NAWC
National Association of Water Companies

MOVING WATER FORWARD

NATIONAL ASSOCIATION OF WATER COMPANIES

Water Policy Forum

FOR STATE PUBLIC UTILITY COMMISSIONERS

Summary Report
APRIL 2011

National Association of Water Companies

Water Policy Forum

SUMMARY REPORT
April 2011

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I. ACKNOWLEDGEMENTS

The National Association of Water Companies (NAWC) extends its sincere appreciation to all of the participants and presenters at the NAWC 2011 Water Policy Forum. NAWC also thanks the authors of the issue papers discussed and presented herein. Finally, we would like to extend gratitude to the National Association of Regulatory Utility Commissioners (NARUC) President Tony Clark for his attendance and participation, as well as to Mary Healy attending on behalf of the National Association of State Utility Consumer Advocates (NASUCA). NAWC wishes to give special thanks to South Carolina Chairman and NARUC Water Committee Chair Butch Howard.

II. PREFACE

The 2011 NAWC Water Policy Forum was held April 3 through April 5, 2011, in Charleston, South Carolina. Participants in this Forum represent the water industry, state public utility commissions, consumer advocates, state and federal drinking water administrators, NARUC, and Wall Street. The purpose of the Forum is not to reach consensus or develop action steps, but rather to share thoughts, particularly information and ideas in the form of "regulatory practices," that can be used to build a common understanding of the issues that impact water companies, the customers they serve, and the respective regulatory agencies. The NAWC Forums have gained recognition as major events for the gathering of key public utility commissioners and key stakeholders to enhance communications on pressing water and wastewater issues. This report provides a summary of the topics discussed at the 2011 Forum in hopes that it will facilitate additional discussion on these issues in the future.

III. 2011 NAWC WATER POLICY FORUM PARTICIPANTS

Mr. John R. Bigelow
President
New Jersey American Water

Ms. Rhea Brekke
Chief of Staff
New Jersey Board of Public Utilities

The Honorable James Cawley
Commissioner
Pennsylvania Public Utility Commission

The Honorable Tony Clark
Chairman
North Dakota PSC

Mr. Nicholas DeBenedictis
Chairman, CEO and President
Aqua America, Inc.

Ms. Dianne Dusman
Sr. Assistant Consumer Advocate
Office of Consumer Advocate

The Honorable Edward Finley
Chairman
North Carolina Utilities Comm.

Mr. Paul Foran
Vice President-Regulatory Programs
American Water

The Honorable Bill Gallagher
Chair
Montana Public Service Commission

The Honorable Elia Germani
Chairman
Rhode Island Division of Public Utilities & Carriers

The Honorable Kevin Gunn
Chairman
Missouri Public Service Commission

Mr. Edward Hallock
Program Administrator
Office of Drinking Water, Division of Public Health,
Delaware Health and Social Services

Ms. Mary Healey
Consumer Counsel, NASUCA President
State of Connecticut - Office of Consumer Counsel

Mr. Walton Hill
Sr. Vice President, Regulatory Relations
United Water

The Honorable Butch Howard
Chairman
South Carolina PSC

The Honorable Patrick Lyons
Chairman
New Mexico Public Regulation Comm.

The Honorable Arnetta McRae
Chairman
Delaware Public Service Commission

Mr. David Monie
President
SB Water Company

Mr. Donald Morrissey
Vice President, Finance and CFO
Aquarion Water Company

The Honorable Erin O'Connell-Diaz
Commissioner
Illinois Commerce Commission

Mr. Philip Oshida
Deputy Director, Standards & Risk Management Division
Environmental Protection Agency
Office of Ground Water and Drinking Water

The Honorable Anthony Palermino
Commissioner
Connecticut Department of Public Utility Control

Mr. Dave Parker
Senior Utility Analyst
Robert W. Baird & Company

Ms. Lisa Sparrow
President & CEO
Utilities Inc.

Mr. Eric Thornburg
President & CEO
The Connecticut Water Company

The Honorable Luis Valera
Commissioner
Nevada Public Utilities Commission

The Honorable David Wright
Commissioner
South Carolina PSC

Moderator
Lila Jaber
Shareholder, Practice Leader-Government Affairs
Gunster, Yoakley & Stewart

NAWC
Cade Clark
Director of Regulatory and Government Affairs

Michael Deane
Executive Director

Sharon Gascon
Deputy Executive Director &
Senior Director of State Regulatory Programs

IV. THE FUNDAMENTALS OF THE PRIVATE WATER INDUSTRY

Forum Participant and NAWC President Eric Thornburg presented an overview of the private water industry. A necessity of life, water is the only utility service that is physically ingested. Mr. Hill noted that water service provided by a utility company must be safe and adequate, with little regard for the cost of providing that service. Not only is water subject to increasingly stringent standards of quality by regulators, but customers demand a high level of reliability as well. Therefore, the essential nature of water service is intrinsically related to quality and reliability. There is no substitute.

A. The Industry is Fragmented

The private water industry is a fragmented industry. Mr. Thornburg commented that there are too many water systems. Additionally, they are too small and too inefficient. For example, there are more than 52,000 community water systems in operation. However, 78% of the water systems serve less than 3,300 people and less than 1% of the water systems serve more than 100,000 people.

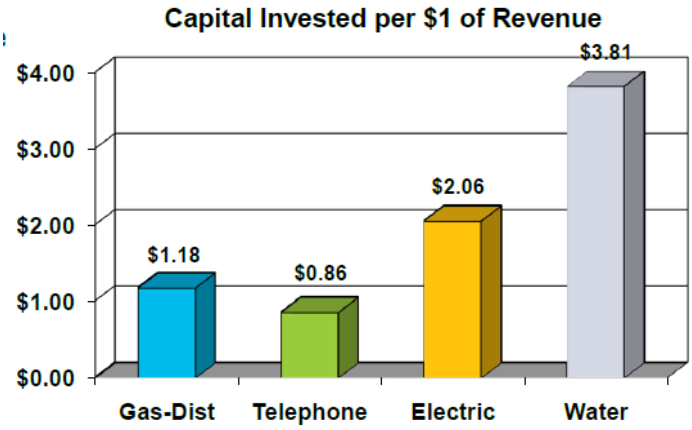
Compared to other regulated industries, the water industry is the only utility that has not been "deregulated." It is the least expensive to consumers but yet heavily regulated by environmental and economic regulators. Water is essential to public health and public safety (fire protection). Today, the water industry is a rising cost industry with high capital needs and the longest capital recovery period.

B. Capital Intensive Industry

The water industry is a rising cost industry with declining per capita revenue. According to the United States Environmental Protection Agency (USEPA), it is estimated that $335 billion are needed over the next 20 years for infrastructure related expenses.[1] The cost drivers and risk considerations include infrastructure replacement needs (supply, treatment and distribution), increasingly stringent Safe Drinking Water Act (SDWA) requirements, increasing testing sensitivity, tort liability, rising costs of production and declining per capita revenue (conservation efforts are working), growth-related needs, pressure on critical water supplies, rising security concerns, and regulatory lag. While the cost drivers and risk considerations will be discussed in greater detail later in the Forum Report, the charts immediately below demonstrate the differences between the regulated industries as they relate to capital investment and recovery.

[1] EPA Drinking Water Infrastructure Needs Survey and Assessment, Fourth Report to Congress, March 2009.

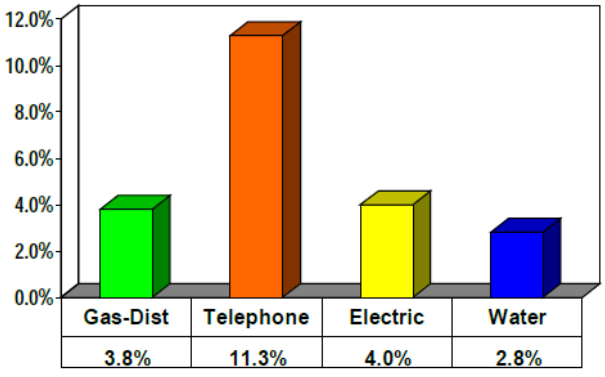
Capital Intensive Industry



Source: 2009 AUS Utility Reports

The water utilities require more capital invested per dollar of revenue than any other regulated industries. As the chart demonstrates, it takes $3.81 of investment to generate $1.00 of revenue. To complicate the economics further, making it more difficult to attract capital, the water industry has the lowest depreciation rates as the chart below demonstrates. Mr. Parker noted low depreciation rates and long recovery periods are viewed negatively by Wall Street. These are factors that negatively influence the industry's ability to attract capital.

Low Depreciation Rates



Source: 2009 AUS Utility Reports

C. The Regulatory Compact

Mr. Thornburg reminded the Forum that the regulatory compact should still hold true today in economic regulation. A fair return should be allowed ***and*** earned so that the industry has the ability to attract capital and ensure a sustainable water supply. With allowed returns, the industry should be able to replace aging infrastructure, meet evolving quality standards, and extend water service to those who need it. Predictability is key to making the appropriate investment.

Mr. Thornburg also believes that regulatory incentives should be considered for ***real*** consolidation. Examples of states that have some incentives for consolidation include Pennsylvania and New York. Some regulatory tools used to promote consolidation and infrastructure investment include acquisition adjustments (positive and negative), capital surcharges, accelerated depreciation, premium rate of return, and single tariff pricing. Other states (Connecticut, New Jersey, Indiana, Oregon, Pennsylvania, and Washington) have mandatory takeover laws for severe cases.

D. The Future of the Water Industry

The Industry Forum Participants believe that major capital investment and rising costs of water will lead to more rate cases and greater need for efficiency. Sustainability of water resources will require capital investment. Communicating "the value of water" will continue to be a challenge but it is critical. Regulatory and structural changes can help assure quality service at a reasonable price. Regulatory practices and policies, the regulatory compact, and Wall Street all influence the ability to attract capital on reasonable terms. Keeping capital markets confident in the "regulatory compact" is critical for future investment and sustainability.

Participant Reaction

In responding to a question posed by NASUCA President Healey about the cost drivers in the water industry compared to the electric industry, Mr. Thornburg noted that the largest cost in the water industry is the cost of the water pipe. USEPA forecasts that the costs of transmission and distribution will far exceed costs associated with the water source, treatment, and storage.

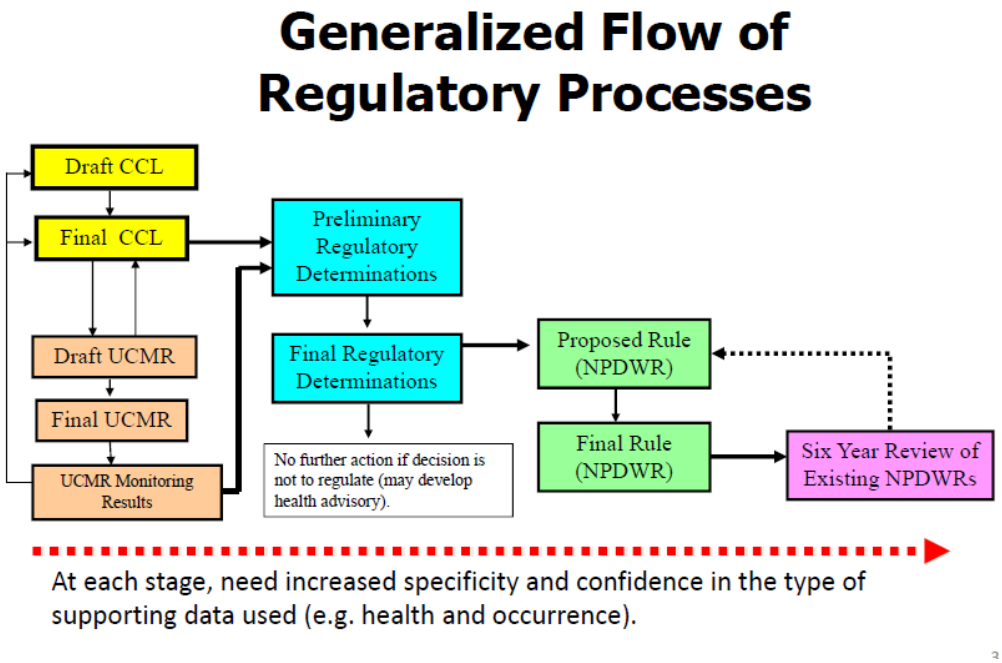
V. THE COST IMPACTS OF THE NEW DRINKING WATER STANDARDS

Philip Oshida provided a regulatory update on behalf of USEPA (also referred to as "Agency"). He spoke specifically to the Agency's:

- Safe Drinking Water Act Regulatory Process;
- Unregulated Contaminants;
- New Drinking Water Strategy
- Existing Standards; and
- Regulatory & Implementation Assistance Tools

A. Regulatory Process

The flow chart below demonstrates the general flow of regulatory processes at USEPA. At each stage of the process, there is a greater specificity and confidence in the type of supporting data used, e.g., health and occurrence. Mr. Oshida notes that the process also allows for participation by stakeholders including state commissions, NARUC, and NAWC.



B. Unregulated Contaminants

1. Contaminant Candidate List (CCL)

The 1996 SDWA Amendments require USEPA to publish a list of unregulated contaminants every five (5) years. Specifically, these are the unregulated contaminants that may require regulation and are known or anticipated to occur in public water supplies. The CCL was published in the Federal Register on October 2009. The USEPA evaluated more than 7,000 potential contaminants and identified 104 chemicals and 12 microbes. Mr. Oshida notes that USEPA will evaluate contaminants in groups, as well as individually, to make regulatory determinations for chemicals with the greatest public health concern.

USEPA is giving priority consideration to CCL3 contaminants. A stakeholder meeting was held on April 7, 2010. As discussed below, UCMR3 monitoring is anticipated in the 2013-2015 timeframe. CCL3 contaminants include:

- 11 Disinfection byproducts i.e., NDMA, aldehydes, halogenated compounds;
- Perfluorinated contaminants(PFOA & PFOS);
- 9 Hormones and an antibiotic;
- 43 Pesticides and/or degradates;
- 12 Pathogens; and
- 3 Cyanotoxins

2. CCL Regulatory Determinations

The SDWA also requires USEPA to publish a Maximum Contaminant Level Goal (MCLG) and promulgate National Primary Drinking Water Regulations (NPDWR) for a contaminant if the Administrator determines that:[2]

- The contaminant may have an adverse effect on the health of persons;
- The contaminant is known to occur or there is substantial likelihood that the contaminant will occur in public water systems with a frequency and at levels of public health concern; and
- In the sole judgment of the Administrator, regulation of such contaminant presents a meaningful opportunity for health risk reduction for persons served by public water systems.

3. Status of Regulatory Determinations

a. Regulatory Determinations for CCL 1

[2] SDWA Section 1412(b)(1)

In March 1998, USEPA published CCL 1 and listed 60 contaminants. In July 2003, USEPA published its final determination "not to regulate" 9 of the 60 contaminants.

b. Regulatory Determinations for CCL 2

In February 2005, the Agency carried forward the 51 remaining CCL 1 contaminants onto CCL 2. In July 2008, it published its final determination "not to regulate" 11 of the 51 contaminants. The USEPA is currently gathering available health and occurrence information for the remainder of the contaminants.

c. Regulatory Determinations for CCL 3

The proposed regulatory determinations are expected in 2012, and the final regulatory determinations for CCL 3 are expected in 2013. For any final determination to regulate a contaminant, the Agency has 24 months from issuance of the final regulatory determinations, to propose MCLGs and the associated regulation(s). Within 18 months of the proposal(s), USEPA will make the regulations final.

d. Regulatory Determination for Perchlorate

In October 2008, USEPA made a preliminary determination "not to regulate" perchlorate. Subsequently, in response to this preliminary determination, the USEPA received comments from over 32,000 individuals and/or organizations. In August 2009, the Agency issued a Supplemental Request for Comment where EPA asked for comments on a re-evaluation of perchlorate exposure to sensitive life stages, including infants, children and the fetuses of pregnant women. USEPA received over 6,600 comments. In February 2011, after considering all of the public comments, the USEPA decided to regulate perchlorate in drinking water. According to Mr. Oshida, this is the first contaminant that USEPA has decided to regulate from the CCL. The decision to regulate perchlorate is a reversal of the 2008 Preliminary Determination and is, in part, a result of the consideration of the input of almost 39,000 commenters.

e. Unregulated Contaminant Monitoring: UCMR 2 and UCMR 3

The Final Rule on UCMR 2 was published on January 4, 2007. The Agency provided oversight to the UCMR 2 monitoring, which took place from January 2008 through December 2010 on 25 contaminants, including: brominated flame retardants, nitrosamines, explosives, insecticides, pesticides, and degradates. A summary of progress on UCMR 2 and the status of UCMR 3 can be found at the following website: http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/upload/UCMRUpdateIssue15.pdf. The results from UCMR 2 have been submitted to the National Contaminant Occurrence Database (NCOD) and are available at the following website: http://water.epa.gov/scitech/datait/databases/drink/ncod/databases-index.cfm. The Agency expects to complete UCMR 2 reporting by mid 2011.

USEPA proposed UCMR 3 in February 2011. The monitoring is planned for 2013-2015. Consistent with the Proposal, the Agency will monitor for 30 contaminants and/or pathogens. The monitoring will include hormones, perfluorinated compounds (e.g., PFOS/PFOA), volatile organic compounds (VOCs), metals, and pathogens.

4. Endocrine Disruptor Screening Program

The Food Quality Protection Act of 1996 required that USEPA develop validated methods for screening contaminants for endocrine disrupting activity. USEPA issued test orders for 67 pesticides. The 2010 Congressional House Appropriations Report requires USEPA to publish a list of at least 100 chemicals, including drinking water contaminants, for endocrine disruptor screening. In November 2010, the USEPA published a proposed list of 134 chemicals that includes regulated and unregulated drinking water contaminants and pesticide registration review chemicals. The comment period closed in January 2011. After considering the comments and the information submitted, USEPA will refine the list and develop a schedule for issuing the test orders. Mr. Oshida expects that this will be complete by late 2011.

C. USEPA's Drinking Water Strategy

The USEPA's new drinking water strategy will focus on 4 principles:

1. Address contaminants as groups rather than one at a time to accelerate advancement of drinking water protection;
2. Foster development of new drinking water technologies to address health risks posed by a broad array of contaminants;
3. Use the authority of multiple statutes to help protect drinking water; and
4. Partner with states to share more complete data from monitoring at public water systems.

As part of the USEPA's efforts to implement a new drinking water strategy, the Agency will engage the stakeholders and the public (using public meetings, webcasts, and USEPA's website) to develop technical and procedural approaches. USEPA will also seek advice from the National Drinking Water Advisory Council, as well as consult with the Science Advisory Board's Drinking Water Committee.

1. Naming Contaminants in Groups

The Agency has announced plans to develop a single regulation that will include up to 16 carcinogenic VOCs. Mr. Oshida believes that this approach should provide public health protection more quickly and allow utilities to more effectively plan for improvements and costs. The 16 compounds selected: 1) have a public health goal of zero (may cause cancer); 2) are measured by the same technique; 3) are treated by the same technology (aeration and/or GAC); and 4) may co-occur. Mr. Oshida expects a Proposal for this "Single Regulation" in 2013.

2. Foster New Drinking Water Technologies

USEPA Administrator Lisa Jackson and the U.S. Small Business Administration Administrator Karen Mills announced the formation of the Water Technology Innovation Cluster (WTIC). With a Board of Directors that includes stakeholders and substantive committees, the WTIC will hold a meeting in May 2011 to solicit input from the water industry, research organizations, and other national stakeholders regarding technology needs and water challenges. Mr. Oshida expects that there will be grant opportunities that arise out of this partnership.

3. Use Multiple Statutes to Protect Drinking Water

The USEPA has begun the process of identifying regulatory authorities under the Toxic Substances Control Act (TSCA) and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) that may provide opportunities for better protection of drinking water. Specifically, the goals are to limit pesticides and toxic chemicals in drinking water sources and to collect, share, and assess data on the potential occurrence and health effects. USEPA hopes that using multiple authorities will more readily allow the identification of co-occurrence, common treatments and analytical methods.

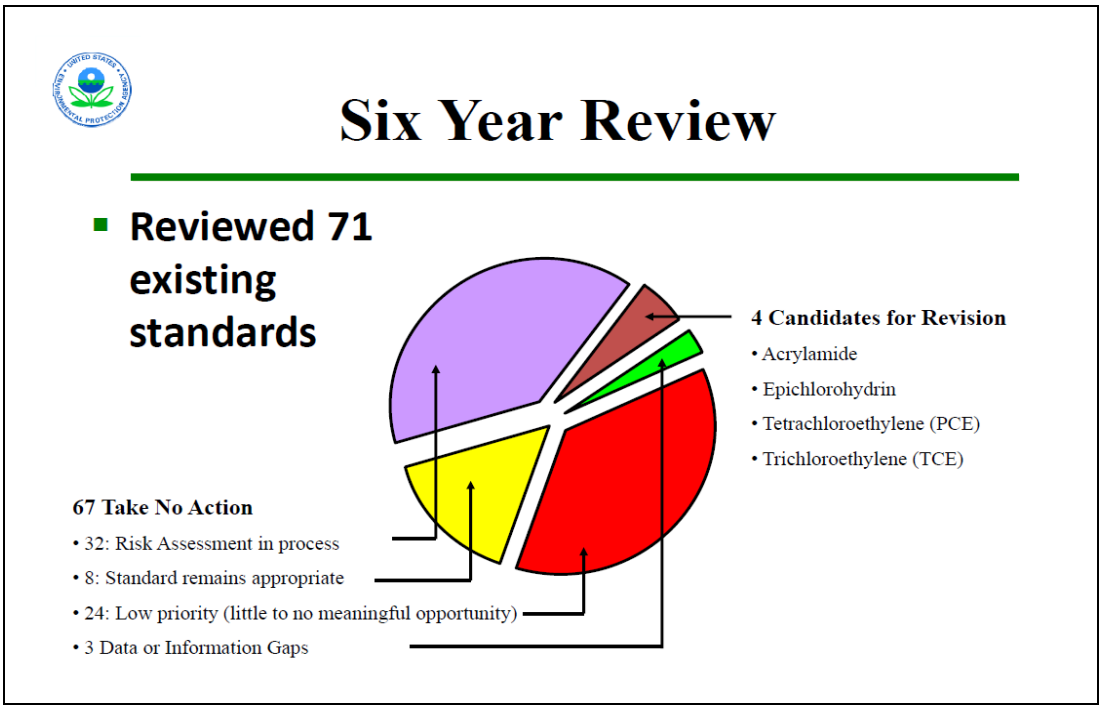
4. States to Share More Monitoring Data

A state-EPA Data Sharing Committee that includes representatives from the USEPA, the Environmental Council of the States (ECOS), the Association of State Drinking Water Administrators (ASDWA) and the Association of State and Territorial Health Officials (ASHTO) has been formed. A Memorandum of Understanding has been signed by the Committee representatives and they have agreed to share information and form a Data Sharing Implementation Work Group to develop recommendations. In response to a question from a Forum Participant about how USEPA communicates with the states, Mr. Oshida clarified that USEPA communicates through its regional USEPA offices to individual state public health administrators and ASDWA.

D. Existing Standards

1. Six Year Review

USEPA is required to review and, if appropriate, revise existing NPDWRs every six years. Any revision shall maintain or provide for greater protection of public health. The Agency completed the 1st Six Year Review in 2003. During that process, the Agency made the decision to revise the Total Coliform Rule (TCR) after reviewing 67 standards. USEPA completed the 2nd Six Year Review in 2010. During this process, USEPA reviewed 71 existing standards. The Agency has determined that it will not take action as it relates to 67 standards. However, the four candidates for revision are acrylamide, epichlorohydrin, tetrachlorethylene (PCE), and trichloroethylene (TCE). TCE and PCE are being considered as part of the group under the Drinking Water Strategy. Regulatory revisions for Epichlorohydrin and Acrylamide will be initiated at a later date.



2. Revised Total Coliform Rule

As stated earlier, in 2003 during the first Six Year Review, USEPA published its intent to revise the TCR. The Agency convened a Federal Advisory Committee to provide recommendations on how the TCR should be revised, what research should be conducted, and what information should be collected to better determine distribution system risk. The Federal Advisory Committee was comprised of representatives from 15 stakeholder groups. The proposed revised Total Coliform Rule was published on July 14, 2010. It provides a more proactive approach to public health protection. The proposal was based on the Agreement in principle signed by the Federal Advisory Committee in September 2008. The completion of the final rule is expected in 2012. The Federal Advisory Committee also recommended an evaluation of all currently approved coliform analytical methods to determine appropriateness. A stakeholder meeting was held in May 2010 to discuss identification of options and development of a conceptual approach for this evaluation. EPA is evaluating the concepts and determining next steps.

3. Lead and Copper Rule

A 2004-2006 National Review identified issues that reduce the effectiveness of the Lead and Copper Rule. Short-term revisions were issued in October 2007 to clarify monitoring requirements, strengthen the long-term treatment change evaluation, assure customer notification of results, clarify lead service line “test out” provisions, and improve public education requirements.

A stakeholder meeting was held in the Fall of 2010 to start to address "Long-term" issues that remained with the Lead and Copper Rule. Mr. Oshida anticipates that a proposed rule will be released in the Spring of 2012. Issues under consideration include partial lead service line replacement, sample site selection, tap sampling issues such as pre-stagnation flushing and maximum stagnation time, consecutive systems, and particulate lead.

4. Fluoride

In 2006, the National Academy of Sciences (NAS) recommended that USEPA update health and exposure assessments to account for bone and dental effects and consider all sources of fluoride. The U.S. Department of Health and Human Services (HHS) and USEPA reached an understanding on fluoride effects on tooth decay and development of dental fluorosis with excess fluoride consumption. The HHS proposed a recommendation of 0.7 mg/L that would replace the recommended range of 0.7-1.2 mg/L. The USEPA will investigate whether to lower the fluoride MCL.

5. Hexavalent Chromium (Cr)

The drinking water standard is 1.0 mg/L for total Cr. In 2010, the USEPA released a draft review of hexavalent Cr health effects. When the final review is complete in 2011, USEPA will review the conclusions and other up-to-date scientific findings and determine if a new standard (for hexavalent chromium and/or total chromium) should be set. The USEPA is working with state and local officials to learn about the prevalence of hexavalent chromium. The USEPA has issued guidance on sampling for and analyzing for hexavalent chromium.

E. Regulatory & Implementation Assistance Tools

The USEPA Optimization Program offers compliance and implementation assistance to small public water systems. Active Area-Wide Optimization Programs (AWOPs) are in 21 states. ASDWA provides critical support for the development of AWOPs. The Optimization Program is developing new technical tools and implementation approaches. Many states have integrated AWOP-thinking into their other drinking water programs. USEPA and the states are including optimization of Distribution Systems and Ground Water Systems into AWOP.

Expedited Method Approval

USEPA also offers an expedited method that allows approval of "alternate" drinking water analytical methods via a streamlined process for approval and publication in the Federal Register. Alternative methods need to show equally effective performance to the approved methods. The Expedited Method Approval process reduces approval time from several years to 6 to 12 months. The first group of methods using the new process was published in a June 2008 Federal Register notice with subsequent actions

published in August 2009, November 2009, and June 2010. The next action will likely be published in the summer of 2011.

Participant Reaction

Many of the Forum Participants noted that the cost to implement any new or modified requirements from the USEPA is borne directly by the ratepayers. In that regard, Forum Participant Dusman requested that Mr. Oshida comment on how the Agency considers cost to consumers in the Agency's identification of regulations for contaminants. According to Mr. Oshida, the Agency attempts to mitigate costs by looking at contaminants in groups rather than in isolation. In addition, some public comments include information on costs and the Agency does consider those comments. Moreover, the USEPA does conduct a cost-benefit analysis as part of its review and evaluation. Mr. Foran questioned how the USEPA uses or relies upon the cost-benefit analysis and Mr. Oshida clarified that it is used to make adjustments related to the level to which USEPA will regulate a particular contaminant. Forum Participant Dusman noted that her office does participate in the public comment opportunities issued by USEPA. Forum Participant Gallagher asked if contaminants are ever identified because of their regional or geographic occurrence. Mr. Oshida noted that such contaminants are identified only if it is tracked as a national occurrence as well.

As it relates to the Agency's review of Fluoride levels, Forum Participant DeBenedictis noted that this is a real problem from a business perspective because his company has to add fluoride to water in some of the service territories. He commented that it would seem more cost efficient to provide fluoride tablets to customers for specific areas. Ms. Dusman noted that in Pennsylvania, some customers will not participate in the mandatory system hook ups because of the fluoride issue generally.

VI. CUSTOMER COMMUNICATION AND THE VALUE OF WATER

Previous Forum Participants have commented that future sustainability of the industry and attention to better services requires a solid understanding by consumers of the "value of water." To accomplish this, Forum Participants believe that consumer education is critical. Therefore, this year, Forum Participant Hill made a presentation to address these points.

While redundant, for purposes of context, it is important to note again that for the last decade, the water industry has been characterized by rising costs at a rate in excess of inflation. As discussed earlier, this occurrence is primarily associated with increasingly stringent water quality regulations, the replacement of aging infrastructure, threats to sources of supply, and the costs of adding supply. These factors put upward pressure on both capital and operating costs, and therefore on rates for water service; all with no sign of abating. Mr. Hill notes that the resulting frequency and magnitude of water rate increases requires new approaches to ratemaking, such as those incorporated into the NARUC Water Committee Resolution (attached to the Forum Report). New approaches to customer communication and outreach efforts are necessary as well because the regulatory process will be facilitated to the extent that customers understand the reasons for the rising cost of water. Proactive communication strategies have become a significant change in the way water companies are conducting their business.

Mr. Hill notes that the water industry has been, and still is, in transition regarding its customer communication functions. A victim of their own success for almost one hundred years up until the late twentieth century, water suppliers were virtually invisible to their customers, at least until there was an issue such as a rate case or a service outage, and customer outreach was generally reactive to those issues. Those events were not frequent, however, and after a flurry of activity or concern, the companies slipped back "out of the spotlight" into comfortable invisibility. Corporate communications departments were not focused on proactive customer education or on raising the visibility of issues. Rather, the majority (non-emergency) communications efforts, when they occurred, were generally delivered by operations or executive personnel. The changing landscape described above, along with changing customer preferences and needs and substantial technological advances, have resulted in a largely untapped opportunity in the manner and methods through which utilities now relate to customers.

A. Newer Developments In Customer Communication

Mr. Hill outlined some new approaches being developed and implemented to enhance customer communication. These approaches extend well beyond the classic "bill insert" approach to customer communication.

1. Customer Surveys

Customer surveys are used for specific feedback on customer service or field contacts and for more general purposes such as determining the customers' perception of the water supplier and the reasons for such perception. Customers' experiences with quality, supply, customer service, billing, and communication can be adequately determined using customer surveys. This information enables the Company to identify and undertake those actions that will have the most impact on customer satisfaction. According to Mr. Hill, United Water's 2010 customer survey revealed somewhat unexpected results: while quality and sustainability of water supply are always important to customers, the key drivers of satisfaction of the overall customer experience are now based on customers feeling valued by and receiving value from a socially responsible company[3]. This kind of result can inform the Company in its customer service decision making providing such surveys are an essential part of establishing an ongoing dialogue with customers. As costs and therefore the price of service increase, we need to ensure that in parallel, we develop services that are valuable to our customers and that our communications and outreach activities educate our customers to the essential role we play in securing water resources for the communities we serve.

2. Inclusive Services

As part of the outreach transition, many water suppliers have implemented various outreach initiatives to special customer groups. These include low income assistance programs, Braille and large print bills, assistance for customers with medical hardships, senior citizen programs, and multi-lingual services. These programs increase the visibility of the water supplier and ensure that the services offered are inclusive of the diverse needs of the customers served.

3. Automated outbound calling systems

Deployment of mass outbound telephone messaging services now provides an opportunity to communicate important messages about emergencies and other important service events. These notifications are now being expanded to both text and email channels to accommodate the increasing mobility of communication networks. This practice serves the customers' desire to feel valued and demonstrates the company's desire to quickly and proactively give the customer up-to-date information about the service they purchase.

These systems are also proving valuable in other areas of our business. *Televox* is an outbound messaging system fully integrated with the company billing system. Payment reminder calls are made to customers, providing them with the opportunity to pay their

[3] A socially responsible company is for example, active in the communities it serves, recognizes the value of diversity and inclusion, demonstrates ethical and transparent decision making and meets the requirements of the regulatory systems.

outstanding charges via electronic check or credit card at the time of the call. This low cost, environmentally friendly method of reminding customers of past due balances is both effective and well received by customers. In many cases this system avoids the mailing of traditional reminder notices while simultaneously allowing each customer to choose immediate payment options. Maintaining a low level of aged receivables and its associated carrying cost is in the best interest of all customers.

4. Consumer Confidence Reports

Consumer Confidence Reports are required by the USEPA and they are an important vehicle for customer outreach and education. Noting that the required information is very technical, Forum Participant Hill suggests that the reports can be supplemented with general information about the company, water supply sources, distribution systems, treatment, environmental regulations, conservation, and safety and security.

5. Company Websites

Websites are a successful tool for customer communications. For example, United Water web site visits per month have soared from only 358 in 2009 to over 39,000 per month so far in 2011. Customer self service via the website is the largest driver of customer communication. With this system, a registered customer can view his account data, including current and past bills, and complete transactions such as paying his bill and checking scheduled appointments. Customers can also enroll in services offered by the company such as electronic billing. For United Water, investment in this 24-7 communication channel has been very well received by customers. The website contains:

- General information and history of the company and the industry;
- Outreach, education, and information about assistance programs;
- Outline of services provided and tariff specifics;
- Information about conservation programs;
- Regulatory contact information and rate case notices;
- Company sponsored community event calendars (plant tours, school visits, charitable events, and fundraising);
- Press releases;
- Education resources;
- Company speakers bureau;
- Customer Advisory Panel;
- Company contact information; and
- Links to other resources: EPA, AWWA, UN, National Geographic.

6. E-Billing

E-billing is a great example of a service that can be introduced to combine cost saving and environmental benefits, as well as to establish another real-time communication channel with customers. For United Water, eBilling replaces paper billing with the electronic delivery of a customers' bill directly to their email inbox. An eBill can be up to 37% less expensive to produce and deliver than a paper bill. Since inception in 2009, almost 12% of United Water customers have enrolled to receive their bill electronically. As a result, paper use for billing services has been reduced by 24,000 pounds (roughly 73 fully grown trees) and over 183,000 gallons of water have been conserved. In addition, greenhouse gas emissions have been reduced by over 55,000 pounds. Over 33% of customers enrolling in the eBilling service in 2010 did so through the company website.

7. Payment options

Payment options have changed dramatically over the past 5 years to reflect customers' changing preferences. Traditional payment methods of cash and check have been enhanced with electronic options including credit card and electronic check payments both online and over the phone. Customers can have payments automatically deducted from their checking account with Direct Debit services or spread their payments equally over 12 months with budget billing programs.

8. Texting

United Water is now developing an SMS text billing service for implementation in 2011. This will give customers the option to receive a text message when their bill is issued. By preselecting a preferred payment option (credit card or bank account), the bill can be paid by pressing a button on their cell phone. Additionally in 2011, United Water plans to implement a recurring online payment option, under which customers will be able to select the timing and amount of monthly payments which will be made automatically through their bank. A major challenge in the payment arena is presented by the high cost of processing credit card payments. Reward programs linked with credit cards are driving usage up for payment of many living expenses; however, this preference is curbed for many utilities as a result of the application of processing fees, which can be as high as 3% of the overall payment made.

9. Customer Information Systems

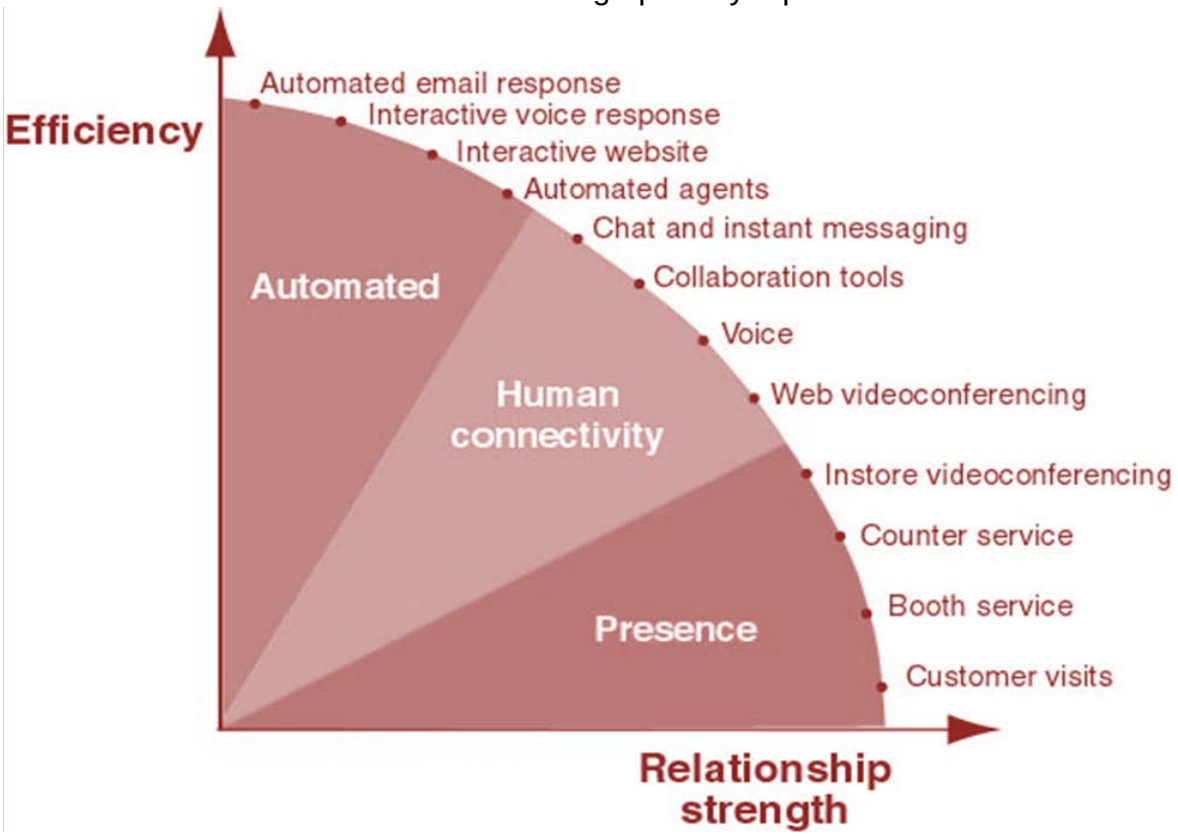
As the transition to enhanced customer communications continues, customer information systems must support both customer preferences and new employee behaviors to make the new customer interactions a great customer experience. Some systems in use today have limited functionality to support real time customer service, and employ somewhat outdated technology. As a result, data access and quality are sometimes not sufficient to support today's customer needs. Systems can be designed to incorporate in real time the full range of customer service, billing, collection and field

service, and integrate the services mentioned above. According to Forum Participant Hill, United Water is currently designing such a system to be implemented in 2011. He believes that this will produce customer benefits that match what our customers and stakeholders are asking for:

- Timely response to information requests from both customers and regulators;
- Services tailored to individual customer preferences;
- Enhanced complaint resolution;
- Improved billing options;
- More timely billing and payment;
- Improved bill accuracy;
- Improved collection functionality and timeliness;
- More flexibility regarding field service appointments;
- Automated appointment reminders; and
- Improved first contact resolution

B. The Challenge of Change

As electronic communication and outreach tools such as email, texting, interactive voice response, and websites become more efficient, they also become more personally detached relative to traditional means such as counter or booth service, telephone, or visits to customer service centers. This is graphically represented in the chart below.



Forum Participant Hill aptly notes that each customer contact, electronic or otherwise, presents an opportunity to demonstrate how much a customer is valued through efficient and professional interaction. For the post baby boom generation and for a growing number of customers, automated self service and self education options are and will become more attractive. He cautions that companies must safeguard the value of each customer contact as the opportunities for personal interaction are reduced. This measure can be accomplished by building and preserving a local presence through efficient local offices, customer surveys, community involvement, support and participation in community events, and the formation of local customer advisory panels. In this way, water suppliers can stay in touch with the changing expectations of their customers and communities, as well as make service decisions firmly based on expressed customer preferences. A customer that is satisfied with his or her water service is also likely to be satisfied with the company's regulators.

C. The NAWC Value of Water Outreach

In 2010, the New York Chapter of NAWC, in cooperation with and support by the New York Public Service Commission and the NAWC national office, completed an outreach program consisting of public information materials which, in 2011, have been distributed to the Chapter members for use. The goal for the New York project was to develop a consistent approach to customer communication in the Chapter that would help customers better understand and appreciate what it takes to deliver safe, reliable, affordable water service from source to tap. The challenge, near the level of the "Got Milk" campaign, was to develop materials and media that would get the point across, without the kind of detail that causes the majority of customers to lose interest quickly, such as that included in Consumer Confidence Reports or rate case notices. To meet this challenge, it was essential to decide upon clear focus points and key messages, and to develop materials for use by all Chapter members so that the messages were delivered consistently across companies and service areas (and states). The group developed four focus points: 1) expertise; 2) commitment to water quality; 3) investment in infrastructure; and 4) customer service.

The selected key messages were:

- tap water is reliable;
- tap water is essential to life;
- tap water is an exceptional value; and
- tap water is a better choice.

To deliver these messages, the group developed scripts for radio spots, and text and visuals for outdoor advertising, bill inserts, newspaper advertising and website media. A Powerpoint presentation and informational brochures were also developed for state and local officials. Posters reflecting the focus points, key messages, and additional print information are attached to this report. The materials have been distributed to all

Chapter members and are now being placed into the various media. Other NAWC Chapters have expressed interest in developing similar outreach campaigns. As part of its much broader communications strategy, reaching out to many stakeholders in addition to customers, NAWC is facilitating the transfer of the New York Chapter's excellent materials to be used in other states for customer education.

Participant Reaction

Some of the Forum Participants noted that the technology "cuts both ways" in the sense that some customer groups, who may not be adequately informed, use the web to promote negativity about the pending cases creating a tremendous amount of work for regulatory commissions as it relates to responding and addressing their concerns. It was also noted that the enhanced communication should be extended to elected officials and local officials. Forum Participant Sparrow noted that the responsibility to educate the consumer and to explain the "value of water" extends to every stakeholder: utilities, regulators, and consumer advocates. Working together with all of the stakeholders lends itself to a better process for the consumer. NASUCA President Healey suggested that the Forum look to the Smart Grid Collaborative as a good example of collaboration for consumer education. That is a partnership between NARUC, NASUCA, the Edison Electric Institute, and the industry to educate on the pros and cons of the smart grid. It has been a useful education exercise and has fostered valuable partnerships. NARUC President Clark also noted that some parties have a tremendous amount of trust for educational institutions and that the water industry could tap into that trust and potential partnership opportunities for education.

VII. CAPITAL MARKETS PERSPECTIVE

Dave Parker of Baird & Company led this discussion. With trillions of dollars in U.S. infrastructure investment anticipated, access to capital markets will be crucial for capital-intensive sectors like water, electric and natural gas. Mr. Parker noted that the current investor realities are such that:

- The weak global economy has investors laser-focused on risk;
- Wall Street hates uncertainty;
- Less regulatory activity is better; and
- Recent state regulatory decisions to deny rate requests fuel investor fears that regulatory practices could turn less constructive.

A. Factors that Impact Cost of Capital

1. Risk/Return

According to Mr. Parker, the bottom line is that investor interest is waning as risk and reward diminishes and the sector direction becomes less predictable. Mr. Parker notes that no one expects regulators to guarantee returns for the industries nor is guaranteed returns necessary. However, good opportunities to earn fair returns are essential. Further, Wall Street views political interferences to the opportunities to earn fair returns, negatively.

Moreover, the global competition for this capital has increased. Countries, states, utility sectors, and different companies are competing for the same capital. Mr. Parker notes that the best expected risk and corresponding reward wins at the lowest cost and not the highest “coupon” rate. Wall Street analysts believe that regulators can assist in working with stakeholders to lower risk. Mr. Parker suggests that ways to lower risk include: 1) the definition of or establishment of an infrastructure policy; 2) consistent regulatory practices; 3) enhanced regulatory recovery mechanisms; and 4) "smooth” cost investment recovery to avoid rate shock. On this general point, Mr. Parker stated that all stakeholders benefit from more predictable results.

2. Sector Loses Positive Momentum

Mr. Parker made the observation that the water industry had the best regulatory mechanisms among peers. In his words, “life was good.” Increased water quality standards helped drive the consensus outlook for the water sector. The increase in regulated investments doubled the EPS growth rate. The investors’ expectations for

sustainable EPS growth increased to 5-7% annually from prior growth of 1-2%. However, the utility sector underperformed.

Investors see limited visibility for infrastructure investment in near-term. Utility infrastructure investment has slowed, including politically popular “green” infrastructure options. Consumers are financially limited with the economic downturn and regulators are taking a "wait and see" approach before approving new infrastructure investment. Moreover, some states have taken negative regulatory action denying rate decisions and the investment concern includes a fear that more states will follow.

The implications to what is described above includes a slowed earnings per share (EPS) growth which means a lower P/E multiple. This lost momentum may take years to regain.

3. Investment Concerns

Investors are concerned that a positive catalyst does not exist. The absence of a national infrastructure policy means there is no positive catalyst. The regulators are hesitant to approve anything that increases rates. With consumers’ (and state) budgets stretched, investors are concerned that ratepayers cannot pay for any new infrastructure. By the same token, with lower demand, the question becomes whether or not new infrastructure is needed.

B. Recapturing Positive Momentum

Mr. Parker notes that an aging U.S. infrastructure system is incapable of meeting “greener” goals and maintaining a high level of service. Analysts forecast that over $1 trillion of infrastructure investment is needed in the next decade to reduce emissions, enhance system deliverability and reliability, replace aging assets, and improve customer efficiencies. The economy must begin to recover before stakeholders begin to push for this new investment. However, for the long-term, Forum Participant Parker believes that substantial investment opportunities should create attractive returns without inordinate risk. He believes there has been some constructive regulation to date and therefore, spending on infrastructure should reaccelerate 4-6% in 2012. The wild card relates to any new emissions legislation.

C. ROE

Allowed returns send a strong, positive message to potential investors. While it is difficult to determine the “right” ROE, getting the wrong one can be very costly. Earned ROE provides good insight into the effectiveness of recovery mechanisms and the review process. Decisions to deny rate cases or disapprove ROEs might make good headlines but are problematic for long-term planning and investment into infrastructure. Regulatory practices significantly impact long-term investment potential. Improved consistency of returns lowers cost of capital and improves access to capital. Mr. Parker noted that flexibility with earned ROE creates stock upside for water companies.

Participant Reaction

Forum Participant O'Connell-Diaz commented that she has always viewed "Credit" and Wall Street as the fourth leg of the stool in that she is cognizant of the fact that the companies have to be able to attract capital to be successful and make the necessary investment in the state to serve customers adequately. Many of the Forum Participants noted that Wall Street analysts review commission orders and listen to proceedings. As it relates to uncertainty and Wall Street's reaction to it, Forum Participant Valera asked Mr. Parker to comment on the difference between elected commissions and appointed commissions. It was noted that there are uncertainties related to both structures but many analysts believe that politics plays a bigger role in elected commissions. However, NARUC President Clark noted that some of the Southeastern commissioners are elected and the Southern Company has some of the most positive regulatory environments. He noted that it really just depends on the individual commissioner. Forum Participant Arnetta McRae noted that Wall Street has a rating system for state commissions as well. She reminded the Forum Participants that ratings (whether for utilities or state commissions) should be a more comprehensive review addressing the overall picture (rates, service, and timeliness in response).

Mr. Parker was asked to provide his view of "constructive regulatory decisions." In response, his definition includes decisions that eliminate or mitigate regulatory lag, embrace a collaborative process and settlements. Mechanisms like the DSIC, for example, are a constructive regulatory decision. Wall Street also views favorable practices such as single tariff pricing, projected test years, and interim rates as positive regulatory practices promoting certainty and encouraging investment. Forum Participant Sparrow reminded the Participants that water companies must make the necessary system investment and provide adequate service to customers regardless of what Wall Street's view is. In other words, water companies have an obligation to serve and that is what regulators must understand and appreciate.

VIII. ASDWA PERSPECTIVE

Ed Hallock presented to the Forum Participants on behalf of the Association of State Drinking Water Administrators (ASDWA).

1. Rule Status – Recently Adopted and In Progress

According to Mr. Hallock, a number of recently promulgated rules by USEPA pose challenges for both states and water systems to implement. This is true for LT2/Stage 2 and the Ground Water Rule. In fact, in many cases, states are finding the need to "go the extra mile" with small water systems to help them comply. Consequently, state administrators have greatly appreciated the opportunity for early involvement with USEPA in rule development – as is the case for the long term LCR revisions currently contemplated and as was the case for the TCR "Agreement-in-Principle." For Lead Copper Rule revisions, states are working with utilities to carry out short-term fixes and states participate in the USEPA's "long-term" workgroup. ASDWA intends to also be involved in the two rulemaking efforts recently announced by the USEPA Administrator related to perchlorate and carcinogenic VOCs.

2. Program Implementation Priorities

Although states met the February 17, 2010, deadline in The American Recovery and Reinvestment Act of 2009 (ARRA), they are busy overseeing the projects that resulted with the flow of dollars. The state administrators also have several "ARRA-like" features in fiscal years 2010/2011 (e.g., the mandatory 20% Green Project Reserve, Davis-Bacon prevailing wage requirements, and a minimum 30% subsidization requirement). In addition, the state administrators are preparing for the next Needs Survey which is expected to be launched later this spring.

As it relates to the USEPA Enforcement Response Policy and the Tracking Tool, states are generally in accord with the federal philosophy underlying both. For example, states believe that they should enforce the highest priority violations first. However, there is an objection to the blanket requirement to have any high priority violations under a formal enforcement order at the end of 6 months (or be returned to compliance).

According to Mr. Hallock, state administrators have "reenergized" the attention being paid to capacity development and believe there are a variety of "best practices" that can be identified using a collaborative workgroup process made up of ASDWA members and the USEPA.

3. Drinking Water Security

State administrators are a vital link to securing the safety of drinking water. Mr. Hallock notes that drinking water security is now viewed by state, local, and federal partners as more than just preparing for and responding to man-made events. States continue to

integrate security into their everyday programs focusing on an "all-hazards" approach. The state administrators work collaboratively with stakeholders to address this more comprehensive view of security. Those partners include the industry, CIPAC workgroups, WaterISAC, the Water Coordinating Council, and utility-based WARNs. However Mr. Hallock notes that there are financial challenges. The elimination of the national drinking water security grant, $5 million spread amongst 50 states, has caused concern with some state administrators.

Finally as it relates to security, ASDWA is monitoring any legislation that would require replacing gaseous chlorine with "Inherently Safer Technology."

4. Source Water Protection

The state administrators are encouraged by the momentum that seems to be shifting toward strategic use of various legislative and regulatory authorities (especially, those embedded in the Clean Water Act). In doing all that they can to leverage those tools, ASDWA is participating on the Source Water Collaborative (with a focus on nutrients) as well as with the On-Site Waste Disposal Workgroup. As it relates to the Land-Water Alignment Pilot Project, ASDWA continues to work with the Trust for Public Lands and the Smart Growth Institute in New Hampshire, Maine, Ohio, North Carolina, Oregon, Utah, New York, and Missouri. ASDWA's goal is to identify best practices for protecting sources of drinking water by leveraging other programs, especially those involving land-use decisions. Additionally, ASDWA is very active and interested in being part of the solution to the Water Availability, Variability, and Sustainability. In that area, the recent focus has been to participate on the State-EPA Tribal Climate Change Council.

5. Drinking Water Data Management

Data drives decisions. Therefore, states strive to ensure data quality and integrity. Additionally, states plan to share occurrence data to inform decisions under the auspices of ECOS/ASTHO/ASDWA/EPA MOU with guidance from Implementation Work Group 7. This will be a major source of input into SDWIS NextGen development.

Participant Reaction

Public health protection must remain the highest priority. However, Mr. Hallock reminded the Forum Participants that the tightening of federal and state budgets creates real challenges to staffing concerns and funding levels. The states struggle to fill the gap between program needs and available funds. For example, Mr. Hallock noted that the State Revolving Fund dollars has declined over the recent years and it is expected to continue on that trend. The Forum Participants also noted the problem with lack of access the private companies have to the State Revolving Fund. For example, South Carolina does not allow private companies to apply for state revolving fund monies. Mr. Hallock and Forum Participant McRae noted that Delaware does provide loans to private companies from its Drinking Water State Revolving Fund Program but it does not allow grants (subsidies, principal forgiveness, or negative interest) to private

companies. Participant Sparrow noted that access to state revolving funds by private companies would help companies keep rates lower for consumers -- indirectly, the consumer gets the benefit of those dollars.

IX. REGULATORY PRACTICES USED TO PROMOTE CAPITAL INVESTMENT AND COST EFFECTIVE RATES

Forum Participant Paul Foran discussed various regulatory practices that regulators and industry have used to promote capital investment, sustainability, and good ratemaking. He refers to some of those regulatory practices as "best practices."[4] "Best practices" are tools that have proven to be effective in meeting the primary challenges facing the water industry to attract capital and technological expertise in order to promote:

- Infrastructure replacement;
- Compliance with expanding SDWA requirements;
- Consolidation and economies of scale;
- Cost effective, safe, reliable service; and
- Wise use/sustainable resources.

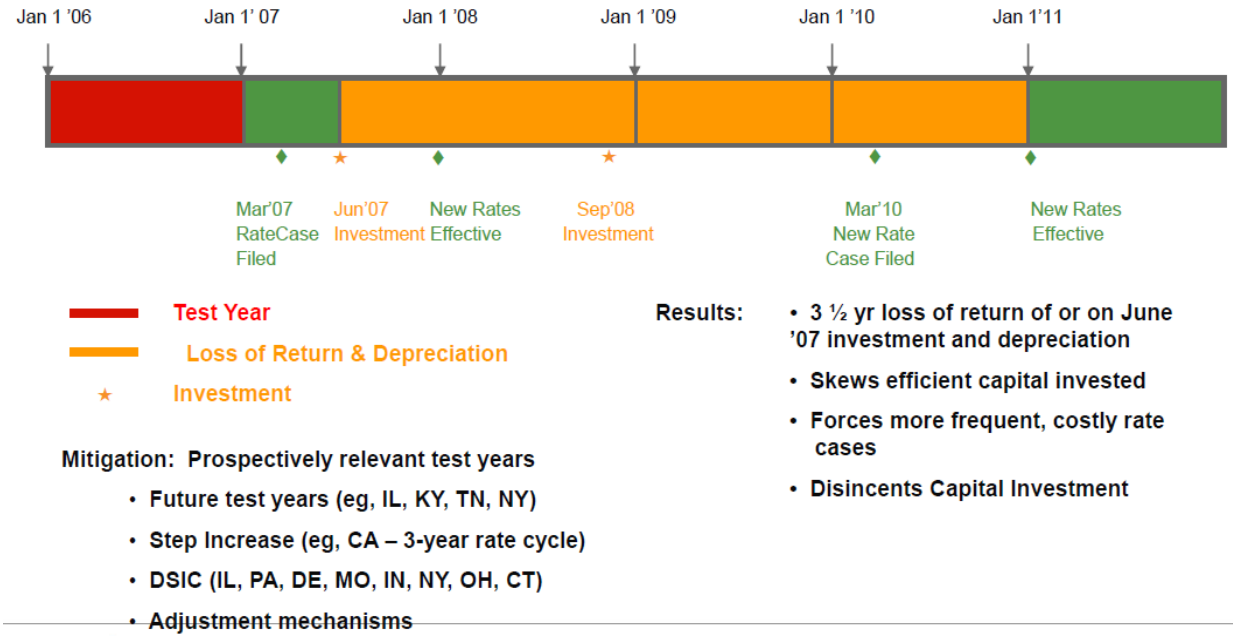
As mentioned previously, the challenges of infrastructure replacement and compliance with water quality requirements under the Safe Drinking Water and Clean Water Acts are increasing. Mr. Foran notes that a comparison of years 2002 and 2009 statistics from the USEPA survey indicates that costs have increased 100% in 7 years. Therefore, he believes that it is incumbent upon utilities and their regulators to identify and implement, as appropriate, regulatory practices to facilitate capital attraction, economies of scale, and efficient operations if these challenges are to be met in a cost effective manner. In his presentation, Mr. Foran discussed a number of practices designed to achieve these goals.

A. Reduction of Regulatory Lag and Timely Recovery of Capital

When the water and wastewater industries face capital investment requirements approaching one trillion dollars over the next 20 years, attraction of that capital is one of the prime challenges the industry faces. For regulated investor-owned systems, timely recovery of invested capital is critical to the ability to attract capital. Moreover, in order to minimize rate impacts on consumers, the industry must be able to recover invested capital at the most cost-effective rates, thereby facilitating construction and capital

[4] On July 27, 2005, the NARUC Board of Directors passed a Resolution, sponsored by the NARUC Water Committee, supporting consideration of regulatory policies considered to be "Best Practices." The Resolution identified many of the practices discussed herein, as well as a number of others. A copy of the Resolution is attached to this Forum Report.

investment in the most efficient manner possible. As the chart below indicates, regulatory lag, the time between when an investment is made and its recognition in rates, can be a significant problem in a capital intensive industry.



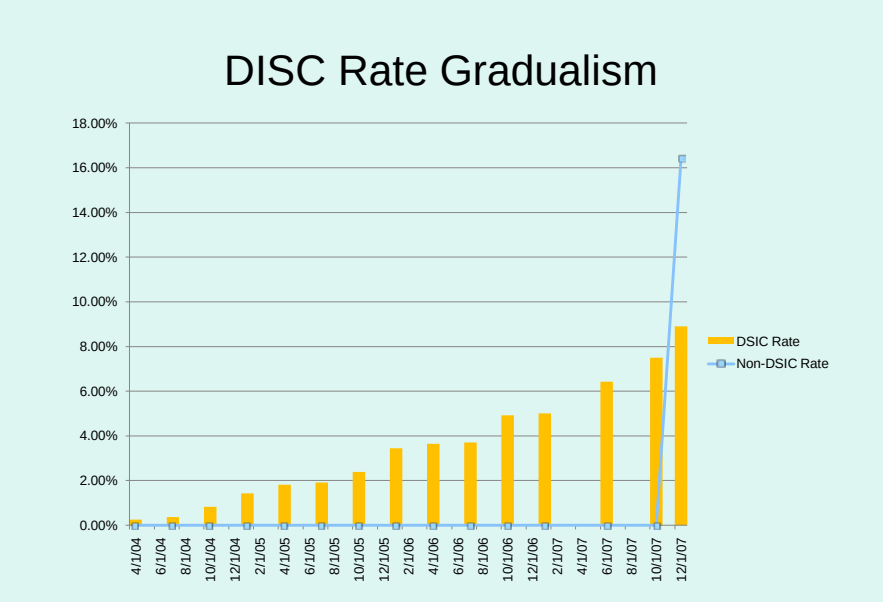
Mr. Foran provided the following as examples of policies that would promote more timely recovery of capital and therefore facilitate capital attraction and investment in the industry.

1. Distribution System Improvement Charge (DSIC) for Water and Wastewater Systems

Mr. Foran believes that an infrastructure surcharge is a sound regulatory practice used by some states to reduce regulatory lag. Eliminating the need for a full general rate proceeding, the utilities use these surcharges as programs to pass through to customers the revenue requirement associated with a return on (rate of return) and return of (depreciation expense) capital invested to replace water and wastewater infrastructure. Sometimes known as a Distribution System Improvement Charge (DSIC) the programs differ from state to state. However, common elements include allowing the utility to begin earning a return on necessary infrastructure replacement outside of a general rate proceeding coupled with limits on the surcharges and some form of reconciliation procedures to protect ratepayers. DSIC-like programs have been implemented in at least nine states (Illinois, Missouri (St. Louis County), Ohio, Delaware, Indiana, New Hampshire, New York, Connecticut, California, and Pennsylvania).

Forum Participant James Cawley spoke specifically about the DSIC as implemented in Pennsylvania in 1997.[5] The DSIC has enabled Pennsylvania companies to recover certain infrastructure improvement costs between base rate cases through a surcharge on customers' bills. Forum Participant Cawley notes that because of the DSIC, timeframes for upgrades of distribution are now at 130 years, closely matching actual service lives. Prior replacement programs have been observed to exceed 900 years. Supporters of the DSIC note that the general benefits of the program include more efficient and timely investment of capital, significant progress in replacing aging infrastructure, enhanced service quality, reduction of water lost through leaks, and avoidance of rate shock. Forum Participant Cawley outlined the following specific benefits of the DSIC program in Pennsylvania:

- It addresses aging infrastructure that presents water quality problems;
- Proactively addresses main breaks (boil water notices);
- New mains have been installed to eliminate dead ends, that is, it facilitates looping projects;
- Reduces unaccounted for water;
- Replaces fire hydrants and larger pipe for fire flows;
- Provides economic reliability in the community;
- Allows coordination with Departments of Transportation and local government;
- Reduces rate case expense;
- Promotes the acquisition of small and non-viable water systems;
- Allows for proactive planning;
- Accelerates the replacement of aging infrastructure;
- Creates a positive impact on capital attraction; and
- Phase-in cost recovery (gradualism)



[5] 66 Pa.C.S. Section 1307(g)

For example, when DSIC was first implemented in Pennsylvania, surcharges were limited to 5% of revenues between rate cases. Due to the success of the program in promoting replacement of infrastructure and lack of customer complaints, the Pennsylvania PUC increased the limit to 7.5% of revenues between rate cases. At the time of a general rate case these surcharges are reconciled into base rates. Due to the timing of infrastructure replacement between rate cases, and the fact that the surcharges are eventually rolled into base rate, the actual percentage surcharge is usually significantly less than the limit.

Pennsylvania has allowed a number of revenue neutral projects in DSIC including: main/valve replacement, main cleaning and relining, fire hydrant replacement, main extensions to eliminate dead ends, and meter change outs. DSIC-type mechanisms have proven to be effective vehicles for capital investment related to replacement of aging infrastructure. According to Mr. Foran, in the last 10 years, these programs have been utilized for over $800 million of investment in the American Water system alone in those states where the programs are in place. Moreover, recent comments by water industry analysts have noted the positive impact infrastructure replacement surcharge programs have on capital attraction:

> [f]irms can also reallocate capital to projects with more timely return periods and take advantage of regulatory mechanisms that recover investment more quickly. Pennsylvania's distribution system infrastructure charge (DSIC), which allows a monthly customer surcharge for pipe repair costs, is an example of this.[6]

While opponents of the DSIC prefer that the infrastructure costs are reviewed in a rate case setting, the Pennsylvania model does have built-in ratepayer protections. In addition to the cap on the surcharge, the annual reconciliation audit ensures that over-collections are refunded with interest. However, under-collections are billed to future rates without interest recovery. The surcharge is reset to zero at the time of new base rates. The surcharge is also reset to zero if the company is overearning. All charges reflect used and useful plant and the charges must reflect additions placed in service during prior three-month period before the DSIC effective date. Finally, Mr. Cawley notes that customers must receive notice of all changes.

2. Surcharge or Automatic Adjustment Mechanisms for Non Capital Costs

Surcharges or automatic adjustment mechanisms for non capital items, such as extraordinary expenses or cost increases that may be beyond the utility's control, have been utilized in a number of states to mitigate regulatory lag. Such programs provide a

[6] Janney Montgomery Scott, LLC; Water Industry Report; October 30, 2008.

better opportunity to actually earn the return the commission allowed in a general rate proceeding, during the time between rate cases, in the face of cost increases over which it may have little effective control. These mechanisms can enhance revenue stability and maintenance of allowed returns, thereby promoting capital attraction. They also promote rate moderation for ratepayers by allowing rates to increase more incrementally as unavoidable costs rise, rather than requiring much larger increases at the time a general rate case is filed. Examples of states that allow surcharges or automatic adjustment mechanisms for purchased water include Virginia, Kentucky, West Virginia, Tennessee and Illinois.

Mr. Foran notes that California has made liberal use of adjustment mechanisms. Each water utility in California is on a three-year rate case filing cycle that allows for certain increases each year based on projected capital and operating expenses. In addition, the California PUC provides for a number of mechanisms, such as balancing accounts, memorandum accounts and tracker programs, designed to keep the utility whole during the rate case cycle for unusual costs, costs related to conservation, and costs over which the utility has little control. For example, California uses Modified Cost Balancing Accounts for certain purchased water and purchased power costs, and for use of the Water Revenue Adjustment Mechanism (WRAM). The WRAM tracks changes in the recovery of authorized fixed costs due to variations in water sales because of conservation or other issues affecting sales. Surcharges are possible when the combined affect of these programs exceeds 2.5% of revenue.

Other cost tracking mechanisms used in California include memorandum accounts for catastrophic events, such as earthquakes, floods, and for extraordinary expenses, such as Endangered Species Act compliance, water rationing, and water contamination litigation costs. Surcharges are possible for catastrophic contamination costs, while a general rate case is necessary to pass costs to ratepayers for certain accumulated Endangered Species Act compliance costs. Other examples of memorandum accounts that allow the utility to track costs for later recovery in a rate case include costs for major water supply projects such as American Water's San Clemente Dam and Coastal Water projects.

Virtually all of these surcharge or adjustment mechanisms contain provisions for true-ups or reconciliations to protect ratepayers and/or reporting requirements to ensure that the utility does not exceed its allowed return.

3. Surcharges for Significant Capital Investments Required to Comply with Certain SDWA Monitoring or Treatment Requirements

The maximum contaminant level (MCL) established by USEPA for arsenic pursuant to the SDWA will entail huge arsenic removal costs in some states, such as Arizona. In response to this challenge, the Arizona Commission has authorized one utility (Arizona Water Company) to implement an Arsenic Cost Recovery Mechanism (ACRM). The ACRM would essentially allow utilities to recover gross return, depreciation, and

recoverable O&M upon commercial operation of arsenic removal facilities, outside of the context of a general rate proceeding. This program facilitates prompt compliance with SDWA mandatory requirements, improves water quality for customers and mitigates rate shock. The program has been supported by the Consumer Advocate in Arizona. Similar to a DSIC concept, this regulatory mechanism is used to allow selected recovery of large, costly items that result from government mandates.

4. Use of Prospectively Relevant Test Years

In a rising cost industry with heavy capital investment requirements, the use of historic test years assures there will be no return on or recovery of capital that is invested during the test year and thereafter, until the utility files another rate case. This practice discourages necessary investment during these periods and skews construction and investment timing based on artificial test year issues rather than system needs and efficient construction planning processes. Mr. Foran noted that regulatory lag from strict historical test years can virtually assure that the utility does not earn its allowed rate of return, thereby increasing risk and the cost of capital. From a regulatory and public policy perspective, Mr. Foran believes that the touchstone for selection of a test year should be, “whether they produce rates that are prospectively relevant, that is, that the rates most accurately reflect the costs during the period the rates are most likely to be effective.” This may or may not involve use of future test years.

A sound regulatory practice in this area would provide the utility with the obligation to identify the most prospectively relevant test year and the choice to use that test year in a rate proceeding. The utility would have the choice of utilizing a historic, current, or future test year and would have the burden of demonstrating the propriety of that choice in the rate proceeding. The use of future test years would have additional filing and proof requirements associated with them to assure that any projections are reasonable. Any party could, of course, challenge the utility's choice of test year. Allowing the utilities a choice of test years is a process that has been followed successfully for many years in Illinois, for example. As a variation of that described above, California requires a 3-year rate case cycle. This allows utilities to project capital investment requirements over the 3-year period and allows for adjustment of rates during each of those three years to reflect invested capital, subject to certain review requirements to assure that the capital has actually been invested.

5. Use of Construction Work in Progress (CWIP) vs. Allowance for Funds Used During Construction (AFUDC)

New major treatment facilities or development of long-term sources of supply may take a number of years before they become operational. Typically, these costs have been accounted for in one of two ways – the use of CWIP in rate base or AFUDC. In a rising cost, capital-intensive industry, Mr. Foran believes that the use of CWIP should be recognized as a "Best Practice". AFDUC does not provide any current cash flow to the utility to fund a major project, thereby adversely affecting the company’s financial condition. Moreover, Mr. Foran believes that AFUDC ultimately and substantially

increases the cost to customers due to the accumulation of carrying charges on invested capital that are ultimately rate-based when the project becomes used and useful and it can result in rate shock. CWIP, on the other hand, mitigates these negative impacts.

B. Promotion of Consolidation, Economies of Scale, and Efficiency

As noted in Forum Participant's Thornburg's presentation, the water and wastewater industries are plagued by extreme fragmentation with approximately 52,000 community water systems and 16,000 wastewater systems. As a result, the industry, as a whole, has not developed the economies of scale and efficiencies that other regulated companies have. Regulatory practices to address this concern include policies that facilitate consolidation, economies of scale, and technical and financial capabilities, to meet infrastructure requirements in the most cost effective manner.

> "*If and to the extent a business combination produces identifiable savings, service improvements or other benefits to customers, shareholders should have the opportunity to recover and earn a return on the investment required to produce those benefits*." – Forum Participant Paul Foran

In this concept, the difference between depreciated original cost and a fair market purchase price represents the investment necessary to produce benefits and would be treated similarly to other investments the utility makes to provide cost effective, reliable service. Methods to achieve this goal could include acquisition adjustments to ratebase or the ability of the utility to retain quantified savings resulting from the combination equivalent to a return of and on the investment necessary to produce the savings.

1. Acquisition Adjustment Policies

Some regulators provide acquisition adjustment policies to promote consolidation of troubled facilities. An acquisition adjustment is the allowance for the difference between depreciated original cost and a purchase price. Forum Participant Cawley spoke to Pennsylvania's regulatory practice to use acquisition incentives to promote water system viability and regionalization. According to Mr. Cawley, Pennsylvania's policy has allowed ratepayers of the smaller, troubled systems to experience improved service after being acquired by a larger, more viable water or wastewater system.[7] Pennsylvania staff actively seeks larger companies for assistance in the takeover/purchase of smaller troubled utilities so that customer service is continued. To promote that participation and in recognition of the investment that has to be made to bring these facilities up to standards, Pennsylvania has allowed:

[7] 66 Pa.C.S. §1327

- A rate of return premium of up to 25 basis points;
- An acquisition adjustment when acquisition costs are more than depreciated original cost; [8] and
- Deferral of acquisition improvement costs to the next rate case.

The Pennsylvania acquisition adjustment policy encourages acquisitions not only of chronically non-compliant water systems, but also of proactive acquisitions of smaller systems where the acquisition is clearly serving the public interest, such as prevention of future noncompliance. Mr. Cawley notes that it is a collaborative effort between industry, consumer advocates, and the regulator with constant staff participation. The Commission engineers have routine visitations to identify the target utilities so that negative situations and nonviability is avoided.

2. PENNVEST

PENNVEST is another regulatory practice used to address sustainability in the industry. It is a state program established to assist with the funding of wastewater and drinking water projects in the Commonwealth of Pennsylvania. The program is a revolving pool of funds that provides low interest loans and grants to community water and wastewater systems as well as public utilities. According to Mr. Cawley, projects to construct a new system or make improvements necessary to correct public health, environmental, compliance or safety deficiencies are eligible for PENNVEST funding. The program has assisted in regional and economic development since 1988. PENNVEST has awarded $5.6 billion in financial assistance to water, wastewater, and storm water projects. It has approved and funded over 2000 water and wastewater projects. The PENNVEST assets are $2.5 Billion with the annual interest income to the revolving fund of $30 million.

3. Single Tariff Pricing

Single tariff pricing has been recognized as the norm for electric, natural gas and telephone utilities. These utilities often serve large territories wherein costs of service can be substantially different from region to region within the service territory. For example, costs of service for urban customers will be different from rural customers and differing geographic terrains impose different costs. Yet all customers in a particular class enjoy the same rates. This has allowed these industries to spread the benefits of economies of scale to all of their customers and to mitigate rate shock effects and affordability concerns. Although single tariff pricing has been controversial for water utilities, the industry Forum Participants and Wall Street's Parker, identified it as a good regulatory practice because of the economic challenges facing the industry. The inability to charge uniform rates inhibits the acquisition of troubled utilities and can result in rate shock or unaffordable rates to customers in certain areas. All of that significantly

[8] The excess is added to the rate base of the acquiring utility and amortized in rates over 10 years.

increases the complexity and cost of regulatory proceedings much to the detriment of ratepayers and the utility.

C. Rate Case Process

Mr. Foran listed other regulatory practices that could reduce the cost rate cases, as well as, enhance the clarity and control the scope of the proceedings.

1. Mediation and Settlement Procedures

Regulatory practices in this area include establishment and encouragement of procedures for mediation and settlement in order to both settle cases as a whole and to narrow issues that need to be litigated and resolved.

2. Establish or More Clearly Define Rules and Procedures

Civil Court rules are designed to narrow the scope of contested issues and eliminate unnecessary litigation. Examples of such procedures include requests to admit; mandatory stipulations as to questions of law and/or fact; requirements that parties stipulate witness's justification of any inordinately long estimates for cross examination; more extensive use of prehearing conferences to narrow issues.

3. Specific and Enforceable Time Limits on the Length of Rate Cases

Time limits would help impose a desirable discipline in presenting and litigating proceedings. Moreover, Mr. Foran believes this discipline would improve the opportunity of the utility to actually earn its allowed return, reduce the costs of rate proceedings, and facilitate capital recovery and investment.

4. Rate Case Filing Cycles

Mr. Foran suggested that state commissions could implement required filing cycles with future capital investment annual rate adjustments. Similar to California's 3-year rate cycle concept, the use of "step" or "phase-in" rates could also reduce the number of rate case filings and the administrative burden on commissions and their staffs, as well as substantially reduce the cost of rate proceedings.

5. Expedited Rate Case Procedures for Small Companies

The expense and time requirements for normal rate case processes are issues for all utilities, but can be especially onerous for small companies that lack substantial technical and operating resources and where the cost of the rate case could even exceed the expected incremental revenues. This can result in disincentives for these

systems to file for necessary rate relief, thus exacerbating their viability challenges and can also result in disproportionate costs imposed on customers. Expedited procedures for such companies can help mitigate these impacts and facilitate more financially stable companies.

D. Conservation/Wise Use

1. Integrated Water Resource Management

Integrated water resource management can take many forms but essentially involves management of the hydrologic cycle to achieve a coherent set of water resource policies and uses that balances all reasonable social, environmental, and economic needs in a sustainable way. Many factors outside of the traditional regulated framework or State Commission jurisdiction can directly impact the cost and reliability of service to regulated customers. These include, for example, watershed protection, wastewater management, reuse, groundwater infiltration and recharge, and others. The more effectively all these impacts can be managed, the more efficient and cost-effective provision of regulated water service is likely to become. Mr. Foran notes that regulatory practices should include using integrated water resource planning concepts in source of supply and treatment decisions, and in leveraging all the resources and capabilities of service providers to meet the challenges of the future.

2. Decoupling

As source of supply constraints increase, drought conditions affect certain areas of the country with greater frequency, and the cost of treating water continues to rise, water utilities have an increasing responsibility to encourage the wise use of this precious resource by their customers and, where appropriate, to implement programs that could have the effect of reducing per capita consumption. Indeed, the use of more efficient plumbing fixtures and appliances, such as low flow toilets and shower heads, among other factors, has already resulted in a significant drop in per capita consumption over time. The increasing need to use this resource ever more efficiently will likely continue and magnify this trend. Therefore, acting as responsible stewards of scarce water resources will increase financial pressure on water service providers as fixed costs must still be recovered despite decreasing per capita sales volumes.

One potential solution to this challenge is the concept of "decoupling" rates from sales volumes which can help address both the need to more efficiently use water while keeping the utility financially sound. The electric industry has experienced similar issues with regard to demand-side management programs designed to better control the need for new generating capacity or the use of high priced fuels. In Illinois, for example, as noted by Forum Participant O'Connell-Diaz, there are a few different decoupling models that involve either a regulatory adjustment to risk and/or the allowance of riders or reconciliation of rate base. On this point, NASUCA President Healey noted the consumer advocate position that decoupling should be considered only in a rate case.

E. Customer Assistance Programs

Despite increasing costs to replace aging infrastructure and comply with SDWA, CWA, and other national and local mandates, water service remains, on the average, the lowest cost of all utility services. However, there is no question that meeting the challenges necessary to continue providing high quality, reliable service to customers will increase the financial burdens on these customers even more significantly in the future. Of course, the impacts on low income, fixed income and otherwise economically disadvantaged customers will be the greatest. In light of the current global economic downturn, Mr. Foran notes that utilities and commissions should consider the implementation or expansion of appropriate customer assistance programs.

For example, American Water currently has some form of customer assistance program operating in nine of its largest utility subsidiaries. These programs differ from state to state but in general provide for some combination of grants, discounts, conservation programs and customer education, including the following:

- Hardship programs: (grants applied directly to customers bill);
- Discount program: (percentage off monthly bill or service charge);
- Payment assistance: (forgiveness based on timely payments);
- Repair: (coordination of repairs to reduce high usage);
- Education: (outreach and promotion focused on conservation and program availability); and
- Direction to other sources of assistance.

American Water programs are funded through a combination of customer and company contributions and are generally administered in conjunction with a social service agency. One example of such an agency is the Dollar Energy Fund, which partners with water, gas and electric utilities in multiple states to administer hardship programs. This agency can help design the program and it also has a fully staffed customer service center with call support in 160 languages. It can provide assistance with regard to data management and records maintenance and other support services. Mr. Foran believes that customer assistance programs should preserve cost-based rates and appropriate price signals and promote recognition of the value of water, its efficient use, and appropriate supply planning. The concept of targeted direct assistance rather than blanket grants has been endorsed by the National Drinking Water Advisory Council. In addition, in a March 2004 resolution, NARUC recommended consideration of targeted low-income assistance programs similar to the LIHEAP programs for energy use.

F. USEPA Four Pillars Approach

USEPA is committed to promoting sustainable practices that will help reduce the potential gap between funding needs and spending at the local and national level. It has promoted a Sustainable Infrastructure Initiative to guide its efforts in changing how the nation views, values, manages, and invests in water infrastructure. As part of these

efforts, USEPA has developed a Four Pillars approach to promote the future sustainability of infrastructure. This approach includes the following:

- Better Management
- Rates that Reflect the Full Cost Pricing of Services
- Efficient Water Use
- Watershed Approaches to Protection

In furtherance of these goals, USEPA sponsored an Expert Workshop on Full Cost Pricing of Water and Wastewater Service, during November 1-3, 2006, at the Institute of Public Utilities at Michigan State University. The Workshop generally concluded that full cost pricing is important to sustainable infrastructure, but will be possible and successful only in an efficiently structured and managed water and wastewater sector. The Workshop noted that many inefficiencies exist in the sector that would need to be eliminated to minimize future cost increases and the magnitude of future rate increases. The Workshop encouraged consideration of many of the same general initiatives contained in the NARUC Resolution and discussed herein. These included, among others: watershed approaches, greater coordination between economic regulators and public health and environmental regulators, the need for public education and building public support, partnerships and consolidation, and management issues. A full copy of the report was distributed at the Water Policy Forum. Many of these issues are also discussed in a USEPA report entitled "Sustaining Our Nation's Water Infrastructure" which includes additional resources and references. A full copy of the Report was distributed at the Water Policy Forum.

Participant Reaction

NASUCA President Healey commented that everyone needs to remember and apply the "regulatory compact." If the companies believe that the regulatory compact is not being fulfilled, she suggests a collaborative effort and conversations with the consumer advocates and the regulators. She noted that all stakeholders should agree that waiting too long for regulatory relief is not a good solution. Waiting too long to get sound results puts the extra cost on the consumer.

Forum Participant Sparrow noted that "regulatory lag" does not sufficiently describe the negative earnings situation and hardship some utilities find during a rate case. She noted that companies have the responsibility to continue to serve and make improvements and all necessary investments and expenditures while the case is pending. Forum Participant O'Connell Diaz suggested that the companies need the appropriate flexibility to capture the expenditures throughout the test year to appropriately address service issues. In Illinois, for example, the state allows expenditures made 6 months post test year.

For the Wall Street perspective, Forum Participant Dave Parker noted that "trackers," annual cost recovery mechanisms, "out of the box" ratemaking, are viewed favorably and are considered sound regulatory practices. Unnecessary rate cases are not viewed

positively. For example, a company with management issues may not need to go through a full rate case to have those issues addressed when a management audit can be used. Forum Participant Dusman cautions against the use of regulatory "trackers" which she believes are closer to a FERC model that does not lend itself to thorough reviews in her opinion.

X. CONSERVATION, DECLINING CONSUMPTION, AND SUSTAINABILITY

This portion of the Forum was presented by Don Morrissey.

A. Consumption Trends

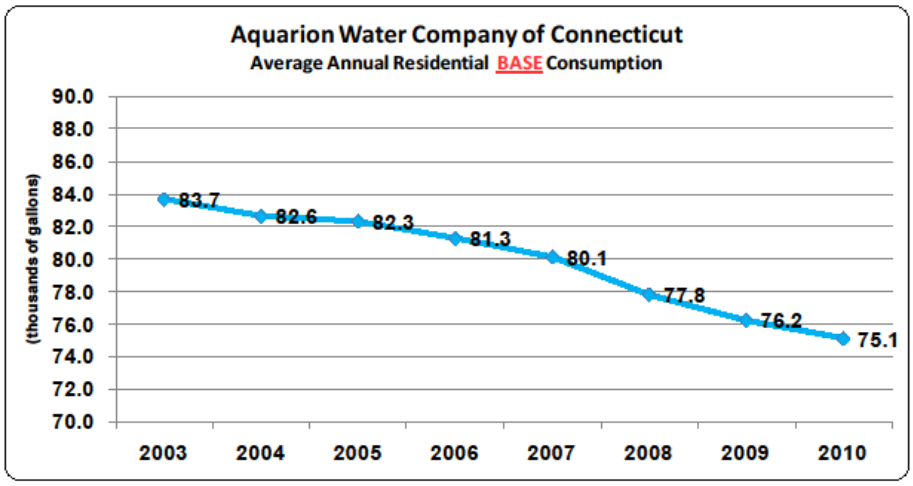
Over the past decade, water companies experienced noticeable declines in consumption per customer – about one percent per year or more.

> Many water utilities across the United States and elsewhere are experiencing declining water sales among households. While 'water conservation' is normally seen as positive, this gradual erosion in residential consumption may force utilities to raise rates to provide sufficient revenues…[9]

Mr. Morrissey notes that, historically, customer growth masked declines. Principally, the decline is due to base load consumption (non-seasonal consumption). For example, the next 3 diagrams illustrate the downward trends in annual consumption for Connecticut water companies. While these are Connecticut companies, Mr. Morrissey notes that the results are similar throughout the Country.

I. Consumption Trends

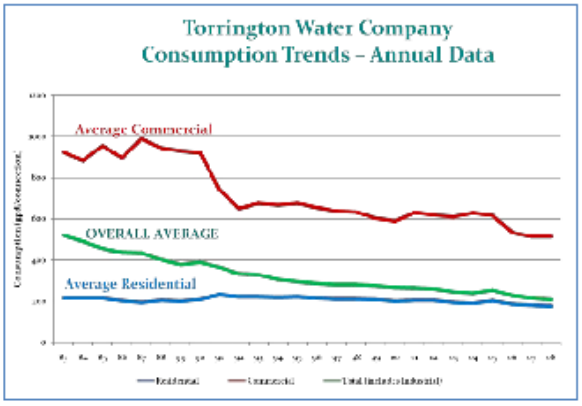
Consumption Experience for Aquarion



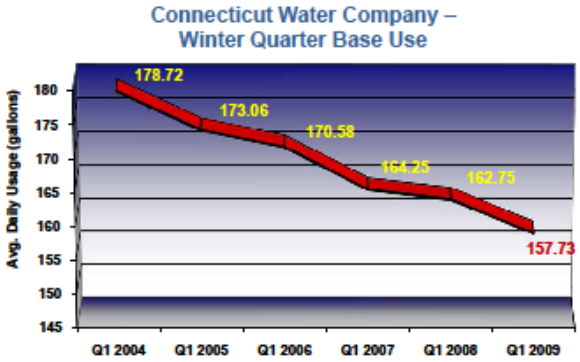
[9] "North America Residential Water Usage Trends Since 1992," jointly sponsored by the Water Research Foundation and US EPA issued in 2010.

I. Consumption Trends

Consumption Experience for Other Water Utilities – Connecticut Water, Torrington Water



- Virtually every water utility in Connecticut reporting decline in consumption
- Similar results seen across the country

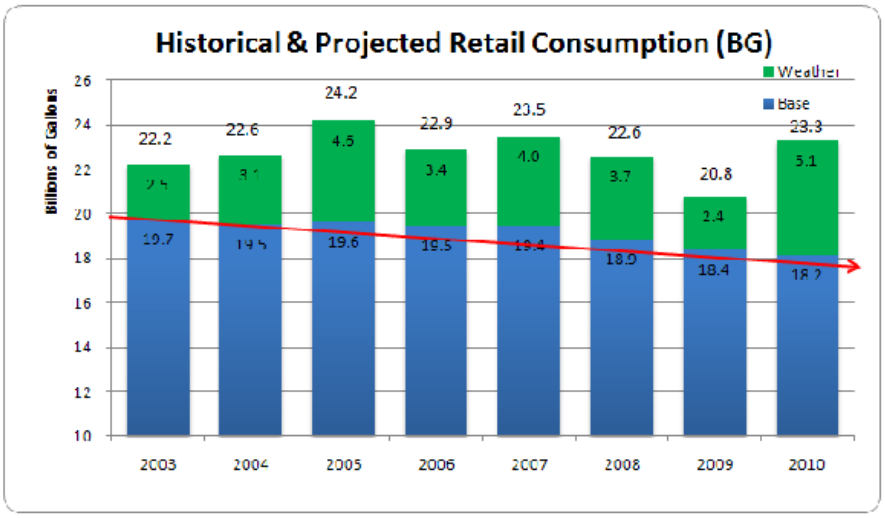


Annual water consumption is separated into two categories: Base load and weather load. Base load, the largest portion is estimated to be approximately 85% of total consumption. It represents non-discretionary usage, primarily internal usage (toilets, showers, and household appliances). Weather load is more discretionary and weather dependent. Base load consumption is declining sharply. For example, Aquarion's base load consumption has declined from 19.7 billion gallons a year in 2003 to 18.2 billion gallons in 2010, an 8% decline in seven years. Weather load consumption varies significantly from year to year. This consumption is unpredictable and volatile. It counts for about 15% of annual billed consumption. From 2003 to 2010, it has varied from as low as 2.4 billion gallons in 2009 to a high of 5.1 billion gallons in 2010.

Mr. Morrissey and the industry Forum Participants note that all of these factors impact revenues and ratemaking. However, averaging techniques historically used by regulators to account for weather variations do not address the problem. In fact, Mr. Morrissey states that he believes the current ratemaking scenarios penalize water companies when conservation is achieved. As a result of the declining consumption, revenue levels have fallen short of allowed amounts.

I. Consumption Trends

Consumption Experience – Base Load declines, while Weather Load remains volatile



B. Factors Impacting Consumption

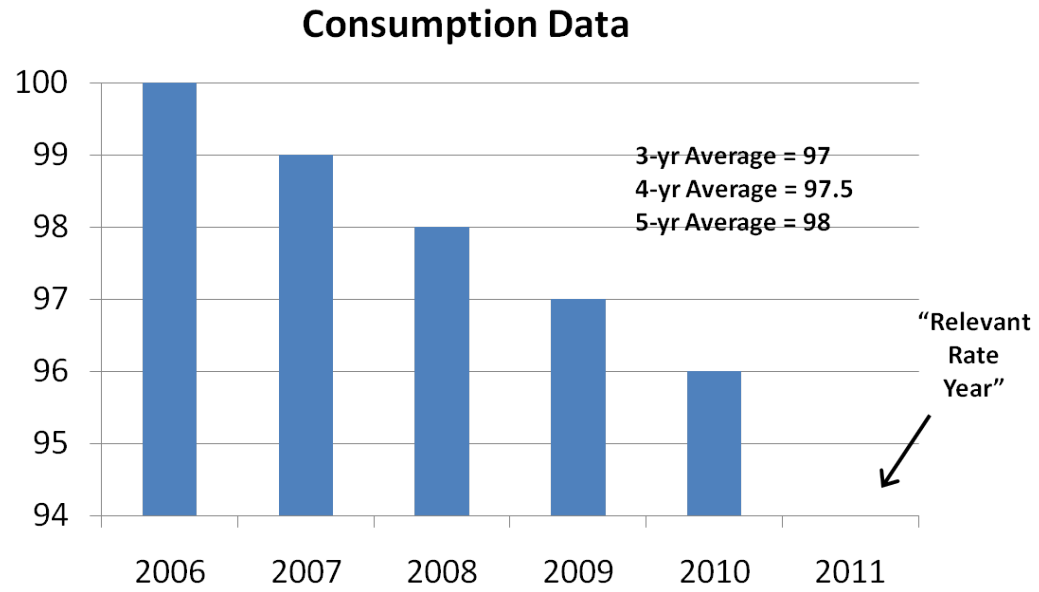
The decline is caused by a number of factors. The factors include: conservation, environmental permitting, economic factors, population and demographic trends.

First, Mr. Morrissey described "unconscious conservation," a factor stemming from energy efficiency initiatives, building code changes, and technological innovation. According to the City of Tampa Water Department residential water conservation study and as cited by Forum Participant Morrissey, appliances and fixtures are more efficient; shower heads reduce water usage by 28%, faucets reduce water usage by 34%, toilets reduce water usage by 68%, and washer machines reduce water usage by 47% from older models. In addition, as it relates to product innovation, Water Smart Turf Builder fertilizers require less watering and sprinkler systems now have timers and sensor technology.

Second, of course, there is an impact from the deliberate changes in attitudes about usage and environmental stewardship. In Aquarion's 2009 Customer Satisfaction Survey, more than three-quarters of respondents or 78.8% reported they have taken steps to reduce water usage. Finally, rebate programs and availability of financial incentives to consumers to replace old appliance with new efficient models are factors in declining consumption.

C. Negative Revenue Impact

The industry cost structure is fixed regardless of the level of conservation. However, the revenues become variable. The current regulatory process creates disincentives to companies to promote conservation. In fact, the current methodologies to establish rates effectively ignore the impact of conservation. These issues influence the frequency in which companies file rate cases (and the amounts requested). According to Mr. Morrissey, a significant portion of rate cases is due to the inability to achieve previously authorized revenues. It accounted for $3.9 million or over 20% of Connecticut Water's rate request and over $5.1 million or 22% of Aquarion's rate increase.



As demonstrated by the chart above, rates are established based on authorized revenues and projected volumes. Getting the projected volumes right is as important as ensuring the revenue requirement determination is right. If the volumes are estimated too high, the authorized revenues will never be achieved. Mr. Morrissey believes that the traditional approaches using full year consumption averages are outdated as they fail to recognize declines in consumption which result in lower than authorized revenues.

D. Solutions and Innovative Approaches

Possible approaches include: 1) an increase in the basic service charge; 2) implementing inclining block rates; and 3) introducing a "premium" for seasonal periods or peak demands. Implementing a limited revenue adjustment mechanism is yet another approach.

1. Limited Revenue Adjustment Mechanism

This mechanism is used to defer the difference in base load revenues until the threshold is surpassed and then a surcharge is imposed (or credit) for customers. Similarly, it can be structured such that base load is projected through the rate plan period and differences in consumption on the balance sheet are deferred. The advantages are that these mechanisms: recognize conservation efforts during the rate period, maintain separation of base load and weather, and unlike decoupling, the companies bear the revenue risk of weather fluctuations. There are regulatory safeguards that state commissions can put in place to ensure consumer protection. State commissions can require compliance filings with actual results of base load consumption. Additionally, they can ensure that if base load declines do not materialize, revenues will be deferred and included as reduction to rates.

Participant Reaction

Forum Participants note that conservation is good policy, is good for the water industry, and for the environment. Strong conservation policies will continue. With that said, communication with consumers about conservation and sustainability is essential. As noted by Forum Participant Finley, customer have a lot of difficulty "paying more for less product." Therefore, it was noted that the message needs to be that the utility industry is providing a service and not a product. The value of that service is reliability and customer service. Participants believe that these are issues that require alignment of regulators and the industry. Regulatory policies should position utilities to promote and achieve conservation and ensure against revenue loss which look more like penalties for promoting conservation. Forum Participant Hill noted, as an example, Florida's practice of allowing a repression adjustment when revenues decline due to conservation.

XI. SMALL WATER COMPANY CONSIDERATIONS AND SOLUTIONS

Forum Participant David Monie presented this portion of the discussion. Based upon his own experiences successfully operating a small water company, Mr. Monie observed that a small water and wastewater utility is viable with two basic requirements: (1) an owner who cares; and (2) access to capital. According to Mr. Monie, if the owner does not care, the only solution is an acquisition by a responsible utility owner. With a caring owner, access to capital is a consequence of having adequate rates. The following is a discussion of tools or regulatory practices that regulators can use to have small systems become or remain viable.

A. Issues and Arrangements Relating to Rates

1. Simplified Rate Proceedings

In most jurisdictions, the cost of processing a rate increase for a small utility is extremely high on a per customer basis. According to Mr. Monie, this provides some explanation for why small companies do not file rate cases more often. For instance, if a water system serving 100 customers processes a rate increase at a cost of $20,000, the per customer cost is $200. However, in many jurisdictions, it is not uncommon for a very small system to have rate case costs of over $300 per customer. The Forum Participants noted that a number of jurisdictions have "simplified rate cases" for small systems. However, in some jurisdictions, no such procedure exists or the simplified procedures are not all that simple and still can cost a small system too much money to process.

The high cost and the complexity of rate case filings are preventing many small systems from seeking the rates necessary to attract the necessary capital for the system to become or remain viable. Mr. Monie notes that truly simplified rate cases designed to both significantly reduce the per customer cost and to allow for significant time between cases would be a big benefit to the small utility's customers. He believes that one possibility is a simplified rate case procedure with automatic cost of living increases for some period of time following the implementation of the new rates. The many benefits include keeping subsequent rate increases small, avoiding rate shock, and allowing the utility to attract capital so that it can become or remain viable.

Given adequate rates, Mr. Monie believes that even the smallest utilities can attract the necessary capital in order to remain viable.

2. Single tariff pricing (STP)

When a small, non-viable system is acquired by a larger system, the improvements that are necessary to bring the non-viable system into regulatory compliance or to provide

reliable service often result in a rate increase that is prohibitive if applied against the small, non-viable system by itself. This situation can make acquisition by a larger water company difficult. According to Mr. Monie, single tariff pricing could spread these costs over a wider customer base. This method of pricing is effectively the way prices have been set for many years for the electric, natural gas and telecommunications companies where large service territories can cover diverse geographic locations but all customers in the same class basically pay the same rates. Many jurisdictions currently allow single tariff pricing for commonly owned water systems (sometimes restricted to geographical areas in a state) and others are considering rate applications that would allow for STP rates.

Mr. Monie notes that whatever rate structure is approved, it should provide sufficient revenue to the purchaser to cover the full cost of providing water service, including O&M, capital investments, and a competitive rate of return (i.e. full cost of service rates)

3. Alternatives to ratebase/rate of return regulation

In the case of many small, nonviable systems, there may be little remaining original cost ratebase as the result of accumulated depreciation or large amounts of contributed plant. This situation could make viability difficult and acquisition of the system financially unfeasible for an acquiring entity because there is little, or no, rate base left upon which a return can be earned. In such cases, alternate methodologies for setting rates may be necessary, such as the use of operating ratios, instead of ratebase. Properly regulated operating ratios, in use in some jurisdictions, can allow the otherwise nonviable system to attract capital for needed capital expenditures. If single tariff pricing is not allowed in a jurisdiction, a larger company that may acquire the small system would not be able to recover capital improvements necessary to bring the system into compliance if there is a negative rate base without an alternative regulatory process like the use of operating ratios.

4. Use of future "prospectively relevant" test years and expedited rate proceedings

The use of historic test years and the length and cost of rate proceedings can be a real deterrent to the ability of a small system to either remain viable or become viable. According to Mr. Monie, the use of a future test year, coupled with an expedited procedure, is an important small system viability tool. In addition, these mechanisms help an acquiring system make the capital investments necessary to bring a nonviable system into compliance. Basically, without a future test year, the acquiring company would need to wait to file for any rate relief until it had already made the capital investments necessary to bring the nonviable system into compliance, and then it would be faced with a rate-setting process that could take up to a year or more. Likewise, without the use of a future test year the small utility, on its own, is not likely to be able to attract the capital needed for the capital improvement. The use of future test years and expedited rate proceedings could mitigate these disincentives. Another possibility for small systems facing a significant capital improvement would be to allow quarterly

CWIP rate increases that would allow the small utility to earn on the investment shortly after it is made and would greatly help in its ability to attract the necessary capital for the project.

Many small systems do not experience maintenance expenses at a constant level from year to year. Therefore, traditional ratemaking policies that require expenses to have occurred in the test year to be recognized in rates should be modified to assure that the small system will have enough funds to pay for required maintenance when needed. In that regard, the use of averaging methods and, in some cases, the allowance in rates for annual contributions to a maintenance/capital investment fund are possible methods to help small companies become, or remain, viable.

B. Issues and Arrangements Relating to Return on Investment

> "*If the purchasing utility is to remain viable and continue to have access to the equity capital market, the allowed rate of return must be competitive*."
> - David Monie

When the acquisition of a troubled utility is encouraged or ordered by a state commission, the overall acquisition must be structured to assure the purchaser has a good chance of earning a competitive return. For this to happen not only must the maximum allowable rate of return set by the state commission be competitive but also the rate structure that is approved must provide sufficient revenues so the purchaser has a good chance of realizing that maximum return.

Absent this, from a purely business perspective, there is little incentive for a successful utility to take over a troubled utility. While an emergency takeover of a troubled utility may be necessary in some circumstances because the situation is so dire that public health is being jeopardized, ultimately the acquiring utility must be made whole on the takeover or its own financial health and potentially the public's health could be jeopardized.

C. Issues and Arrangements Relating to Compliance

1. Use of Infrastructure System Replacement Charge to Bring Non-viable Systems into Compliance

Connecticut has adopted the Water Infrastructure and Conservation Adjustment (WICA), similar to legislation in California, Missouri, Pennsylvania, Illinois, Delaware, Indiana, New York, and Ohio, to provide for recovery of capital investments to replace aging infrastructure, outside of the confines of a general rate proceeding. In the case of many small, nonviable systems, there is an immediate need to make capital investments to bring the system into regulatory compliance. Mr. Monie believes that some form of the WICA concept for this purpose could facilitate the necessary capital investment by helping in the acquisition of capital by the small system as well as by making acquisition of the non-viable system more feasible for the acquiring company.

2. Relief from fines and penalties

Existence of outstanding fines and penalties against a system, from either federal or state agencies, poses significant obstacles to acquisition. This is especially true where local health authorities or primacy agencies or enforcement authorities may have been holding off enforcement activities against the nonviable operator but then insist on immediate compliance by the acquiring entity. State legislation may be necessary to assure that responsible operators who acquire nonviable systems with outstanding fines and penalties will have such penalties waived and a reasonable compliance schedule established.

3. Insulating Purchaser from Former Owner Violations

Past and current violations of standards or regulations should not be attributable to the purchasing utility unless it fails to correct the violations in a timely fashion. State and EPA enforcement records should clearly identify that the utility's previous owner is responsible for the occurrence of any violations existing at the time of purchase. The new owner should be classified as being in compliance, provided he is correcting the violations in accordance with the terms agreed to by all the parties. The purchasing company should be given a grace period to correct the violations. The amount of the grace period should be a function of what must be done to correct the violations.

Finally, according to Mr. Monie, EPA and state officials should provide documentation to the purchasing company explaining the above circumstances so the company can provide it to anyone who questions its compliance record (such as a potential client). To accomplish the above measures, the state commission may need to enter into agreements with the state primacy agency and the relevant EPA regional office that would establish a protocol for implementing the details, including how to document and oversee the commitments of all the parties.

D. Issues and Arrangements Relating to Purchase Price

If ordered to purchase a troubled utility, the purchaser has little leverage to get a fair price and may have to pay an inflated price with consequences to his rate of return.

If a state commission requires or encourages a utility to purchase an ailing utility and a premium price must be paid to acquire the utility, the state commission should provide an acquisition or some comparable adjustment so the purchasing utility will not be financially penalized in its return on the investment because of having to pay an excessive purchase cost. Mr. Monie notes that care should be taken to assure that well managed and financed small utilities are not penalized with policies favoring only troubled small systems. His point will be discussed in greater detail below.

1. Reducing Purchase Price of a Small Utility for Penalties

As Mr. Monie discussed above, the elimination of penalties against the system, if it is acquired by a larger system that agrees to a time schedule for upgrading the system to meet standards, is a very helpful way of reducing the purchase price and, therefore, the ultimate rates to ratepayers.

2. Acquisition Adjustments

Granting acquisition adjustments with regard to small water systems can raise issues of concern. All things being equal, Mr. Monie believes that it would be appropriate not to provide incentives for unscrupulous operators of non-viable systems to profit from their failure to properly maintain them. On the other hand, a properly structured policy with regard to acquisition adjustments can play an important role in addressing not only the small company problem but also issues of fragmentation and lack of economies of scale in general in the water industry. Not all small system owners are irresponsible. Even owners of non-viable systems may simply not be in a good position to meet the daunting challenges of quality compliance and infrastructure replacement in the future. Their systems have value and any purchase price is likely to include some increment over depreciated book value. Recognizing an acquisition adjustment in these cases is appropriate. For example, Pennsylvania has enacted legislation that provides for possible recognition of premiums for systems with less than 3,300 service connections, subject to certain conditions. In addition, premium recovery is possible for systems in excess of 3,300 service connections if they are "non-viable." However, if acquisition adjustments are allowed into rate base for small systems, Mr. Monie believes it is clearly unfair to only allow acquisition adjustments for non-viable systems. This would punish the responsible owners of small but viable systems that have kept their utilities in compliance with all applicable standards and could encourage owners to give poor service if they are contemplating a sale in order to have the acquiring company qualify for an acquisition adjustment and, therefore, be willing to pay a higher purchase price.

Recognition of acquisition adjustments, even where systems are not small or nonviable, may also be an effective tool in addressing the small company issues. For example, enlarging the footprint of a financially viable, competent system operator through acquisition of other competent systems could place the responsible operator in closer proximity to non-viable systems, thus making it more economically viable to acquire and operate them. Texas has explicit provisions and standards for recovery of positive acquisition adjustments. Likewise, California provides for valuing rate base at fair market value for rate setting purposes.

When American Water acquired the water assets of Citizens Utilities in 2001, the company made a proposal in three states whereby the commissions would agree to consider some form of premium recognition if the company could demonstrate value to ratepayers. The basic principle is that if, and to the extent, a business combination produces identifiable savings, service improvements or other benefits to customers, shareholders should have the opportunity to recover and earn a return on the investment (i.e., the premium) required to produce those benefits. The principle is no different than what is involved when a utility invests in a more efficient pump that

produces savings. Generally, that investment is allowed in rates. In California and Illinois, such proposals resulted in the ability of the company to partially retain quantifiable and proven savings resulting from the acquisition. In Arizona, it resulted in an acquisition order that recognizes the possibility of retaining certain quantifiable and proven synergy savings.

Participant Reaction

Forum Participant Dusman noted that Pennsylvania has used “phase-in” rates to mitigate rate shock. In discussing Mr. Monie’s point that the most experienced staff should be assigned to small cases to ensure efficiency, Forum Participant O’Connell-Diaz suggested that state commissions should consider designating one person to handle small company issues. That specialization helps keep costs down and makes the process run more efficiently. Forum Participant McRae noted that Delaware has a staff-assisted rate case process. It was also noted that some states have a process that allows for *pro se* representation mitigating legal expenses for the small systems.

XII. FUTURE ISSUES

In discussing interest for future topics, some Forum Participants expressed a desire to learn more about single tariff pricing and strategies for communicating the benefits of single tariff pricing. Other Participants noted that additional discussion and information about inter-agency coordination would assist them to begin those efforts in their own states. The Forum Participants suggested expanding the discussions for regulatory practices specific to conservation and regulatory lag.

XIII. NARUC RESOLUTION SUPPORTING CONSIDERATION OF REGULATORY POLICIES AND BEST PRACTICES

WHEREAS, A number of innovative regulatory policies and mechanisms have been implemented by public utility commissions throughout the United States which have contributed to the ability of the water industry to effectively meet water quality and infrastructure challenges; *and*

WHEREAS, The capacity of such policies and mechanism to facilitate resolution of these challenges in appropriate circumstances supports identification of such policies and mechanisms as "best practices"; *and*

WHEREAS, During a recent educational dialogue, the "2005 NAWC Water Policy Forum," held among representatives from the water industry, State economic regulators, and State and federal drinking water program administrators, participants discussed (consensus was not sought nor determined) and identified over 30 innovative policies and mechanisms that have been summarized in a report of the Forum to be available on the website of the Committee on Water at www.naruc.org; *and*

WHEREAS, As public utility commissions continue to grapple with finding solutions to meet the myriad water and wastewater industry challenges, the Committee on Water hereby acknowledges the Forum's *Summary Report* as a starting point in a commission's review of available and proven regulatory mechanisms whenever additional regulatory policies and mechanisms are being considered; *and*

WHEREAS, To meet the challenges of the water and wastewater industry which may face a combined capital investment requirement nearing one trillion dollars over a 20-year period, the following policies and mechanisms were identified to help ensure sustainable practices in promoting needed capital investment and cost-effective rates: a) the use of prospectively relevant test years; b) the distribution system improvement charge; c) construction work in progress; d) pass-through adjustments; e) staff-assisted rate cases; f) consolidation to achieve economies of scale; g) acquisition adjustment policies to promote consolidation and elimination of nonviable systems; h) a streamlined rate case process; i) mediation and settlement procedures; j) defined timeframes for rate cases; k) integrated water resource management; l) a fair return on capital investment; *and* m) improved communications with ratepayers and stakeholders; *and*

WHEREAS, Due to the massive capital investment required to meet current and future water quality and infrastructure requirements, adequately adjusting allowed equity returns to recognize industry risk in order to provide a fair return on invested capital was recognized as crucial; *and*

WHEREAS, In light of the possibility that rate increases necessary to remediate aging infrastructure to comply with increasing water quality standards could aversely affect the affordability of water service to some customers, the following were identified as best

practices to address these concerns: a) rate case phase-ins; b) innovative payment arrangements; c) allowing the consolidation of rates ("Single Tariff Pricing") of a multi-divisional water utility to spread capital costs over a larger base of customers; *and* d) targeted customer assistance programs; *and*

WHEREAS, Small water company viability issues continue to be a challenge for regulators, drinking water program administrators and the water industry; best practices identified by Forum participants include: a) stakeholder collaboration; b) a memoranda of understanding among relevant State agencies and health departments; c) condemnation and receivership authority; and d) capacity development planning; *and*

WHEREAS, The U.S. Environmental Protection Agency's "Four-Pillar Approach" was discussed as yet another best practice essential for water and wastewater systems to sustain a robust and sustainable infrastructure to comprehensively ensure safe drinking water and clean wastewater, including: a) better management at the local or facility level; b) full-cost pricing; c) water efficiency or water conservation; *and* d) adopting the watershed approach, all of which economic regulators can help promote; *and*

WHEREAS, State drinking water program administrators emphasized the following mechanisms which Forum participants identified as best practices: a) active and effective security programs; b) interagency coordination to assist with new water quality regulation development and implementation, such as a memorandum of understanding; c) expanded technical assistance for small water systems; d) data system modernization to improve data reliability; e) effective administration and oversight of the Drinking Water State Revolving Fund to maximize infrastructure remediation, along with permitting investor owned water companies access in all States; f) the move from source water assessment to actual protection; *and* g) providing State drinking water programs with adequate resources to carry out their mandates; *now therefore be it*

RESOLVED, That the National Association of Regulatory Utility Commissioners (NARUC), convened in its July 2005 Summer Meetings in Austin, Texas, conceptually supports review and consideration of the innovative regulatory policies and practices identified herein as "best practices;" *and be it further*

RESOLVED, That NARUC recommends that economic regulators consider and adopt as many as appropriate of the regulatory mechanisms identified herein as best practices; *and be it further*

RESOLVED, That the Committee on Water stands ready to assist economic regulators with implementation of any of the best practices set forth within this Resolution.

Sponsored by the Committee on Water
Adopted by the NARUC Board of Directors July 27, 2005

XIV. CONTACT LIST

The National Association of Water Companies hosts an annual Water Policy Forum for the purpose of sharing thoughts, particularly information and ideas on regulatory practices, that can be used to build a common understanding of the issues that impact water companies, the customers they serve, and the respective regulatory agencies. The NARUC Resolution on Best Practices serves as the starting point for the Forum discussion on this issue.

At the conclusion of the 2010 NAWC Commissioners Water Policy Forum, participants agreed to create a contact list of commissioners and commission staff who have experience with the regulatory practices discussed during the Forum. The contacts for this list will grow as participants in future Water Policy Forums are invited to add their names for reference. Additional regulatory practices will also be added through future Forum dialogue.

Those listed below have agreed to be a contact to others who would like more information on how these practices have been used in their respective states.

Additional information on regulatory practices along with a listing of states that have implemented them can be found at NAWC's website.

California Water Action Plan

Contacts: California Public Utilities Commission
Stephen St Marie, Advisor on Policy and Planning, 415-703-5173, sst@cpuc.ca.gov
Rami Kahlon, Water Director, 415-703-1837, raminder.kahlon@cpuc.ca.gov

Conservation

Contacts: California Public Utilities Commission
Stephen St Marie, Advisor on Policy and Planning, 415-703-5173, sst@cpuc.ca.gov
Rami Kahlon, Water Director, 415-703-1837, raminder.kahlon@cpuc.ca.gov

Consumer Education

Contacts: California Public Utilities Commission
Stephen St Marie, Advisor on Policy and Planning, 415-703-5173, sst@cpuc.ca.gov
Rami Kahlon, Water Director, 415-703-1837, raminder.kahlon@cpuc.ca.gov

Customer Assistance Programs

Contact: Tom Geddis, Administrator, Aqua America's Helping Hand, 610-645-4201, TGeddis@aquaamerica.com

Decoupling

Contacts: California Public Utilities Commission
Stephen St Marie, Advisor on Policy and Planning, 415-703-5173, sst@cpuc.ca.gov
Rami Kahlon, Water Director, 415-703-1837, raminder.kahlon@cpuc.ca.gov

Contacts: New York State Public Service Commission
James Evensen, Chief, Water Rates Section, 212-417-2321, jee@dps.state.ny.us
Michael Pankowitz, Utility Supervisor, 212-417-3140, mcp@dps.state.ny.us

Rate Setting Process

- Mediation and Settlement Procedures

Contacts: North Carolina Utilities Commission,
Bliss B. Kite, Deputy Operations Director, 919-733-0854, kite@ncuc.net
Ron Brown, Commission Staff – Operations Division, 919-733-0845, brown@ncuc.net

- Establish or More Clearly Define Rules and Procedures

Contact: Anne-Marie Cuneo, Director of Regulatory Operations, Nevada Public Utilities Commission, 775-687-6101, amcuneo@puc.nv.gov

Contacts: North Carolina Utilities Commission,
Bliss B. Kite, Deputy Operations Director, 919-733-0854, kite@ncuc.net
Ron Brown, Commission Staff – Operations Division, 919-733-0845, brown@ncuc.net

- Specific and Enforceable Time Limits on the Length of Rate Proceedings

Contact: Andrea Maucher, Public Utilities Analyst, Delaware Public Service Commission,

Contacts: North Carolina Utilities Commission,
Bliss B. Kite, Deputy Operations Director, 919-733-0854, kite@ncuc.net
Ron Brown, Commission Staff – Operations Division, 919-733-0845, brown@ncuc.net

- Rate Case Filing Cycles

Contacts: California Public Utilities Commission
Stephen St Marie, Advisor on Policy and Planning, 415-703-5173, sst@cpuc.ca.gov
Rami Kahlon, Water Director, 415-703-1837, raminder.kahlon@cpuc.ca.gov

Contact: Anne-Marie Cuneo, Director of Regulatory Operations, Nevada Public Utilities Commission, 775-687-6101, amcuneo@puc.nv.gov

- Expedited, Streamlined Rate Proceedings for Small Companies

Contact: Anne-Marie Cuneo, Director of Regulatory Operations, Nevada Public Utilities Commission, 775-687-6101, amcuneo@puc.nv.gov

Reduction of Regulatory Lag and Timely Recovery of Capital

- Distribution System Investment Charge (DSIC) for Water and Wastewater Systems

Contact: Steve Klick, Executive Policy Manager, Pennsylvania Public Utility Commission,

Contact: Andrea Maucher, Public Utilities Analyst, Delaware Public Service Commission,

- Surcharge or Automatic Adjustment Mechanisms for Non-Capital Costs

Contacts: California Public Utilities Commission
Stephen St Marie, Advisor on Policy and Planning, 415-703-5173, sst@cpuc.ca.gov
Rami Kahlon, Water Director, 415-703-1837, raminder.kahlon@cpuc.ca.gov

Contacts: New York State Public Service Commission
James Evensen, Chief, Water Rates Section, 212-417-2321, jee@dps.state.ny.us
Michael Pankowitz, Utility Supervisor, 212-417-3140, mcp@dps.state.ny.us

- Use of Prospectively Relevant Test Years

Contact: Steve Klick, Executive Policy Manager, Pennsylvania Public Utility Commission,

Contacts: New York State Public Service Commission
James Evensen, Chief, Water Rates Section, 212-417-2321, jee@dps.state.ny.us
Michael Pankowitz, Utility Supervisor, 212-417-3140, mcp@dps.state.ny.us

- Surcharges for Significant Capital Investments Required to Comply with Certain SDWA Monitoring or Treatment Requirements

Contact: Steven Olea, Director, Arizona Corporation Commission,
602-542-7270, SOlea@azcc.gov

- Contact: Andrea Maucher, Public Utilities Analyst, Delaware Public Service Commission,
- Contacts: California Public Utilities Commission
  Stephen St Marie, Advisor on Policy and Planning, 415-703-5173, sst@cpuc.ca.gov
  Rami Kahlon, Water Director, 415-703-1837, raminder.kahlon@cpuc.ca.gov

Regionalization, Consolidation, Coordination with Municipals and Troubled Systems Solutions

Contact: Freda H. Hilburn, Senior Financial Analyst, North Carolina Utilities Commission,

Contact: Steve Klick, Executive Policy Manager, Pennsylvania Public Utility Commission,

Contacts: New York State Public Service Commission
James Evensen, Chief, Water Rates Section, 212-417-2321, jee@dps.state.ny.us
Michael Pankowitz, Utility Supervisor, 212-417-3140, mcp@dps.state.ny.us

Single Tariff Pricing

Contact: Steve Klick, Executive Policy Manager, Pennsylvania Public Utility Commission,

Small System Best Practices

- Simplified Rate Proceedings

Contact: Dana Lynn, Utility Analyst, Indiana Utility Regulatory Commission, 317-232-2750, DLynn@urc.IN.gov

Contact: Stanley Brown, Assistant Counsel, Pennsylvania Public Utility Commission, 717-782-3968, stabrown@state.pa.us

Contact: Bart Fletcher, Public Utilities Supervisor, Florida Public Service Commission,

- Alternatives to ratebase/rate of return regulation

Contact: Stanley Brown, Assistant Counsel, Pennsylvania Public Utility Commission, 717-782-3968, stabrown@state.pa.us

Contact: Bart Fletcher, Public Utilities Supervisor, Florida Public Service Commission,

- Use of future “prospectively relevant” test years and expedited rate proceedings

Contact: Stanley Brown, Assistant Counsel, Pennsylvania Public Utility Commission, 717-782-3968, stabrown@state.pa.us

Contact: Bart Fletcher, Public Utilities Supervisor, Florida Public Service Commission,

Sustainable Water Infrastructure

Contacts: California Public Utilities Commission
Stephen St Marie, Advisor on Policy and Planning, 415-703-5173, sst@cpuc.ca.gov
Rami Kahlon, Water Director, 415-703-1837, raminder.kahlon@cpuc.ca.gov

The National Association of Water Companies is the voice of the private water industry and the only organization that represents this group of quality water service providers, innovation drivers and responsible partners.

In conjunction with our members, we engage with others looking for fresh and powerful solutions to water-related challenges such as aging water infrastructure, increasing pressure on existing sources of water supply, and economic shortfalls that are preventing much-needed investment in the people, tools and facilities required to help ensure reliable water and wastewater service.

Together, we are moving water forward.

NAWC
National Association of Water Companies

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