as to whether the valve should be held in the open or closed position. The rotary vane of the actuator then automatically holds that position until power is restored. This prevents the flooding of filter galleries.

Much appreciated by maintenance staff, the simple structure of pneumatic rotary-vane actuators allows “in-the-field” repair if necessary.

“In a smaller water treatment facility, say in a town of about 10,000, the city engineer and his staff may wear several different hats,” notes Underwood. “One day they might be doing road repairs, and the next day working in the water plant. But a pneumatic actuator with one moving part is simple to work on. If the guy can use a screwdriver or a wrench, he can pretty much understand how to fix a K-TORK vane actuator.”

Simple field installation helps fuel the changeover to pneumatic rotary actuators. Given the advantages inherent with rotary actuators coupled with the fact that they are generally less expensive than electric actuators, facility engineers are installing them in water works plants with intensifying frequency. Such is the case because some vane actuator designs come ready equipped for mounting into existing plants.

“One problem is that the manufacturers of valves don’t necessarily make the mounting hardware for retrofit,” observes Underwood. “That leaves a facility engineer or a supplier with the responsibility of sketching something out on a piece of paper and taking it to a local machine shop. ‘I need some plates with some holes drilled in this pattern.’ That’s generally the way it occurs.”
For challenging retrofits, some rotary-actuator manufacturers, like K-TORK, send their experts out into the field to help facilitate the installation process. Factory personnel or the qualified representative does the survey on the valve and returns to the factory with the dimensions and recommended actuator sizing. Given seven sizes to work with (torque outputs up to 150,000 inch/pound) and adjustable rotations from 80 to 100 degrees, the proper actuator for any given application can be found. Integral limit switches and positioners are installed. The mounting plate is then fabricated, set-up and tested with the actuator. This process also includes the correct control module to interface with the plant’s existing PLC, SCADA or even older pneumatic systems. The actuator is then shipped to the plant with the correct valve mounting kit.

Such turnkey installation procedures make it easy for plant managers on a tight budget to initiate plant upgrades from maintenance money. The proven reliability of the pneumatic rotary design also factors significantly in the decision to upgrade.

“In our case, for example, we offer a standard three-year / two-million stroke, Performance Warranty,” says Underwood. “We’ve gone in and put in demos in over 100 water plants, with the option that they can return them any time. We’ve never had one returned. Even the first vane actuator we installed back in 1981 is still in service, and has not required a single spare part.”

The bottom line Given the lowered costs, operational advantages, and ease-of-installation afforded by pneumatic vane actuators, water treatment managers are awakening to this new option for optimizing their water production, avoiding downtime due to maintenance problems and remaining within federally-mandated turbidity levels. “Regulating agencies get very picky about when you take filters out of action,” says Underwood. “They don’t want a community or municipality to be without water. Plant operators just can’t shut their plants down whenever they want to. So aside from the fact that the accurate control made possible by rotary actuation helps lower turbidity levels, it is their reliability and low cost of ownership that really matters to most plant managers.”

In a not-so roundabout way, vane actuators are allowing water works management to up their water production while decreasing maintenance costs. Whether private or municipal, these kinds of operational efficiencies can be taken straight to the bank.

Based in Fullerton, Calif., David Rizzo, D.P.M. has researched and written over two-dozen engineering articles regarding all aspects of water production including metering, treatment, recycling, irrigation, and its use in power plants.
a. Requiring that interested candidates for the position of council or division chair should forward a self-nomination to the council staff secretary at least 45 days prior to the council or division meeting at which a new chair will be elected.

b. Clarifying that both current and past members of councils and divisions are eligible to be chair.

FINANCES
8. Accepted the 2001 Audited Financial Statements.
9. Approved renewal of a $300,000 line of credit with US Bank. The interest rate will be .5% over the prime rate charged by US Bank. This is a fee line of credit.
10. Approved a line of credit with US Bank. The interest rate will be 0.5% above the prime rate charged by US Bank. This is a fee line of credit.
12. Approved revisions to the following Section Bylaws:
   a. Arizona
   b. Pennsylvania
   c. Puerto Rico

STANDARDS

SECTION BYLAWS
16. Approved revisions to the following Section Bylaws:
   a. Arizona
   b. Pennsylvania
   c. Puerto Rico

STANDARDS
17. Approved the following AWWA standards:
   a. C213a-02, AWWA Standard for Fusion-Bonded Epoxy Coating for the Interior and Exterior of Steel Water Pipelines (First Edition)
   b. C218-02, AWWA Standard for Coating the Exterior of Aboveground Steel Water Pipelines and Fittings (Revision)
   c. C223-02, AWWA Standard for Fabricated Steel and Stainless Steel Tapping Sleeves (First Edition)
d. C303-02, AWWA Standard for Concrete Pressure Pipe, Bar-Wrapped, Steel-Cylinder Type (Revision)
e. C500-02, AWWA Standard for Metal-Seated Gate Valves for Water Supply Service (Revision)
f. C540-02, AWWA Standard for Power-Actuating Devices for Valves and Slide Gates (Revision)
g. C700-02, AWWA Standard for Cold-Water Meters—Displacement Type, Bronze Main Case (Revision)
h. C704-02, AWWA Standard for Propeller-Type Meters for Waterworks Applications (Revision)
i. C710-02, AWWA Standard for Cold-Water Meters—Displacement Type, Plastic Main Case (Revision)
j. C901-02, AWWA Standard for Polyethylene (PE) Pressure Pipe and Tubing, 1/2 In. (13 mm) Through 3 In. (76 mm) for Water Service (Revision)
k. D120-02, AWWA Standard for Thermosetting Fiberglass-Reinforced Plastic Tanks (Revision)
l. D130-02, AWWA Standard for Flexible-Membrane-Lining and Floating-Cover Materials for Potable Water Storage (Revision)

OTHER

18. Discharged with thanks the Board Ad Hoc Committee on Board Involvement.

19. Reaffirmed the Partnering Agreements with the following organizations:
   a. Australian Water Association
   b. AIDIS
   c. American Public Works Association
   d. Associated General Contractors of American Water Works Association
   e. Canadian Water & Wastewater Association
   f. Water Environment Federation
   g. Water & Wastewater Equipment Manufacturers Association

20. Confirmed San Diego, California as the site for the winter 2005 Board of Directors’ meeting.

21. Elected the following Directors to serve on the Nominating Committee for Vice-Presidents and Director-at-Large for the 2003 election:
   Larry R. Anderson (Iowa Section)
   Jon L. Diebel (Rocky Mountain Section)
   A. Roy Fowler, III (Georgia Section)
   John G. Miriovsky (Nebraska Section)
   David C. Odens (South Dakota Section)

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