

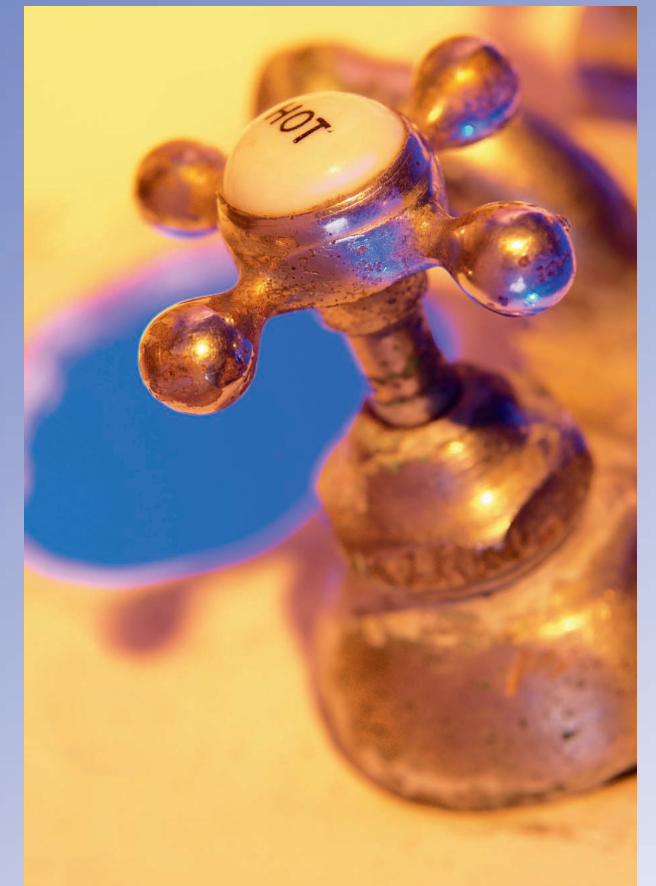
2009 NAWC WATER POLICY FORUM

SUMMARY REPORT

April 2009



National Association of Water Companies
2001 L Street NW Suite 850
Washington DC 20036
Tel: 202-833-8383
Fax: 202-331-7442



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www.nawc.org

Prepared By
Lila A. Jaber
Akerman Senterfitt

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I. ACKNOWLEDGEMENTS

The National Association of Water Companies (NAWC) extends its sincere appreciation to all of the participants in the 2009 Water Policy Forum for their willingness to contribute their time and candid discussion to this event.

The Forum Participants and NAWC extend their appreciation to Ms. Sharon Gascon for planning and organizing the Forum and Lila Jaber, Esquire for her outstanding facilitation of the discussions.

II. PREFACE

The 2009 Water Policy Forum is the 13th annual discussion forum held by NAWC. The Forum was convened on April 26-28, 2009, in Amelia Island, Florida.

Participants in this year's Forum represent the water industry, state public service commissions, the United States Environmental Protection Agency (USEPA), consumer advocates, state drinking water administrators, and Wall Street. The Forum has gained recognition as a major event for the gathering of key public utility commissioners and key stakeholders to enhance communications on pressing water and wastewater issues. The purpose of the Forum is not to reach consensus or develop action steps, but rather the purpose is to share thoughts, particularly information and ideas in the form of "best 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.

This report provides a summary of the topics discussed in hopes that it will facilitate additional discussion on these issues in the future.

III. 2009 NAWC WATER POLICY FORUM PARTICIPANTS

The Honorable John Bohn
Commissioner
California Public Utilities Commission

The Honorable Charles Box
Chairman
Illinois Commerce Commission

The Honorable Amalia Vazquez Bzdyra
Commissioner
Connecticut Department of Public Utility Control

The Honorable David Coen
Commissioner
Vermont Public Service Board

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

Ms. Heike Doerr
Research Analyst - Water
Janney Montgomery Scott LLC

The Honorable Edward Finley
Chairman
North Carolina Utilities Commission

Mr. Charles Firlotte
President & CEO
Aquarion Water Company

Mr. Paul Foran
Vice President-Regulatory Programs
American Water

The Honorable David Hardy
Chairman
Indiana Utility Regulatory Commission

Mr. Walton Hill
Senior Vice President
Regulatory Relations
United Water

Ms. Christine Hoover
Senior Assistant Consumer Advocate
Office of Consumer Advocate

The Honorable Butch Howard
Vice Chairman
South Carolina Public Service Commission

Ms. Karen Irion
Chief Engineer
Louisiana Department of Health &
Hosp. Office of Public Health

The Honorable Sandy Jones
Chairman
New Mexico Public Regulation Commission

The Honorable David King
Commissioner
New Mexico Public Regulation Commission

The Honorable Sara Kyle
Director
Tennessee Regulatory Authority

Mr. David Monie
President
SB Water Company

Mrs. Kathy Pape
President
Pennsylvania American Water

Mr. Brad Ramsay
General Counsel
NARUC

Mr. W. Richard Roth
President and CEO
San Jose Water Company

Mr. Peter Shanaghan (via telephone)
Team Leader
Environmental Protection Agency

The Honorable Eric Skrmetta
Commissioner
Louisiana Public Service Commission

Mr. Stephen St. Marie
Chief of Staff to Commissioner Bohn
California Public Utilities Commission

Moderator

Ms. Lila Jaber
Akerman Senterfitt

Ms. Nicki Garcia
Akerman Senterfitt

NAWC Forum Coordinator

Ms. Sharon Gascon
Deputy Executive Director & Senior Director of State Regulatory Programs
NAWC

IV. CURRENT DEVELOPMENTS IN THE USEPA DRINKING WATER PROGRAM

Mr. Peter Shanaghan participated in the Forum by telephone conference. He explained that the USEPA has been tremendously busy in meeting the deadlines and implementing the procedures for the American Recovery and Reinvestment Act (ARRA). ARRA was signed by President Barak Obama on February 17, 2009.

ARRA provided an additional \$2 billion dollars for the Drinking Water State Revolving Fund Program (DWSRF), as well as an additional \$4 billion dollars for the Clean Water State Revolving Fund Program. For purposes of this Forum, Mr. Shanaghan focused on the Drinking Water State Revolving Fund Program. Pursuant to ARRA, the additional \$2 billion dollars are to be used to fund infrastructure projects that are immediately ready for construction. ARRA directs that the money must be committed to projects under construction or under contract and can proceed to construction by February 17, 2010. The ARRA addition of \$2 billion dollars into the DWSRF is a one-time appropriation into the \$840 million/year base program funding.

Some of the requirements for the additional appropriation into the DWSRF include:

- All iron, steel, and manufacturing goods must be made in the USA or the applicants must receive a waiver from the EPA;
- Payment for contractors must be consistent with Davis-Bacon wages;
- States must use half of the capitalization money for providing additional subsidies and therefore, must provide half of the money in the form of grants, principal forgiveness, or negative interest loans;
- ARRA waives the 20% state match; and
- States must direct 20% of the money to projects that are “green,” particularly from an environmental perspective or projects that show extraordinary energy or water savings.

Participant Reaction

Forum Participant Butch Howard noted that privately held companies do not have access to the DWSRF in his state and that creates a disadvantage for infrastructure replacement and improvements. Mr. Shanaghan responded that EPA considers access to DWSRF a state issue for which EPA cannot get involved. Each state legislature and/or state environmental agency can address this concern. Forum Participant Nick DeBenedictis opined that grants undermine cost of service.

V. SOURCES OF CAPITAL FOR THE PRIVATE WATER INDUSTRY

Nick DeBenedictis made the following presentation to the Forum Participants.

A. THE BACKGROUND

1. Demographics

After almost a century of stability, the investor-owned water industry has experienced significant restructuring and change over the past 15 years. Major spending for water and wastewater utilities began in the last three decades as a result of new EPA rules and aging infrastructure. At the same time, federal grants that were available to municipal wastewater utilities during the 1970s and 1980s have been replaced with low-interest loan programs. Mr. DeBenedictis believes that loans are preferred by the government so as to avoid providing an advantage to one municipality over another and to force the cost of service rates for sustainability of the investment. As the nation's population growth has slowed, the most apparent change has been that the historic steady, but modest, new customer growth in individual franchise areas that supported a growth in revenues for municipalities is now being supplemented with regionalization and consolidation of nearby utilities.

After World War II, growth continued outside the cities in the outer suburban and rural areas. More independent or developer-owned water and wastewater utilities developed because of the lack of interest by municipal governments in making new investments. Consequently, a "mosaic" of smaller water and wastewater systems was created without any land use planning or coordinated regulatory policy. Regulators and public policymakers recognized that this water industry was fragmented, balkanized, and inefficient during the 1980's when costly environmental requirements were imposed on the industry and when the lack of internally generated cash due to low depreciation rates (3%) caused an immense need for external capital investment. Moreover, this was during the time of high interest rates and competition in the equity and debt markets from financially healthy electric, gas, and telephone companies. The results were predictable. Water companies made only EPA-required treatment plant investments and made investments in infrastructure (pipes, valves, tanks) rehabilitation as funds were available. Companies also avoided acquiring the many small, unprofitable, and cash-needy water and wastewater systems that were causing service problems for environmental and economic regulators.

When natural growth slowed in the suburbs where most of the large publicly-traded water companies were concentrated and industrial use was reduced sharply from plant shutdowns and rationalization augmented by conservation practices after the oil/energy crunch in the late 1970's, more rate pressure was put on the remaining residential and commercial customer classes. Moreover, the environmental ethic and implementation of water conservation requirements in the National Plumbing Code produced decreased usage by each residential and commercial customer of approximately 1% per year putting extreme pressure on water companies to look for ways to grow. Companies could no longer depend solely on rate cases in order to spread rising costs associated with environmental compliance, accounting and legal fees, rate cases, and employee benefits. One result was a series of mergers and acquisitions among the publicly-traded water utilities.

2. The Impact of Electric Deregulation and European Water Company Expansion

In the 1990's, consolidation and restructuring began to occur. It began with closely-held large companies buying smaller public and private companies. Only Utilities, Inc. had a unique strategy to work with new developers, buy their systems and wait for a growing municipality to expand and condemn them at a fair market value. Philadelphia Suburban (now Aqua America, Inc.), American Water, and General Water (now United) bought small to medium-sized independent private and municipal systems. United Water, Aquarion, and Elizabethtown concentrated on non-regulated water entities such as land development, laboratories and operations and maintenance contracts. States like Pennsylvania, where small system acquisition policies were developed to eliminate disincentives, saw the larger companies (American and Philadelphia Suburban) start consolidating the numerous small systems in the Commonwealth. Without these incentives, the acquisition of troubled water and wastewater systems was limited because of regulatory risk and the need for significant investment needed to achieve environmental compliance and reliability.

According to Mr. DeBenedictis, these mergers allowed the merged companies to achieve economies of scale and be more financially stable for the significant future investments in needed capital. Examples included:

- Philadelphia Suburban – Consumers Water Company (now Aqua America)
- American – Avatar (Indiana, Missouri, Ohio, Michigan); Pennsylvania Gas & Water (water assets); NEI (St. Louis County Water, Northern Illinois Water, Northwest Indiana Water and Long Island Water; Citizens (CA, AZ, IL, IN, PA, OH); United's Midwest (IN, IL, MO) and VA properties
- United (Hackensack Water) – General Waterworks
- Aquarion – American's New England properties (Massachusetts, New York, New Hampshire, and Connecticut)

After the deregulation of the electric industry in the 1990s, electric companies had excess cash as a result of selling generation facilities. With the goal of "convergence" of energy and water customers, the electric industry deployed its excess cash to buy water assets. For example, NiSource/NIPSCO bought Indianapolis Water. Enron bought Wessex Water and created Azurix. Duquesne Light bought small troubled companies in nine states and formed AquaSource. ALLETE (formerly Minnesota Power) bought Florida Water Services in Florida and Heater Utilities in North Carolina. Sierra Pacific Power Company bought Truckee Water Company; and finally, Duke Energy bought the water systems in Anderson, South Carolina and Rutherfordton in North Carolina.

Rapidly, the electric companies became discouraged by the lack of synergies between water and electricity, the limited success of electric customer choice through controlling a water customer, and the low returns water companies receive on the heavy capital investments required compared to the electric utility. As they quickly exited, the existing water industry began to pick up the pieces of this flawed electric industry strategy. As Enron imploded, American Water bought Azurix. Aqua America collected the remains of the Duquesne Light buying spree in 2003 and in 2004, they assimilated the Allete systems in Florida and North Carolina. Claiming deteriorating service, many municipalities condemned some electric-owned water properties. Florida Cities bought

some of the ALLETE properties. Duke's properties were sold to municipalities in North and South Carolina. The City of Indianapolis bought the NiSource system.

Following the electric industry exodus, the large European multi-utility companies then entered the United States domestic water market for what they considered to be "undeveloped opportunities." Mr. DeBenedictis notes that these large, well-capitalized and experienced companies view the U.S. fragmented water structure as an opportunity to capitalize on using the European "concession" model. Suez bought General Waterworks in the 1980's and sold it to United Water in 1994. Suez took United Water private in the late 1990's and then concentrated for the next decade chiefly on expanding its unregulated businesses. By the 1990's, General des Eaux had accumulated 20% of Philadelphia Suburban Corporation and then sold it in 2002 when General des Eaux's successor, Vivendi (now Veolia), ran into financial problems. General des Eaux bought 23% of Consumers Water Company in 1987 and sold it to Philadelphia Suburban Corporation in 1999. Thames Water bought E'Town Corporation in 2002 and was itself acquired by RWE. American Water was acquired by RWE in 2003. In 2005, RWE announced that it would divest its ownership interest in American Water and Thames. In 2001, Nuon bought Utilities, Inc., and in 2005 announced its sale of Utilities, Inc. to Highstar II, a subsidiary of a private equity fund formed by AIG. In 1999, Kelda purchased Aquarion and, in 2006, announced it would sell Aquarion to Macquarie Infrastructure, an Australian investment bank and private equity investor.

Mr. DeBenedictis observed that most of the large European utilities, with the exception of the newly-created Suez Environmental, have either announced their intentions to leave or have actually exited the U.S. regulated water utility market. Private equity funds have become the newest players to see the water industry as an "opportunity." Through 2007, with both equity and debt investments from pension and hedge funds readily available to spend, the private equity model typically included significant leverage and was dependent on bank partnerships. Since 2008, due to the freeze in the capital markets, there has been very little new activity by private equity in the water space.

3. Access to Capital Markets

As will be discussed in greater detail below, the water and wastewater industry needs access to the capital markets to fund major infrastructure investments. Through 2007, the credit and equity markets were receptive to the negative cash situation of every water utility. However in 2008, the volatility in the financial markets began with the collapse of the sub-prime mortgage market that prompted the central banks throughout the world to infuse large amounts of reserves into the banking system to increase liquidity. Thereafter, this credit crunch continued with bank mergers, bankruptcies and bailouts by the Federal Government. This instability continues today as corporations report depressed earnings.

Towards the end of 2008, many companies feared that this lack of liquidity would result in their short-term credit lines to be called by banks which would directly impact their working capital needs, acquisition plans, and infrastructure improvements. Some companies instituted worse case scenarios and made the decision to draw down all available credit lines in the event they could not access other sources of funding. Mr. DeBenedictis notes that when short-term lines were renewed, the banks increased spreads and imposed commitment fees and new covenants.

Companies that were rated less than investment grade were shut out of the bond and private placement markets as credit spreads widened.

According to Mr. DeBenedictis, in addition to the lack of liquidity and the credit crunch, the industry saw downgrades to the monoline insurance companies. Typically, transactions with credit enhancement trade based upon the strength of the monoline insurer. The cost of bond insurance increased as the number of monoline bond insurers with an 'A' rating dwindled to one. Today, companies must maintain a strong corporate credit rating as well as healthy business and financial risk profiles in order to access the debt markets at favorable credit spreads. The rating agencies as well as the capital markets are focusing on the strength of the balance sheet and liquidity.

Balance sheet strength has also become the main focus of equity investors. The recent outperformance of the water sector compared to other sectors such as the financial institutions has supported some equity issues in early 2009. This sector offers attractive dividend yields and earnings visibility as well as stable revenue growth supported by the regulatory model. Therefore, analysts do a state-by-state review of the predictability of the regulatory compact. Mr. DeBenedictis observes that tapping into the equity market now may be a good source of funding for utilities to finance their cash flow needs.

Concerns about liquidity and credit quality will continue to be a major issue throughout 2009. Many states are facing budget shortfalls for 2009 and 2010. Some states, cities, counties and municipalities are facing downgrades to their ratings and are being placed on negative watch. Companies must evaluate the various financing sources available including bonds, notes and equity. In addition, building strong bank relations is more important than ever as bank consolidations continue. Mr. DeBenedictis believes that companies need to evaluate their financing needs and begin to identify new banks to add to their existing bank group.

4. Eminent Domain or Municipalization

In all but a few states, a local governmental agency can initiate condemnation even if the utility is meeting all of its regulatory and service obligations. Use of eminent domain to condemn a utility is not a new or even recent concept. However, Mr. DeBenedictis noted that since the U.S. Supreme Court's *Kelo* decision, more public attention has been given to limiting government's ability to use eminent domain and to better define the "public good." In recent years because high profile utility business failures including Enron and Worldcom have damaged public confidence in business, there has been a greater incidence of condemnation activity involving electric and water utilities in particular. Some government officials mistakenly see the local utility as a source of revenue to solve municipal needs – "a cash cow." However, cash can only be generated if you do not reinvest in the water infrastructure system. In some cases, interest in condemnation evolves from a handful of elected officials who have a personal agenda. For example, elected officials may seek condemnation to prevent growth, to support certain growth, to control growth, or even to remove public service commission jurisdiction. A national special interest group named Food and Water Watch now exists. It is a proponent of "municipalization" worldwide and is against privatization of water systems. Often, the root cause for an attempted condemnation is not directly related to poor or inadequate utility service, or dissatisfied customers. Mr. DeBenedictis advocates that the real test of public interest should be whether the utility is meeting regulatory and service obligations.

Without public service commission jurisdiction, the public cannot be protected from a government owner that minimizes investments to generate cash for other public use needs or uses a rate increase to increase utility income to subsidize other municipal needs rather than raising taxes. He notes that best practice laws exist in Indiana and Missouri that limit misuse of eminent domain in condemning well-run utilities.

B. THE WATER COMPANY RESPONSE

During the last three decades while the Europeans, the electric industry, and now the private equity funds became interested and then disinterested in the water industry as a financial investment, those companies that have been in the water industry for over a hundred years continued to follow the regulators' directive to provide safe and adequate service to customers at just and reasonable rates. These mature companies have experienced the demise of small water companies with inadequate financial and operational resources. They watched the confluence of the explosion in the environmental regulations and industry hard assets reaching the end of their useful lives. In cooperation with utility commissions throughout the United States, these issues were addressed using infrastructure surcharges and environmental cost pass-throughs.

At the same time all around them, the failing small, troubled undercapitalized water companies that had been created to accommodate a developer's goal to sell homes began to create a "black eye" for the entire water industry. While addressing its own need to attract capital and maintain customer service and reasonable rates, the long-term water companies began to buy their weaker sister companies and to remedy the issues that plagued these companies. Some states like Pennsylvania and North Carolina implemented both administrative and legislative remedies. Single tariff pricing gave larger companies the opportunity to spread the required non-revenue producing capital invested in small nonviable water systems over a larger base of customers, thus improving service levels to the statutory requirement of "safe and adequate" while at the same time producing "just and reasonable rates." Legislation was passed permitting recovery of positive acquisition adjustments if the acquiring company fixed the troubled status of the acquired small company.

For many years, the Pennsylvania Public Utility Commission has supported the viability of its water and wastewater systems via regionalization and consolidation, noting that improved service can be achieved through resource coordination and economies of scale. The Commission has consistently observed that the acquisition of smaller systems by larger, more viable systems improves the overall long-term viability of the water and wastewater utilities in the Commonwealth. Mr. DeBenedictis and industry Forum Participants believe that these efforts have served to enhance the quality of ratepayers' daily lives, the community's economic development, and environmental compliance.

C. CASE STUDIES IN INNOVATIVE IDEAS TO ENCOURAGE REGIONALIZATION OF WATER SYSTEMS FOR NEW COST-EFFECTIVE SERVICE TO THE CONSUMER

1. Pennsylvania Acquisition Process as a Best Practice

Pennsylvania's efforts to improve system viability is accomplished in many ways, including its ongoing coordination with the Pennsylvania Department of Environmental Protection's PennVest low-interest revolving loan program. For over a decade, the Pennsylvania Commission has provided acquisition incentives, including rate of return "bonus points," deferral of acquisition improvement costs, plant improvement surcharges, and acquisition adjustments. The most common, the acquisition adjustment, has been approved when a viable system purchases a smaller system that is not meeting regulatory standards. The acquisition adjustment may be appropriate when the acquisition costs are greater than the depreciated original cost. In such situations, that reasonable difference in costs, as determined by the Commission, may be added to the rate base of the acquiring utility and amortized as an addition to expense over a reasonable period of time with corresponding reductions in the rate base.

Recently, in an effort to provide the maximum amount of predictability to the overall process, the Pennsylvania Commission clarified the original cost documentation process. Regulatory guidance on how water companies should document rate base is an important incentive for purchasing systems, especially troubled systems. For example, troubled systems are often poorly managed, do not follow the Uniform System of Accounts, and do not have proper documents verifying rate base. Therefore, it is extremely difficult to obtain cost-related information from these owners and can become a disincentive for purchasing. Because the documents obtained from the seller may be incomplete and may result in an inaccurate valuation, the acquiring utility should not be bound by the incomplete documents from the seller in preparation of its original cost plant-in-service valuation. Rather, the Pennsylvania Commission has a policy in place that allows a predetermined methodology to create an original cost study that facilitates the purchase of systems – systems that are usually undercapitalized and may have difficulty replacing their aging infrastructure.

In addition, many Commissions now consider an acquisition incentive in cases involving the acquisition of a smaller system that is not at the present time in violation of regulatory standards, but its acquisition can be shown to be in the overall public interest. Other regulatory mechanisms used by Pennsylvania include single tariff pricing, future test years, true-ups, "pass-throughs," price indices, leverage formulas (when applied consistently), mediation, and settlements for quicker resolution of cases and avoidance of regulatory lag.

Forum Participant and Consumer Advocate Christine Hoover notes that while Pennsylvania has a statute to address acquisition adjustments, there are no procedures in place for the transition period.

2. North Carolina Acquisition Process as a Best Practice

According to Mr. DeBenedictis, other state utility commissions, such as the North Carolina Utilities Commission, have coupled recovery of acquisition adjustments with the further acquisition of small troubled water companies. Under this approach, as the acquiring company buys and fixes a

troubled company, one dollar of acquisition adjustment is transferred to rate base for every dollar of acquisition cost and fix-up expended by the additional “troubled” acquiring company. While this solution is not an overnight fix, it does ensure that over time, the troubled companies will be absorbed by the operationally and financially stronger companies. It will also ensure that customer service will improve, rates will be uniform and reasonable, and the acquiring company will be rewarded for the risk in its efforts to fix troubled companies.

D. STATUTORY REQUIREMENTS

1. The Two Masters

Although unstated in public utility statutes, a Commission is bound to please two masters, the customer and the bondholder/shareholder. The state commission, in contrast to a consumer advocate’s office must represent “the public interest,” not just the residential customers, not the commercial customers, not the industrial customers and not the shareholders individually, but all of the stakeholders together. Thus, in all decisions there must be a balancing to reach the public interest. In the industry’s opinion, the easy path of “keep rates as low as possible” is a short-term benefit. In the water industry which depends on major infusions of capital to ensure that infrastructure is kept in service, the easy path of “keep rates as low as possible” is a long-term loss for the customer.

Some would argue that the Commission has no obligation to shareholders, that, indeed, shareholders can fend for themselves. But, according to Mr. DeBenedictis, the water utility industry not only is capital intensive, but is in and will continue to be in, at least for the next 20 years, the most capital devouring period in its history. Equity dollars are coming from small individual investors, many of whom are the water company’s customers, as well as institutional investors. Because of this need for capital and because its assets are so long-lived, resulting in low depreciation rates, internally generated funds from depreciation, deferred taxes and returns on equity are too low to cover all of the investment capital needed. Thus, municipal and private water utilities will be accessing debt markets more often than ever before. The same will be true of equity markets for publicly traded utilities. The markets, on which the utility must depend for capital, are jealous masters. If not nurtured and catered to they will redeploy their capital elsewhere. If supply of a product, including capital, decreases it is an economic axiom that cost will increase. If cost increases, the cost of capital will increase, thus increasing rates.

All markets expect consistent regulatory treatment to cover the long-term nature of environmental and infrastructure investments. This specifically requires reasonable and consistent returns so water companies will be able to keep equity and debt investors whole and interested in new investments.

2. The Tests

Although there are various means to achieve the same end, public utility commissions, almost universally, are bound by the various legislatures to the same standards. A Commission must ensure that a utility company provides safe and adequate service at just and reasonable rates. All other public utility statutes and regulations flow from those standards. All proposals, including

mergers and acquisitions, if judged against these standards will produce results that benefit the customer and the utility and meet the Commission's statutory mandate.

Because of the capital intensity of the water utility industry, maintaining the same capital base spread over a greater customer base will, all other things being equal, produce lower rates. Thus, Mr. DeBenedictis concludes that, in general, growth and consolidation are beneficial for water utility customers and shareholders.

3. Market Expectation of a State Utility Commission

Both debt and equity markets crave certainty and adequate returns to protect their investments. They reward entities, with greater access and lower cost of capital, if ¹regulatory certainty and adequate returns are provided. Standard and Poor's has noted that regulation is often the defining factor in the ratings of a utility.² Scrutiny of regulation is both qualitative and quantitative. The rating agency assesses:

- What capital structure is used;
- Whether the new rates are based on a fair rate of return;
- Whether the utility is afforded an opportunity to actually earn the rate of return awarded;
- Whether the test year is historic, current or projected;
- Whether known and measurable changes to the test year are acknowledged;
- Whether the Commission regulation provides for deferred cost recovery, such as, amortization of rate case expense, tank painting, and storm damage;
- Whether the Commission provides for recovery of commodity (fuel/purchased power/gas/water/residuals handling) costs;
- Whether the company tariff design reflects greater percentage of fixed costs in the Customer Charge; and
- Whether regulation is flexible enough to acknowledge and address unusual business and economic issues (infrastructure replacement, rising healthcare and pension expense, increasing power expense as electric rate caps expire) as they arise.

4. State Utility Commission Expectation of Markets and Water Utilities

Both at the time of a merger and on an ongoing basis, a Commission must look to water utilities to act in concert with the Commission and its Staff to meet its statutory mandate of providing safe and adequate service at just and reasonable rates. Statutory and case law regarding acquisitions and mergers direct that a Commission must determine if the acquisition or merger is in the public interest as well as its effect on the customer. Super-imposed on these dictates are the Commission's overriding obligation to ensure that utilities provide safe and adequate service at just and reasonable rates. Mr. DeBenedictis believes that the bottom line is, are customers better or worse off after the transaction than they were before the transaction, not just on the day that the transaction closes but in the long-term. A long-term perspective sometimes produces not only a different analysis but also a different answer to the statutory questions that must be answered during consideration of a merger or acquisition. He offers that responses to the following questions should produce a decision with a long-term perspective:

¹ Future test years avoid regulatory lag that is severe during periods of high capital investment requirements

² "A Fresh Look at U.S. Utility Regulation", *S&P Utilities and Perspectives*, February 2, 2004

- Does the Commission know the utility and its representatives, the parent of the utility, and the entities in the chain of ownership of the utility?
- What is the credit worthiness (credit rating) of all entities in the chain of ownership?
- Will the acquisition increase the utility risk and/or decrease its credit rating over the long-term?
- Is the new owner committed to maintain its investment in the utility business long-term consistent with the long-term nature of utility assets?
- How much net income is retained in the business and ploughed back into capital benefiting customers? What is the payout ratio proposed by the utility?
- What is the new owner's commitment to capital investment? Even if the new owner has large market capitalization, is it willing to commit a portion of that capitalization to investment in the water utility business over a term of years?
- Has the utility been a utility of its word in the past, i.e., does it do what it says it will do?
- Has the utility assisted the Commission in achieving its goals in the past? Has it acquired small troubled companies and helped the Commission by assisting smaller companies with service problems? Has the Company acted as an emergency operator for the Commission in the past?
- What are the Company's plans for staffing levels after the closing? Do they produce monetary savings at the expense of customer service?
- Will service improvements result from the transaction?

Participant Reaction

Recent history tells us that a long-term financial and operational perspective is required if the capital needs of the water industry are to be met while keeping the public health responsibilities paramount. According to Mr. DeBenedictis, those in the water industry for the long-term, know that at the end of the day they will be the "provider of last resort" when those who would "test the water" for a short-term financial gain come and go. Rather than be left with the clean-up at the end of the new game, the water industry, which has partnered with utility commissions under traditional regulation, prefers to maintain that path and look toward safe and adequate service at just and reasonable rates not just this year and next, but for the long-term. The Forum Participants believe that the focus should be on improving past best practices as we move forward to provide more cost-effective and environmentally sound service for the customers.

VI. RATE OF RETURN, RISK, ECONOMIC DOWNTURN AND STIMULUS ISSUES

Forum Participant Kathy Pape presented this portion of the discussion.

In this portion of the Forum, the participants discussed the fundamental concepts of capital attraction, including, for example, the United States Supreme Court standards for determining a “fair” authorized return, the basic relationship between risk and return, the relationship of debt and equity to utility financing, and other matters affecting the ability to attract capital. To begin, the Forum Participants recognized that the current unprecedented and virtually overwhelming economic situation and economic conditions magnify the importance of the concepts discussed and greatly exacerbate the difficulty of meeting the infrastructure and water quality challenges the industry faces. Ms. Pape discussed some of the industry’s efforts to promote adoption of programs through the Administration’s Economic Stimulus Package that will facilitate capital attraction in these difficult times.

A. Impact of the Current Economic Crises

The recent and ongoing global economic and financial market crises have severely dislocated capital markets, negatively impacting not only the availability but the cost of capital for companies looking to access both the equity and debt markets. Concurrently, driven by our nation’s growing energy needs, increasing population and aging infrastructure, it is expected to cost approximately \$1 trillion to replace aging drinking water infrastructure and ensure the sufficient delivery of sustainable drinking water and wastewater services in the United States.

This dire need for capital expenditures comes in an age of rapidly devalued equity and debt related securities. The current recession has already lasted longer than any recession since the Great Depression and has significantly reduced access to equity markets. Since January 1, 2008, the value of equities, as measured by the Dow Jones Industrial average, has dropped by over 39%. The publicly traded investor-owned water industry has fared somewhat better, dropping approximately 9%. Ms. Pape and industry participants believe that a significant factor in tempering the impact on water industry stock values is a perception that public utility commissions will continue to support the traditional regulatory compact that provides fair returns on capital necessary to provide service and recovery of prudent operating expenses in exchange for the obligation to provide high quality, reliable service to all customers.

Reduced access to the equity markets is also reflected by the recent lack of capital markets transaction activity. While 43 companies successfully completed an Initial Public Offering (IPO) during 2008, representing a significant 83% decrease from 2007 levels, Ms. Pape notes that there have been only two U.S. listed IPO’s over the last seven months. Furthermore, the number of withdrawn or postponed IPOs in 2008 totaled 120, a 62% increase from the year before.

Regarding debt markets, fundamental economic conditions that impact bond creditworthiness remain just as challenging as corporate earnings and consumer confidence have hit historic lows. As a result of these factors, bond investors have been demanding and getting paid considerably

more for the risk of holding corporate debt securities. Spreads on debt instruments such as high yield bonds – the difference between the (typically greater) yield on high-yield bonds and those of risk-free Treasury bonds of comparable duration – soared to a historical high of 2182 basis points (bps) in 2008, up from only 551 bps at the start of the year. Accordingly, high-yield bond issuance volume was considerably weaker during 2008 as only \$55.7 billion came to market – a 65% decrease from the prior year.

These and many other factors affecting the economy underline the significantly heightened challenges water service providers face in attracting necessary capital, just at a time when these capital needs are growing to replace aging infrastructure and comply with ever more stringent water quality standards. Cooperation among all concerned stakeholders is needed now more than ever if these challenges are to be met in a cost effective manner. An understanding of the fundamental relationships of risk, return, and capital attraction is a necessary first step.

1. The Basics: Risk and the Ability to Attract Capital

“Capital” is the dollar amount that a utility company and its shareholders invest to meet the customer service obligation that is mandated by each public utility statute. Just as any business or individual decides to invest in necessary home improvements such as replacing a failing roof or replacing a heating and cooling system or an addition to accommodate a growing family, a utility company, too, must buy pipe, tanks, booster stations, wells and treatment plants. Like any business or individual, if the utility company does not have current cash available to pay for these needed improvements, it needs to borrow or otherwise obtain funds from others. Although the concept is the same, utilities generally raise needed funds (capital) in the debt and equity capital markets.

Ms. Pape noted that any discussion of fair returns should start with the standards for determining allowed returns for regulated utilities established by the United States Supreme Court in the landmark Bluefield and Hope decisions. In the Bluefield case, the Court determined that a regulated company, “is entitled to such rates as will permit it to earn a return on the value of the property which it employs...equal to that generally being made...on investments in other business undertakings which are attended by corresponding risks and uncertainties.” The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. Bluefield Water Works vs. PSC of West Virginia, 262 U.S. 679 (1923)

Similarly, in the Hope case, the Supreme Court stated that, “the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.” Federal Power Commission vs. Hope Natural Gas Company, 320 U.S. 591 (1944)

From the inception of public utility regulation, the United States Supreme Court recognized the fundamental relationship between risk and the ability to attract capital. The bottom line is that in setting an allowed return on equity and overall return, by whatever methodology it chooses, commissions must recognize the inherent risks specific to the utility, must set an allowed return

commensurate with returns of other businesses of comparable risk, and the return must be sufficient to attract the capital necessary to provide utility service. An important corollary to these principals is that investor perception of risk determines not only access to capital, but the cost of that capital, which directly impacts the cost of utility service and rates to customers.

It is important to note that utilities are not given *carte blanche* in this regard. Utilities are entitled to the opportunity to earn a fair return, not a guaranteed return. These standards also presume prudent and reasonable management and actions by the utility. With that assumption, these standards have been established to prevent the unconstitutional confiscation of the property of the utility and its shareholders, and to assure that the utilities have access to the resources and capital necessary to provide service to their customers and otherwise fulfill their obligations as public utilities.

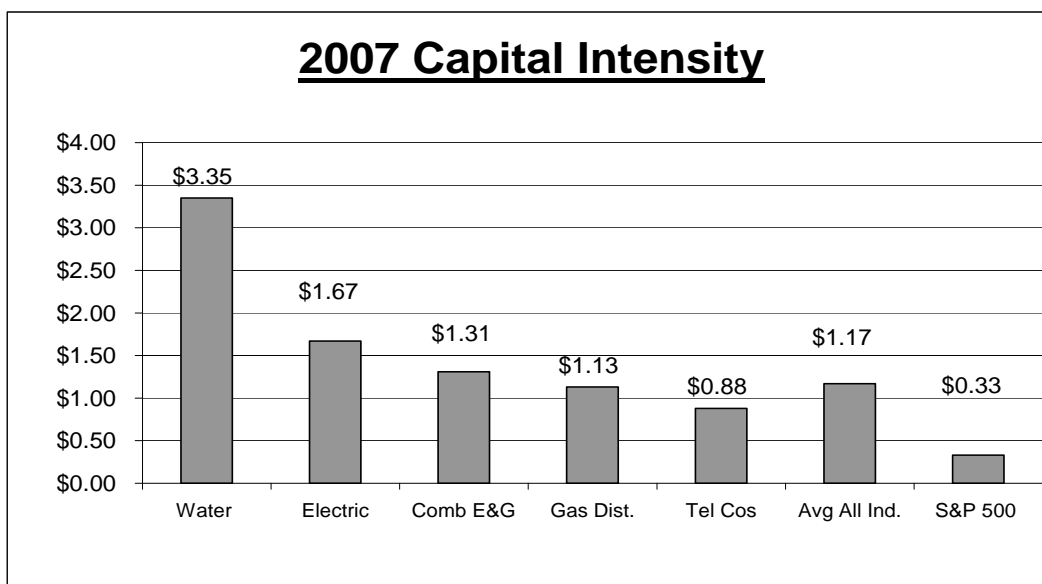
2. Capital Attraction

Generally, a company has to attract outside capital if it cannot generate enough funds internally to make investments necessary to meet customer needs today and into the future. The economics of the water industry make capital attraction the *sine qua non* of a financially and operationally healthy utility. Accordingly, the ability to provide reasonable rates of return to investors is essential for a water utility to provide high quality, reliable service to its customers. The inability to attract capital will impair the utility's financial and operational performance and therefore impair its ability to provide quality service at reasonable cost to customers.

In addition, Ms. Pape noted that capital attraction is particularly important to the water industry because of the need to replace aging infrastructure and comply with ever more stringent water quality standards. Based on USEPA estimates, the costs to replace aging infrastructure and comply with water quality requirements for the water and wastewater industries over the next 20 years could approach one trillion dollars.

Utilities are more capital intensive than most other industries and water utilities are the most capital intensive of all the traditional utilities. According to Ms. Pape, this means that more dollars of capital are invested by water utilities for each \$1 of revenue received than in the electric, gas, or telecom industries and significantly more than the S&P 500.

On the other hand, service industries, such as legal, medical, financial or engineering require relatively minor levels of capital to produce \$1.00 of revenue. Manufacturing requires machines, equipment, and large buildings to produce a product. However, most of the manufacturing industries, even the steel industry, do not require as much capital to produce \$1.00 of revenue as does the water industry. Recent statistics show that water utilities invest \$3.35 in capital to produce \$1.00 of revenue, while in the electric, gas and telecom industries capital investment of \$1.67, \$1.13 and \$0.88, respectively, produces a \$1.00 of revenue, as indicated in the above graph.³



Because of this capital intensity, water utilities do not produce enough internal cash (capital) to pay for all the hard assets needed to provide service. Accordingly, this requires that they must turn to the capital markets, both debt and equity, on an ongoing basis. Due to infrastructure requirements, running cash negative is a day-to-day fact of life for water utilities and reflects normal economic and financial conditions. The basic economic fact is that the confluence of the significant capital that is needed because of the requirements of the Safe Drinking Water Act, the Clean Water Act (and amendments thereto), the massive capital that is needed to replace infrastructure that is reaching the end of its useful life, and current economic conditions produce the “perfect financial storm.”

Water utilities require massive amounts of externally funded capital to meet legislatively mandated quality and service standards. In order to do this, water companies must seek the support of the external markets if they are to both meet environmental requirements and replace aging infrastructure, especially if they are to do so in a cost effective manner. Dependence on capital markets coincides with investor perceptions of unknown future risks and of the water industry as the equivalent of the “Investment Money Pit.” While some investors may perceive the massive capital requirements of the water industry as opportunities, they also recognize the entailing risk.

a. Depreciation Expense

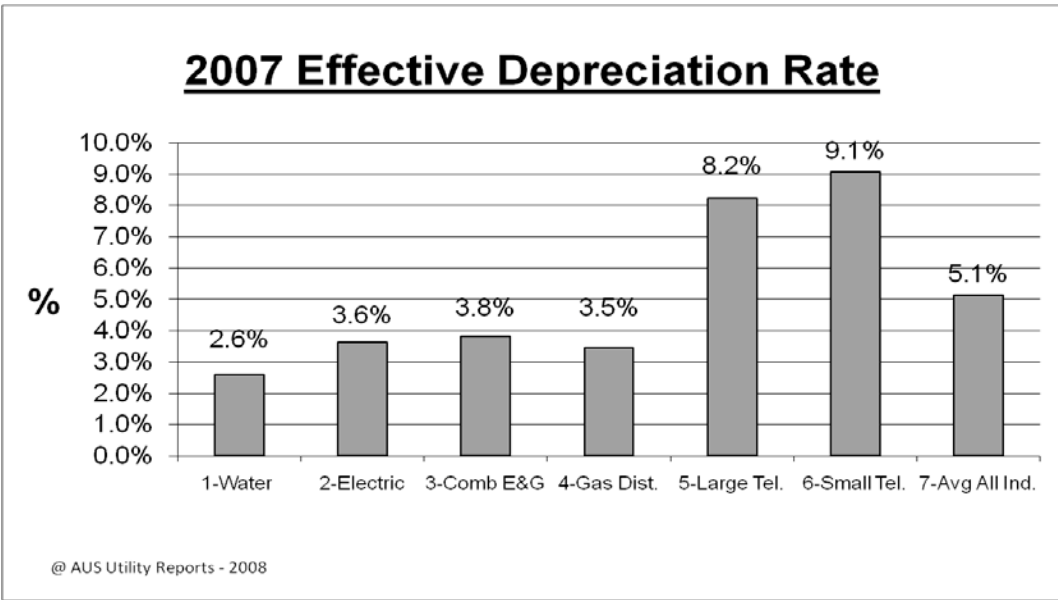
Some would argue that water utilities should have been saving for this “rainy day” by putting away funds in the form of depreciation expense. First, as noted previously, utilities typically fund capital investment requirements out of cash flows which do in fact include revenues associated with depreciation expense but are insufficient to fully fund capital needs. Therefore, to hold these revenues in some sort of “fund” would unnecessarily increase costs to customers because of the necessity to both fund the improvements and support the “fund.” Despite depreciation expense allowance in rates, utilities, particularly capital-intensive water utilities, are typically in a negative cash situation, requiring ongoing access to the capital markets.

¹ Source: AUS Utility Reports - 2008

Ms. Pape notes that the issue of depreciation highlights a second economic factor that sets water utilities apart from other industries and apart from its sister utility companies. Not only are water utilities the most capital intensive, but the assets needed to provide service have extremely long useful lives. Extremely long useful lives produce extremely low depreciation rates and extremely low depreciation expense. This means that any “rainy day fund” established through depreciation rates based on the original cost of the asset would be greatly deficient to replace assets installed many years earlier.

To further explain this concept, Ms. Pape points to at least two views on the role of depreciation expense. Views differ depending on whether the proponent is an engineer, an accountant or an economist. One view is that depreciation expense is to repay the investor for the capital outlay, a return of principal like paying down your home mortgage. An alternative view is that depreciation expense is to build a fund to replace the asset when it reaches the end of its useful life, hence the term “Reserve for Depreciation.” The Uniform System of Accounts defines “depreciation” as “the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of utility plant in the course of providing service from causes which are known to be in current operation and against which the utility is not protected by insurance.” Among the causes to be given consideration are wear and tear, decay, and action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities. The accounting definition does include a consideration for the physical impact of time on the asset; rather, it allocates the original cost of the plant evenly to each year of the asset life.

Couple the low depreciation rates with the fact that utilities earn on and recover only the original cost of their investment, rather than the current cost to replace the asset and the “perfect storm” converts to a financial hurricane. Consider the following example: in the year 1904, 2,000 feet of 16" pipe was installed at \$2.43 per foot and in 2004 the pipe breaks and must be replaced at \$265 per foot. An asset purchased and booked originally at \$4,860, costs \$530,000 to replace. Not only is the cost of pipe more expensive, but the cost of installation, primarily road restoration, is much more expensive.



The depreciation that has been paid by the customers through rates for use of the asset may provide less than 1% of the actual cost to replace the asset at the end of its useful life. To provide the immediate dollars needed to fund the shortfall, shareholders, both new and old, and bondholders are asked to invest in the replacement plant that is needed. Thus, the water utility industry faces relatively greater challenges in terms of capital attraction and the capital markets because, disproportionately, it must rely on these markets in the near and long-term more than their sister utility companies or most other industries, to secure the capital necessary for them to provide high quality, reliable service to their customers.

b. Contributions in Aid of Construction (CIAC)

CIAC is typically a contribution funded by developers or certain customers to extend service. While CIAC may be a supplemental non-utility source of capital, especially with developer systems, it can become an albatross around the neck of a water company. This is because neither a return on, nor of contributed capital through depreciation expense is permitted on CIAC in most states, when these zero cost assets are replaced the impact on customer rates is even more significant. There is not even a small “pool” of a “rainy day” depreciation expense for CIAC. Small systems funded with a large percentage of CIAC are especially susceptible to failure because they are affected disproportionately (must internally generate 100% of the replacement cost) and they cannot access the capital markets at reasonable cost to alleviate the CIAC burden.

c. Economies of Scale

The capital intensity of the water industry also has significant implications with regard to the need for consolidation, both with regard to the number of systems as well as rate structures. Such consolidation can be extremely beneficial to customers. For example, each capital asset has a maximum capacity at which it can operate. For an asset such as a well, the return on (rate of return) and return of (depreciation) for the investment will be the same regardless of whether the well serves 10 or a hundred customers. However, the per capita capital and operating costs will obviously be less depending on the number of customers over whom the fixed costs can be spread. To the extent that the number of customers being served moves closer to the maximum number of customers that the asset has the capacity to serve, the cost to each individual customer is reduced. Water companies, more than any other industry, need to strive to serve at the maximum capacity of assets in order to maintain financial health and minimize customer rates. Such economies of scale are not as possible in small systems, especially under environmental rules that may require “peaking factors” sometimes twice the daily average demand.

B. Debt and Equity Sources of Capital

Capital must be attracted from two sources: the debt markets and the equity markets. Equity capital is generally provided by shareholders and debt capital comes from lenders. The cost of any capital, that is, the returns on the capital that investors will demand to provide the capital, vary directly with the risks investors perceive in the particular form of capital. Equity capital is more risky than debt capital because equity returns to shareholders are subordinated to interest and principal payments on debt, and thus, demands a higher return than debt. The return differential between the two sources of capital makes capital structure an important issue to water utilities as they face massive capital additions. Capital structure affects the overall cost of capital as much

as the types of capital employed. If the percentage of equity in a capital structure is too low, the company is viewed as too risky. The result is an increase in the cost of capital (debt and equity). If the percentage of equity in the capital structure is too high, the overall cost of capital could be higher even though debt charges should be lower, causing water rates to be increased. This results because equity returns are taxable; therefore revenues must be increased to account for the tax implications. However, interest payments on debt are deductible. For these reasons, an appropriate mix of debt and equity is necessary to assure the utility of cost effective access to capital. Not only is a balanced capital structure important, but it is also important to understand that one capital structure does not fit all industries or all companies at all times. Companies with low business risk and low capital needs may be able to employ greater amounts of debt (leverage) in their capital structure. An industry that needs to spend significant dollars on infrastructure replacement and faces changing environmental demands and lower usage of its product cannot necessarily utilize a highly leveraged capital structure. As it repeatedly goes to the markets for capital, it may be viewed as having a weak financial structure thereby increasing the cost of capital.

Whether an investor will buy bonds or notes of a water company and at what price is impacted by the rating that a bond or the bond's issuer is given by one of the debt rating agencies. Whether and at what price an investor is willing to purchase stock (equity) is determined by the investor's required return based on their analysis of the investment risk. Companies attempting to attract capital, and their regulators, must therefore view these analysts as important in determining a water company's cost of capital. As previously indicated, the current financial and economic conditions are resulting in bond investors demanding and receiving considerably more for the risk of holding debt. Since water companies are not generally considered to be growth stocks, they must depend in large part on a steady stream of increasing dividends to attract capital. Investors in water company stocks look for a dividend yield that is higher than growth stocks, which may grow market share and generate positive cash flow over the long term. Water companies must be able to attract capital from those who are typically risk averse, yet willing to invest during the time of an operational and financial perfect storm for the water industry.

C. Risk and Return

As noted earlier, the United States Supreme Court recognized the inextricable connection between risk and return when it ruled that a utility is entitled to a return equal to those earned by other business undertakings with corresponding risks and uncertainties. In addition, the return must be sufficient to assure confidence in the financial integrity of the utility and allow it to attract necessary capital.

The determination of what constitutes a fair return on invested capital, or the utility's "cost" of capital, is usually a major part of any rate proceeding. The cost of debt is usually non-controversial, as it is reflected by the interest rates paid on the embedded debt. However, the determination of a fair return on equity capital, that is, the return required by investors to buy the stock of a utility, is more complex and is usually the subject of expert testimony sponsored by the utility, the commission staff or interveners.

Through the years, a number of methodologies have been developed to help commissions estimate the cost of equity. Examples include various forms of the Discounted Cash Flow (DCF)

model, the Capital Asset Pricing Model (CAPM), the Comparable Earnings Model, Risk Premium Model, and others. Each of these methodologies has advantages and disadvantages. In addition, which model may be appropriate to use may change over time and with changing market conditions or other factors affecting the utility or the economy in general. However, Ms. Pape notes that it is important to keep in mind that regardless of what model is utilized, the result must comply with the fundamental standards established by the United States Supreme Court in terms of returns that are comparable for companies of similar risk and capital attraction ability.

In this regard, it is important to recognize that commissions regulate utilities and not the investors nor investor expectations. Investors will make their own assessments of risk and decide if the expected returns of the investment appropriately compensate for that risk. The commission's role in assessing risk and investor expectation and matching those expectations with an appropriate ("fair") allowed return is determinative of the utility's ability to attract capital at reasonable rates as well as compliance with constitutional standards.

As noted above, part of what will guide investors in making determinations of risk for an industry or company will be the analyses of credit rating agencies, such as Standard and Poors, Moody's and Fitch, as well as other industry financial analysts. In assessing credit worthiness or "risk," ratings agencies look at many factors including various financial ratios such as capital structure (the mix of debt and equity), debt coverage ratios, and cash flow. They will also look at business and operating risks, the quality of economic regulation, including allowed returns and regulatory policies that impact the ability of investors to earn timely returns on capital investments. As with any investment, uncertainty adds to risk. In addition, for regulated, capital intensive industries, such as the water and wastewater industries, regulatory policies that promote or prevent the timely recovery of returns of and on invested capital are particularly important. In this regard, it should be noted that analysts will not only look at the equity returns a commission authorizes, but the likelihood that the utility will actually earn the allowed return. While utility management obviously plays a crucial role in achieving allowed returns, so do regulatory policies and actions. For example, disallowance of legitimate, reasonable operating expenses and regulatory lag (the time between when an investment is made and a return is realized in rates) will prevent a utility from actually earning the allowed return and will be a factor in analyzing credit worthiness. The ratings ascribed to a utility by the ratings agencies are extremely important because they will determine the interest rates the utility will have to pay for debt capital and will therefore directly affect costs to customers.

The Forum Participants noted several of the fundamental characteristics of the water and wastewater industries that impact risk and capital attraction. These are the massive infrastructure investment requirement, capital intensity and low depreciation rates of the industry, as well as the extreme fragmentation that inhibits economies of scale and compliance with ever-increasing quality standards. Another factor unique to the water industry is that it is the only utility service that is actually ingested into the body. This in itself creates unique issues of trust with our customers, with direct impacts on public health. This, plus increasing quality requirements, makes the industry susceptible to lawsuits seeking damages for alleged contamination of water supplies, in some cases even if the utility is or was in compliance with all then existing quality standards.

Reports last year about the possibility of trace amounts of pharmaceuticals in certain water supplies are an example of the sensitivities that can surround the provision of a service that

people actually ingest. USEPA has not established any standards with regard to pharmaceuticals and uncertainty exists with regard to what, if any, requirements may be imposed with regard to any implications these potential contaminants may have on legal liability of service providers.

Consolidation of the industry to achieve economies of scale and reduce the problems created by thousands of small, financially and technologically nonviable systems, also poses risks for utilities. Acquisition of such systems often entails immediate needs for capital investment to correct system deficiencies and non-compliance issues, as well as hidden environmental, legal, and other risks. How regulators deal with these issues and the ratemaking implications directly impacts the risks of these acquisitions.

Part of the uncertainty inherent in the water industry is the moving target created by the Safe Drinking Water Act, which requires the USEPA to periodically identify additional contaminants for possible regulation, thereby directly impacting costs in the future. For example, the USEPA last year released a list of 105 contaminants from which candidates for establishment of new regulations may be selected.

Not only is the water and wastewater industry fragmented with regard to the number and types of systems, it is also fragmented from a regulatory perspective. Unlike the Federal Communications Commission or the Federal Energy Regulatory Commission, there is no national economic regulator for water. State economic regulators, with some exceptions, generally only regulate investor-owned water companies, with thousands of municipal and other government providers regulating only their own systems. Quality regulation by the USEPA is totally unconnected with economic regulation. This all contributes to uncertainty and poses significant challenges to developing coherent water policies and achieving necessary economies of scale.

Global climate change issues and persistent drought conditions in many areas of the country also directly impact the water industry in unique and uncertain ways related to sources of supply, sustainability, energy usage, and other areas.

D. Economic Stimulus Proposals

In light of the need to attract huge amounts of capital to continue providing high quality, reliable service, and the challenges the recent economic downturn pose to achieving this goal, the investor-owned water industry proposed that a number of programs be included in the Administration's Economic Stimulus Package. Rather than grants or other giveaways, the industry proposals focus on the use of tax incentives to facilitate needed investment in utility infrastructure.

The following describes the proposals and provides a brief history of use in the past.

- 1. Investment Tax Credits: a 10% investment tax credit on all investments in water and wastewater infrastructure for the next three years.**

In 1962, Congress enacted the Investment Tax Credit (ITC) into law as the primary tool with which to spur modernization and expansion of the country's productive facilities and increase competitiveness in international markets. The ITC went through some revisions in the 1970s and

1980s, and then was repealed in the Tax Reform Act of 1986. The water industry believes its reintroduction today could be an important part of our nation's economic recovery.

- 2. Public Utility Dividend Reinvestment: a five-year deferral of tax on dividends, similar to the program in the 1981 Tax Act (ERTA), for all public utility dividends that are reinvested in infrastructure replacement.**

According to the Congressional Joint Committee on Taxation, Congress in an effort to stimulate capital formation through internal generation of funds, included in ERTA a provision to provide capital to public utilities for the purchase of new equipment through the reinvestment of dividends by shareholders. Congress believed that an appropriate way to realize this objective was to allow tax-free treatment of certain stock distributions made to shareholders of public utility corporations.

- 3. Tax Exempt Financing: lift the cap on Private Activity Bonds for all water and wastewater investments.** (Legislation was introduced in Congress in 2008)

Bringing water and wastewater projects out from under the volume cap on private activity bonds could leverage as much as \$6 billion annually into water infrastructure, and do so at very little cost to the federal government (\$214 million over ten years).

- 4. Accelerated Depreciation: 50% increase, or more, in depreciation rates for infrastructure replaced over the next three years.**

Congress has increased the rate of depreciation of business related assets as a way of spurring the economy three times since 2002. Today the investor-owned water industry believes that Congress should extend, and consider increasing, the 50% "Bonus Depreciation" for infrastructure replaced over the next three years.

- 5. State Revolving Loan Funding (SRF): increase funding of these programs and insure access to all providers of water and wastewater services.**

In addition to the proposals referenced earlier, the industry proposed increased funding for the State Revolving Loan program and access to these funds for all providers of water and wastewater services, regardless of ownership structure.

Recognizing that attraction of capital to provide for infrastructure replacement is critical to maintaining quality water and wastewater service, and that such investment means jobs, NARUC sent to each US Senator a letter supporting the incorporation of these proposals into the Economic Stimulus Package.

Although not all the proposals were adopted, some notable success was achieved in a number of areas.

- 6. Tax Exempt Financing**

The Economic Stimulus Package increased the limit on Private Activity Bonds for "exempt" facilities, which includes water and wastewater facilities, by \$15 billion over 2 years. The amount

available in 2007 for private activity bond financing was \$28 billion, so the increase contained in the Economic Stimulus Package is sizeable. These bonds will also be exempt from the Alternative Minimum Tax for 2009 and 2010 as well as the refunding of such bond issues between 2004 and 2009.

7. Accelerated Depreciation

This was extended at the 50% depreciation rate for calendar year 2009.

8. State Revolving Loan Funding

Funds available for this program were substantially increased. Four billion dollars will be available for the Clean Water State Revolving Funds, representing more than a four-fold increase over recent funding levels. Two billion dollars are available for the Drinking Water State Revolving Funds, which is more than double recent funding levels. Unfortunately, investor-owned wastewater service providers still do not have access to the Clean Water Funds.

Participant Reaction

The Forum Participants discussed the importance of capital attraction to the water and wastewater industry, a capital-intensive industry. The Forum Participants noted that this is particularly true in this period of economic downturn where, for example, electric cost is the largest expense. Other significant expenses include rising chemical and pension benefit costs. Through the establishment of allowed returns on equity and other regulatory policies affecting the timely recovery of invested capital, commissions will be determinative of the ability of water and wastewater utilities to continue supplying quality service to customers at just and reasonable rates.

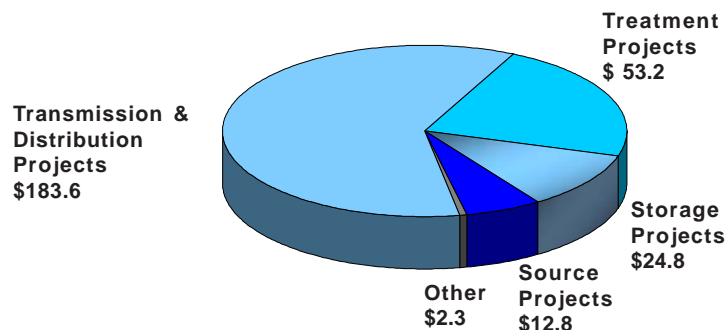
VII. A WALL STREET PERSPECTIVE

Heike M. Doerr of Janney Montgomery Scott led this discussion. In emphasizing the point made earlier that the water industry is the most capital intensive industry, she notes that:

- It takes over \$3 in capital spending to generate \$1 in water revenue at current prices;
- Replacement costs continue to rise dramatically outpacing the book value of assets in the ground; and
- Water infrastructure has a long asset life with long depreciation schedules, especially for transmission pipes.

For the water industry, this means that they will consistently have negative free cash flow making it necessary to regularly access the debt and equity markets to fund capital investments. Ms. Doerr notes the importance of keeping Wall Street comfortable with the “regulatory compact,” i.e., that fair returns will follow the needed investment.

Drinking Water Investment Needs Remain High **\$335 billion is needed for U.S. drinking water utilities over the next 20 years to ensure compliance with existing and future water regulations⁴** **(\$ Billions)**



- This represents infrastructure projects necessary from January 1, 2007, through December 31, 2026, for water systems to continue to provide safe drinking water
- Emphasis is on transmission & distribution projects
- Pipe replacement cycles are not keeping up with increasing deterioration

Source: EPA's 2007 Drinking Water Infrastructure Needs Survey & Assessment

¹ USEPA 2009 Infrastructure Needs Survey and Assessment estimates that the 20-year infrastructure replacement needs for the water industry is \$334.8 billion.

In the past, markets viewed water utilities as low-risk operations. While water utilities are supposed to be low-risk regulated monopolies, Ms. Doerr reminded the Forum Participants that water utilities have the following to address which do, in fact, impose risk:

- Infrastructure replacement needs;
- Pressure on critical water supplies;
- Costly environmental regulations;
- Rising security concerns;
- High cap ex requirements and low depreciation rates;
- Effects of regulatory lag;
- Local political risk; and
- Ability to access capital markets

Wall Street Cap Ex Assumptions are that: 1) capital spending should approximate D&A; and 2) spending should be less than operating cash flow. However, Ms. Doerr made the observation that water utility capital spending is very high relative to D&A and operating cash flow. Therefore, the sustainability of this scenario is questionable.

Capital Market Access Needed in 2009

Many water utilities are outside of their historical capitalization ranges

Company	Most Recent Equity Offering	Net Debt/ Capitalization Ratio (12/31/08)
American States Water	September 2004	51.9%
American Water Works	April 2008	56.3%
Aqua America	August 2006	53.6%
Artesian Water	June 2007	53.9%
California Water Service	October 2006	39.9%
Connecticut Water	May 1985	46.6%
Middlesex Water	November 2006	47.9%
Pennichuck	June 2005	57.5%
San Jose Water	N/A	46.1%
SouthWest Water *	August 2004	54.0%
York Water	November 2006	55.3%

* SWWC (as of 6/30/08)

Source: Company filings & Janney

Current levels of capital spending are sustainable only if water utilities can regularly access the equity and debt markets to fund capital programs and receive fair (and timely) returns on their investments. Otherwise, by delaying non-mandated capital expenditures, the water utilities could

quickly generate positive operating cash and spend closer to their depreciation rates but then, they will fall further behind on needed replacement infrastructure spending.

There is no “one size fits all” approach to regulation. Commissions that work with their utilities to minimize rate shock to customers, while stimulating infrastructure investments in their jurisdictions, are viewed most favorably by the investment community. Investors evaluate regulatory treatment by determining whether the state commission has consistent regulatory treatment, allowed fair and balanced allowed returns on equity, and implemented mechanisms that minimize regulatory lag.

Importance of Allowed ROEs

Most important consideration in assessing regulatory climate

Actual (Reported) 2008 ROE

American States Water	7.2%
American Water Works *	5.5%
Aqua America	9.3%
Artesian Resources	7.3%
California Water Service	9.9%
Connecticut Water Service Inc.	9.0%
Middlesex Water	8.5%
Pennichuck Water **	5.3%
SJW Corp.	9.9%
Southwest Water Company	N/A
York Water	9.2%

Water Utility Average **8.1%**

* AWK assumes adjusted equity; **
 PNNW excludes land sale gain

Source: Company filings & Janney

- If Commissions want to maintain existing capital structure (50% equity ratio) proper incentives need to be in place to attract capital. Investors have many choices.
- Allowed ROEs are typically not achievable/maintainable due to regulatory lag
- Should water utilities receive lower allowed ROEs than electric or gas utilities?
- Are water utility risks accurately reflected in granted ROEs?

Participant Reaction

According to Ms. Doerr, recent positive regulatory developments and “best practices” include 11% allowed rates of return on equity (ROE) granted in Pennsylvania, a 30-basis point improvement in New Jersey, and implementation of the Water Regulatory Adjustment Mechanism (WRAM) in California. Single tariff ratemaking, projected test years, infrastructure surcharges, retroactive effective dates, temporary, interim, and/or step rate increases, are also viewed favorably by Wall Street. These are mechanisms that minimize regulatory lag.

VIII. BEST PRACTICES TO PROMOTE CAPITAL INVESTMENT AND COST EFFECTIVE RATES

This discussion of “Best Practices” was led by Paul Foran. In beginning, he noted that the NARUC Water Committee has been very active in facilitating identification and consideration of “best practices” in the water and wastewater industries. 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 hereto for reference.

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 and reliable service; and
- Wise use/sustainable resources

The challenges of infrastructure replacement and compliance with water quality requirements under the Safe Drinking Water and Clean Water Acts are increasing. For the water and wastewater industries, the USEPA estimates the costs of meeting these challenges could approach \$1 trillion over 20 years putting upward pressure on rates for the foreseeable future. Mr. Foran notes that it is incumbent upon utilities and their regulators to identify and implement best practices to facilitate capital attraction, economies of scale, and efficient operations, if these challenges are to be met in a cost effective manner. The Forum Participants discussed a number of best 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 timely construction and capital investment in the most efficient manner possible. 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 because of the time it takes to process rate cases or burdensome commission regulatory policies. 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 Investment Charge (DSIC) for Water and Wastewater Systems

Infrastructure surcharges are some of the most successful programs used by some states to reduce regulatory lag. Eliminating the need for full general rate proceeding, the utility companies 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 Investment Charge (DSIC), the programs differ somewhat 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 was first implemented in Pennsylvania in approximately 1996. Similar programs have now been implemented in at least seven other states (Illinois, Missouri, Ohio, Delaware, Indiana, New York, and Connecticut) and the California PUC has recently approved a pilot DSIC program. In Pennsylvania, the program has operated for almost 10 years with virtually no known customer complaints. Mr. Foran notes that 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. 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 recently increased the limit to 7.5% of revenues between rate cases. At the time of a general rate case these surcharges are worked 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.

To further demonstrate that DSIC mechanisms have proven to be effective vehicles for capital investment related to replacement of aging infrastructure, Mr. Foran shared that in the last 10 years with his own company, American Water, these programs have been utilized for over \$800 million of investment. 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.”⁵

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 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

¹ (Janney Montgomery Scott, LLC; Water Industry Report; October 30, 2008)

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.

Forum Participant Commissioner John Bohn noted that California has used adjustment mechanisms liberally. Each water utility in California is on a three-year rate case filing cycle that allows certain increases each year based on projected capital and operating expenses. In addition, the California PUC allows a number of mechanisms, such as balancing accounts, memorandum accounts and tracker programs, which are 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 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 as well as reporting requirements to ensure that the utility does not exceed its allowed return. Forum Participant Hoover noted that the Pennsylvania DSIC is reflected on the customer's bill as a separate line item.

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

USEPA has established a new maximum contaminant level (MCL) for arsenic pursuant to the SDWA. This new MCL will involve huge arsenic removal costs in some states like Arizona. In response to this challenge, the Arizona Commission has authorized the Arizona Water Company to implement an Arsenic Cost Recovery Mechanism (ACRM). The ACRM would essentially allow utilities to recover gross return, depreciation, and recoverable operation and maintenance (O&M) expenses 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 Arizona Consumer Advocate. Similar to a DSIC concept, the "Best Practice" as exemplified by the arsenic issue in Arizona, would be to allow selected recovery of big ticket items that result from government mandates in order to achieve the goals described above.

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 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.

This only increases risk and the cost of capital. Mr. Foran believes that from a regulatory and public policy perspective, the touchstone for selection of a test year should be *“whether the test year will 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. The Forum Participants noted that a “best 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 challenge the utility’s choice of test year. Mr. Foran and Forum Participant Box noted that Illinois has successfully allowed the utilities a choice of test years for many years.

California’s use of a required rate case filing cycle, the 3-year rate case cycle, is a successful variation of the prospective test year. In California, utilities are allowed to project capital investment requirements over the 3-year period and make adjustments 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, the use of CWIP is a “Best Practice.” AFUDC does not provide any current cash flow to the utility to fund a major project thereby adversely affecting the company’s financial condition. It ultimately and substantially increases the cost to customers because of the accumulation of carrying charges on invested capital that are ultimately rate based when the project becomes used and useful. It can also result in rate shock. CWIP mitigates these negative impacts by allowing certain construction costs for plants that are net yet in service to be included in rate base thereby providing the utility with current revenues associated with such construction.

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

With approximately 53,000 community water systems and 16,000 wastewater systems, the United States water and wastewater industry is plagued by extreme fragmentation. As a result, the industry, as a whole, has not developed the economies of scale and efficiencies that other regulated utilities have. Furthermore, most states are plagued with a host of small technically and financially nonviable systems that will not be able to meet the infrastructure and quality challenges of the future. Therefore, some Forum Participants noted that “Best Practices” in this area should include policies that facilitate consolidation, economies of scale, technological and financial capability, and the ability to meet infrastructure requirements in the most efficient and cost-effective manner. These policies should also include mechanisms that protect legitimate ratepayer interests. According to Mr. Foran, the following should be considered.

1. Policies that Permit Recovery of and on Investments in Business Combinations that Produce Clear and Identifiable Benefits to Customers

a. Acquisition Adjustments

Mr. Foran and many of the Forum Participants support the allowance of an acquisition adjustment as a best practice. Pennsylvania explicitly allows acquisition adjustments for small and/or troubled systems, subject to certain conditions. While Mr. Foran believes such policies should be recognized as a best practice for the water industry, he also believes that such policies should be extended to include acquisitions that involve entities that may not be small or nonviable. Texas and California are examples of states where this can occur. Mr. Foran recommends that a basic “best practices” principle could be stated as follows: *“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.”*

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.

b. Single Tariff Pricing

The Forum Participants generally defined single tariff pricing as a uniform rate regardless of location or facility. It is sometimes referred to as a “postage stamp rate” or a “uniform rate.” 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 can be different from costs to serve rural customers. Yet, with single tariff pricing, 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 and address affordability concerns. Although single tariff pricing has been controversial for water utilities, many of the Forum Participants still believe that single tariff pricing should nonetheless be recognized as a best practice, especially in view of the challenges facing the industry in the future.

Mr. Foran believes that the inability to charge uniform rates can: 1) inhibit the acquisition of troubled utilities; 2) result in rate shock or unaffordable rates to customers in certain areas; and 3) significantly increase the complexity and cost of regulatory proceedings. These are risks to the detriment of ratepayers, the utility and sound public policy.

C. Rate Case Process

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

1. Mediation and Settlement Procedures

Best practices in this area would include establishment of procedures and encouragement of the use of such 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. More Extensive Use of Civil Court – like Rules of Procedure

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 what witnesses they intend to cross and how long their cross will take, justification of any inordinately long estimates, and more extensive use of prehearing conferences to narrow issues.

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

The Forum Participants discussed the need for time limits in rate case proceedings. Mr. Foran stated that time limits would help impose a desirable discipline in presenting and litigating proceedings. He believes this discipline would improve the opportunity of the utility to actually earn its allowed return, cut down the costs of rate proceedings, and facilitate capital recovery and investment. Forum Participant Coen noted that rate case decisions in Vermont must be decided within 7 ½ months of the filing date.

4. Use of Step Rates/Phase-ins

Similar to California's 3-year rate cycle concept, the use of "step" or "phase-in" rates could 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. It 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. Mr. Foran notes that New Jersey is currently considering adoption of expedited procedures and other states, Illinois for example, have already implemented some form of relief for small systems.

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 PUC 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 suggests that best 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 capital sales volumes.

One potential solution to this challenge is the concept of “decoupling” rates from sales volumes that 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.

E. Customer Assistance Programs

Despite increasing costs to replace aging infrastructure and comply with the Safe Drinking Water Act, the Clean Water Act, 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 the low income, fixed income and otherwise economically disadvantaged customers

will be the greatest. Mr. Foran believes that especially in light of the current global economic downturn, utilities and state commissions should consider the implementation or expansion of appropriate customer assistance programs.

By example and to demonstrate best practice, Mr. Foran notes that American Water has some form of customer assistance program operating in nine of their 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. The customer assistance programs include the following:

- Hardship programs: grants applied directly to the customer's 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
- Direction to other sources of assistance

The 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 the underlying goals of assistance programs should include providing targeted assistance to those that need it and not general subsidies to those that do not. 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 Pillar Approach

The 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 "Best Practices" 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, management issues and others. Many of these issues are also discussed in a USEPA report entitled "Sustaining Our Nation's Water Infrastructure" which includes additional resources and references.

Participant Reaction

The Forum Participants noted that many of the best practices have been implemented by a number of states as referenced above. The Forum Participants encouraged the ongoing partnership between NAWC, NARUC, and the consumer advocates to continue to identify additional best practices and implementation approaches.

IX. CONSERVATION AND WATER RESOURCE MANAGEMENT

Forum Participant Richard Roth led this discussion. While the presentation focused on the California source of supply issues, the Forum Participants commented that these issues are prevalent throughout the country.

A. Introduction

The combination of three years of below average rainfall and a vastly reduced amount of imported water available from the California State and Federal projects has caused San Jose Water Company (SJWC) and other California public water systems to search for additional sources of supply and to consider the imposition of expanded conservation measures.

Runoff from the Sierra Mountains' snow pack travels through the San Joaquin-Sacramento Delta and provides the source water for California's State and Federal projects. Water from these projects is, in turn, delivered to Silicon Valley and other parts of California. However, in a series of Federal Court rulings in lawsuits filed regarding the environmental impact of the Delta pumping on several species, including the Delta Smelt, Steelhead, and Salmon, the courts have severely restricted the Delta water available for distribution to water providers and agricultural users. As a result of these rulings, environmental groups are squarely pitted against agricultural interests, urban water users, supporters of development, and other users relying on the State and Federal water projects. Consequently, with the severely diminished availability of imported Delta water, water resource management and the identification of new sources of supply have taken on greater importance.

B. Water Conservation

Since the early 1990s, SJWC has partnered with its wholesale water agency, the Santa Clara Valley Water District (the District) to provide customers with a full suite of conservation services. However, the importance of water conservation efforts is elevated as new restrictions on water supplies take effect. The water conservation efforts by SJWC include:

- Free residential water audits;
- Low flow shower heads;
- Water educational outreach efforts; and
- Conservation rate structure to encourage efficient use of water

The success of SJWC's conservation efforts is measured by the total amount of water used to grow customer base. During the last ten years, the total amount of water delivered to SJWC customers has only been increasing at a rate of 0.4% per year, even though the service area population has been increasing at 2% per year.

However, according to Mr. Roth, it is unclear how much of the per capita water usage reduction is due directly to conservation efforts, and how much is due to customers' changing demand profiles. For example, in San Jose all new housing and business developments are required by local permitting ordinances to install low flow toilets and other water efficient fixtures as well as dual

pipng, so that recycled water may be employed for irrigation purposes. In addition, the majority of new housing projects in the San Jose area are predominantly infill type projects that have either little landscaping or use xeriscaping to conserve water.

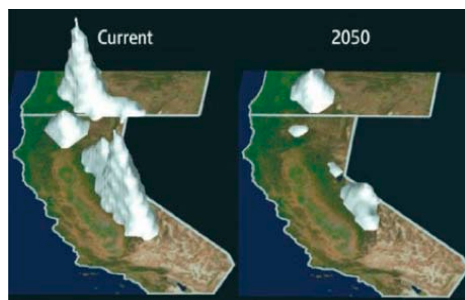
C. Water Resources Dilemma

San Jose and the Silicon Valley are facing unprecedented structural water shortages. Among the more important water resources issues are:

- San Joaquin-Sacramento Delta environmental issues and the related pumping restrictions;
- Extended periods of below average rainfall;
- A Governor mandated 20% usage reduction by 2020;
- Climate change affecting the Sierra Mountains' snow pack; and
- Continued population growth

The San Joaquin-Sacramento Delta pumping issue is a daunting problem for water agencies in California. In 2007, a Federal judge ruled that State and Federal projects' pumping of six million acre-feet of water from the Delta to the San Francisco Bay area, Central Valley, and Southern California could wipe out the endangered Delta Smelt. The court ruled that pumping, therefore, must be cut back by one-third, and that further restrictions would occur if there were a lack of precipitation during the Smelt's spawning cycle. This ruling reduces imported water deliveries to San Jose by 17% - 33% and up to 50% during some years. In a normal year, imported water represents roughly 50% of San Jose Water Company's total water supply.

Below average precipitation in 2007 and 2008, coupled with just average precipitation in 2009, has resulted in water levels in some of California's largest reservoirs remaining at only 50% of normal. This prompted California Department of Water Resources director, Lester Snow, to state that California may be at drought in modern history. Governor Schwarzenegger emergency and called for a water users. In a recent Federal water officials deliveries into the San Jose third of the total contract



Snow Pack Illustration

the start of the worst California Additionally, in February 2009, proclaimed a drought 20% usage reduction by urban announcement, State and stated that imported water area to the District will be one-amount.

It is now believed that climate change will have long-term impacts on California's water supply. Snow pack in Northern California's Sierra Mountains has been the primary source of water for much of the state, giving rise to the designation "California's reservoir." With long-term projections of continued warming, it is predicted that the Sierra Mountains' snow pack will decrease for the foreseeable future. As average temperatures warm, storms over the Sierra Mountains will bring more rain and less snow and thus presents a bleak outlook for what historically has been the main source of California's water.

As the tenth largest city in the United States, San Jose continues to grow. SJWC provides water to most of the San Jose metropolitan area. In 2000, the population served was about 890,000 people but is projected to grow to a population of about 1,274,000 by 2030. Planning for a population increase of 280,000 in the next 30 years with what appears to be permanent structural reductions in water supplies is an immediate and critically important task if we are to continue to enjoy the strong economy and quality of life we have become accustomed to in Silicon Valley. Adequate water supplies are a key element in the location of, and strategic planning for, businesses. Many large companies are now being required by their auditors to disclose the risks to their business of inadequate or extraordinarily high cost water supplies.

D. Sources of Water – Are There Any More?

SJWC contracts with the District for about half of the annual water supply needs. Groundwater makes up over 40% of SJWC water supplies, and in an average year, about 10% of water supplies are derived from surface water collected and treated by SJWC. Due to the current and future source of water limitations outlined above, SJWC has been aggressively working with local water agencies to evaluate and develop additional water supplies. The analysis indicates the most cost effective and immediately available solution is to increase the use of recycled water, in addition to continued aggressive conservation efforts.

As Silicon Valley's largest water retailer, SJWC distributes recycled water from the City of San Jose's South Bay Water Recycling facility. All of the facilities, such as pumps, distribution piping, and service lines, are owned and maintained by the City of San Jose. Recently, SJWC and the City of San Jose began pursuing ways in which future new recycled water distribution and transmission piping, as well as recycled water facilities, could be owned and operated by SJWC.

Obstacles to SJWC's expanded involvement in, and use of, recycled water are laws and regulations that impact the transfer and use of facilities funded by government bonds or other public financing. This limits SJWC's ability to work cooperatively and creatively to integrate systems, expand customer base, and use recycled water effectively. Additionally, the California Public Utilities Commission must be convinced that although in the short term the recycled water rates may not be adequate to fully fund the required investment in the recycled water facilities, this water is a valuable, drought resistant new source of supply that offsets other potable water needs. Additionally, recycled water is projected to be less costly than imported water supplies in the long term. Private investment and partnerships with regional authorities to develop and integrate recycled water is the fastest and best way in which to replace diminishing imported water, recharge underground aquifers, and address the long-term needs of the region. Mr. Roth believes that recycled water is a key element of a cost effective and environmentally responsible solution to the region's long-term water supply needs.

E. Operating at the Lowest Cost – Smart Business

Mr. Roth opined that a water utility can manage the increased cost of new water supplies by using the best new technologies and business practices.

The current economic environment requires that companies minimize costs and maximize production from existing investments. A thorough review of controllable costs is the key

component to value maximization. One key cost saving measure at SJWC is implementation of equipment and systems that take advantage of “time of use” electrical rates. SJWC’s pump stations have established accounts that optimize “time of use” rates, maximizing energy use during off-peak rate hours with remaining usage during partial-peak hours. SJWC has programmed its Supervisory Control and Data Acquisition system to take advantage of this by ensuring that all pumping costs are minimized whenever possible by pumping during off-peak hours.

SJWC has also installed photovoltaic panels on one of its reservoirs and is seeking CPUC approval to expand the use of these panels at additional sites. With a projected seven to ten-year payback period, these renewable energy projects become even more attractive considering the forecasted increase of future energy costs. SJWC has also replaced most lighting fixtures with new low energy fluorescent bulbs and is currently researching the installation of hydropower turbines to generate additional green power. It is the water and energy nexus at the production level where deployment of green technology not only provides environmental benefits but also minimizes overall energy costs to allow effective management of water production costs.

Participant Reaction

Mr. Roth believes that as water supply challenges continue, a shift in the traditional way of doing business for all water utilities must occur. The demand profile in many urban areas is already changing, partially due to water conservation and green efforts, but mostly due to smaller landscape footprints as housing densities increase.

Water Resource Management includes successful proliferation of adequate sources of water while managing the water utility as a successful business to minimize rate increases and continue to attract the capital needed to deal with water supply issues. All of the Forum Participants commented that the future will bring greater challenges than we have faced before. Those challenges include:

- How much water do customers need, and how much are they willing to conserve?
- How will water utilities manage scarce supplies to meet consumer demand?
- How will we manage expectations and communicate effectively with customers about the rising costs of water and water service?
- Will rising water costs bring greater acceptance of indirect potable water reuse? and
- Will public agencies welcome partnerships with private water companies in the development and implementation of new sources of water?

X. 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 that regulators can use to have 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. For instance, if a water system serving 100 customers processes a rate increase at a cost of just \$20,000, the per customer cost is \$200. In many jurisdictions, it is not uncommon for a very small system to have rate case costs of over \$300 per customer. 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. Rate case costs of over \$100 per customer do not benefit anyone as the likely “savings” to the customer by the careful review built into most rate case procedures are not likely to reduce the ultimate rate by more than the rate case costs even when amortized. As a comparison, if a company that served 50,000 customers were to have rate case expenses of \$1,000,000, the per customer cost would be \$20.

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, even small utilities can attract the necessary capital in order to remain viable. Forum Participant Hoover added that costs are mitigated if consumer advocates are able to speak directly to the company as opposed to the consultants.

2. Single tariff pricing

Often the improvements that are necessary to bring a nonviable system into regulatory compliance or to provide reliable service would result in a rate increase which would be prohibitive if applied against the small, nonviable system by itself. This can make acquisition by a larger water company difficult. Many of the Forum Participants believe that single tariff pricing is an effective tool to spread these costs over a wider customer base. Single tariff pricing has been effectively

used 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 or “uniform rates” for commonly owned water systems (sometimes restricted to geographical areas in a state) and others are considering rate applications that would allow for single tariff pricing 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 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 to 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 is a possible method 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. When the acquisition of a troubled utility is encouraged or ordered by a state utility 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. Infrastructure System Replacement Charge-like device for capital needs necessary to bring nonviable systems into compliance

Connecticut has recently adopted the Water Infrastructure and Conservation Adjustment (WICA) to provide for recovery of capital investments to replace aging infrastructure, outside of the confines of a general rate proceeding. This is similar to legislation in California, Missouri, Pennsylvania, Illinois, Delaware, Indiana, New York, and Ohio. 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 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 nonviable 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 the Purchaser from Violations Caused By Former Owner

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.

1. Reducing the 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, 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 nonviable 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 nonviable 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 “nonviable”. 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 nonviable systems. He states that 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 nonviable 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

Mr. Monie reiterated the point that rate cases are expensive to the company and to the consumer even with a staff assisted rate case. He observed that in some jurisdictions, regulators and consumer advocates assign water cases to the least experienced staff. In addition to the issue of having a large learning curve, many Forum Participants noted that another problem with less experienced staff is the greater likelihood of litigation as opposed to settlements.

For examples of best practices, the Forum participants pointed to North Carolina where a streamlined process includes not having a hearing if there is no customer protest. In Indiana, the *ex parte* rules are waived in some cases for small system facilities. As examples on ongoing issues preventing states from adequately addressing small system viability, Forum Participant South Carolina Commissioner Butch Howard notes that his Commission does not have authority to order takeovers. Forum Participant New Mexico Commissioner David King notes that water rights in his state, New Mexico, complicate this issue even further.

Finally, Mr. Monie reminded the Forum Participants that small systems are profitable and there are great owners of small systems. Generally, there are two models: 1) the entrepreneurial model, where the owner makes most of his revenue from affiliate services; and 2) the consulting engineer model, where the engineer serves as operator of the utility pursuant to a contract.

XI. STATE DRINKING WATER PROGRAMS – A STATE ADMINISTRATORS’ PERSPECTIVE

NAWC has a long-standing collaborative relationship with the state drinking water administrators (ASDWA). Each year, a member of ASDWA participates in the NAWC Water Forum. This year, Karen Irion, from the Louisiana Department of Public Health, represented ASDWA and presented this portion of the discussion.

While drinking water programs run complex, multi-faceted programs, public health protection remains the primary focus of the state drinking water administrators. State administrators help public water systems understand their responsibilities and support them in carrying out those responsibilities so they can succeed at delivering safe water. Ms. Irion notes that relationships with organizations like NAWC are critical to mutual success.

A. Funds for Drinking Water Infrastructure in Stimulus Bill: Opportunity & Challenge

The American Reinvestment and Recovery Act is a historic opportunity; but it is not without a number of challenges for both states and water systems. The opportunities include:

- An unprecedented amount of funding in one lump sum on top of existing base program funds;
- The ability to offer very generous loan terms and grants to borrowers; and
- The heavy investment in infrastructure is evidence of widespread recognition of the importance of drinking water infrastructure.

The challenges are equally important. States will be moving a lot of money quickly with more or less the same staff. States will need to surface and resolve issues, together with EPA, very quickly. As Mr. Shanaghan also noted earlier in this Report, there are special challenges associated with the “new” items added to this part of the State Revolving Fund programs – recall the 20% “green” projects requirement, mandatory 50% loan subsidization requirement, Davis-Bacon wage requirements, and the Buy-American provisions.

B. Implementing Recently Promulgated Drinking Water Rules

Many of the recently promulgated rules are risk-based (i.e., in contrast to simple MCL-type rules). Ms. Irion views this positively because the rules tailor the requirements of the utility to the severity of the problem. However, Ms. Irion notes that this also means a lot more work for states in ensuring the rules are implemented. States also grapple with simultaneous compliance issues. As the industry and the administrators saw in the lead in D.C. crisis, control requirements for various contaminants (e.g., lead vs. DBPs) present extremely challenging technical issues.

1. LT 2/Stage 2

Some states have been heavily involved in pre-primacy activities while others are preparing for post-primacy requirements. A number of states have simply been unable to take on pre-primacy requirements due to their daunting workloads (e.g., Region V & X states). Overall, Ms. Irion

believes that implementation has gone reasonably well. Some of workloads are yet to hit with full force, especially those impacting small systems.

2. Ground Water Rule

Many states have submitted primacy applications or are now preparing primacy applications. However, a number of states have requested the allowable two-year primacy extension. In many states, the rule is likely to have relatively minimal impact because those states require disinfection of all systems. In other states, the rule is expected to have a major impact. There are many decision points and actions associated with the rule. Ms. Irion shared her concern about whether EPA's data system will have all of the needed elements.

3. Lead & Copper Rule Short Term Revisions

States will shortly begin (or have begun) working with utilities to implement the various rule "fixes." States are in general agreement with this suite of regulatory changes and believe these provisions bring some needed clarity to some of the provisions of the rule.

C. State Perspectives on Rule Development and Regulatory Tools

1. Regulatory Determinations from CCL

State administrators support the basic CCL process and believe that science and data, rather than political considerations, should drive regulatory determinations from the CCL. State administrators also believe those decisions need to be made expeditiously. In the absence of timely decisions, each state is left to "fend for itself."

a. Perchlorate. States have been somewhat divided on whether or not an MCL for perchlorate is needed. States such as New Jersey, Massachusetts, and California have moved forward with their own regulatory levels.

b. Other Contaminants. Other emerging contaminants such as pharmaceuticals and personal care products as well as PFOAs will need to be the subject of near-term analysis and decisions.

2. 6-Year Review of Rules

States have supported the 6-year review process by voluntarily providing occurrence data and recommending implementation changes. EPA will likely soon propose a handful of the most pressing implementation changes along with whatever decisions they make in terms of whether or not the regulatory limits should change.

a. Total Coliform-Distribution System Rule

States actively participated in the Federal Advisory Committee and signed the Agreement in Principle (AIP) on September 18, 2008. Most states favor the idea of doing away with a chronic MCL violation for Total Coliform and agree that it makes sense to have TC positive findings trigger

action. The devil will be in the details. States hope to be able to weigh in on translation of AIP to propose rule language.

D. Water System Capacity Development/Small System Focus

At the national program level, states and ASDWA have been active in providing input on an array of guidance and training documents designed to assist small systems. However, EPA's national small systems team has been decimated by departures and the pace of guidance documents has slowed down recently. State administrators work to ensure adequate capacity. State administrators work to build small system T, M, & F capacity. State administrators include a small system focus in their implementation training and provide direct technical assistance. Ms. Irion points to Louisiana as an example where they offer free community system training through the Federal Operator Certification Grant Contract. Moreover, they work with the Louisiana Rural Water Association to provide very small system training and they have two circuit riders to provide hands-on assistance in addition to AWOP and staff technical assistance.

State administrators continue to imbed security into their every day programs (e.g., sanitary surveys, capacity development). The long-term success of drinking water security will be to transform it from a "boutique" program add-on to part of our day-to-day work. In January 2008, ASDWA held a State Security Coordinators Workshop in New Orleans. The good work going on in states in this regard was impressive. The state administrators will also have a sector interdependency workshop for states in October 2009 in Portland.

States believe in the importance of an "all-hazards" approach that emphasizes resiliency and recovery in addition to prevention and detection. In Louisiana for example, threats from natural disasters are far more likely to impact systems than either terrorism or vandalism. Other likely threat impacts include backflows into systems and system contamination through cross connections. Therefore, in Louisiana, all systems are required to have an alternate source of power, to practice cross connection control and backflow prevention. A good, regularly scheduled flushing program also is strongly encouraged. Having a seat on the state's Emergency Operations Center is vital to providing for the response needs of water systems. Coordinating WARN volunteer activities, State EOC activities and planning with DHS activities is also vital. There is not much understanding at the Federal level that a water system is not a single plant, but a collection of facilities joined by a network.

State drinking water programs will continue to play a vital communication link between the Federal government, other state agencies, and local entities. The state drinking water administrators actively participate in the Government Sector Coordinating Council (our representatives are from Virginia and Texas) as well as in joint GCC and Water Sector Coordinating Council meetings. They are active in helping update the Sector Specific Plan, where needed, as well as the recently issued security metrics (developed by the CIPAC Metrics workgroup). They are also active in the two recently formed CIPAC workgroups (strategy alignment and response/recovery). States also have representation on the WaterISAC Board of Directors, and utility-based WARNs.

E. Source Water Assessment and Protection

1. Partnerships and Collaboration

ASDWA and state drinking water programs continue to work with partners at all levels to develop collaborative strategies to leverage scarce resources and move from assessment to protection. For most states, source water protection is a “voluntary” program that is in addition to everything else they do. State drinking water programs typically do not have all of the authorities they need (especially, those state drinking water programs housed within health departments, such as Louisiana). Thus, it is all about leveraging and collaboration. Some examples of ASDWA's activities include:

- Participation in the Source Water Collaborative (which NAWC is part of);
- Holding a joint ASDWA/GWPC Workshop (October 2008 in Colorado Springs);
- Sharing of effective approaches, tools, and guidance;
- Participating in an On-Site Waste Disposal MOU Workgroup;
- Participating in an EPA/State Nutrient Innovations Task Force; and
- Working with Trust for Public Lands and Smart Growth Leadership Institute to implement pilot projects in New Hampshire, Maine, and Ohio in a Land-Water Alignment Pilot.

2. Climate Change

In recent years, water quantity issues have come increasingly to the fore. ASDWA recently produced a “white paper” on what states are currently doing in this area. This document also directed states to additional resources and information to support their water conservation and water efficiency efforts. ASDWA is planning a workshop the last week in September 2009 in Denver for states on these issues.

F. Drinking Water Data Management

State administrators have largely completed the process of transitioning to the modernized data flow. Ms. Irion notes that this has been a major effort for states. State administrators have also been active in helping ensure accurate and reliable data with better measures of “data quality.” States worked with EPA to develop a Data Reliability Improvement Plan but it’s an ongoing (and expensive) challenge. ASDWA’s goal is to ensure high quality drinking water data for all program areas that use it. The state administrators will be discussing this topic at a state-EPA Data Management Users Conference in Salt Lake City in May 2009.

G. Limited Resources

State budgets are expected to continue to be extremely tight. At best, the outlook for the future is for level or declining funding. Set-asides from stimulus funds must be used in support of specific infrastructure projects and will not help defray state drinking water program budget issues. She believes that the 2010 budget will include significantly greater levels for states. The degree to which resources are limited varies widely from state to state, so the choices necessarily vary accordingly. States across the country are using the following “coping” strategies:

- Taking greater percentages of SRF Set-Asides.
- Increasing fees or instituting new fee systems.
- Seeking more state general funds.

Until and unless the PWSS program is funded at levels commensurate with the magnitude of the job, hard choices will be made at the state level. States will continue to set public health tasks as the highest priority.

Participant Reaction

State drinking water administrators consider the public water systems to be the consumer and partner. Therefore, accountability and transparency to each other (e.g. PWSs, primacy agencies, EPA, third-party service providers) are critical. Ms. Irion notes that state drinking water administrators must keep their attention principally on outcomes (e.g. water safe to drink) rather than outputs (e.g. number of widgets produced).

XII. FUTURE ISSUES

As the ARRA is in its first year of implementation, the Forum Participants expressed a desire to have a briefing in 2010 about the distribution of federal stimulus dollars and the corresponding impacts. USEPA should be able to provide such a briefing.

The Forum Participants also suggest that more attention be given to source of supply issues. Forum Participant Sandy Jones suggested that these issues should also be brought to NARUC's attention during a general education session. Similarly, some participants suggested that reuse be a topic next year.

Forum Participants expressed an interest in discussing the "energy-water" relationship as it relates to cost impact and climate change issues. Generally, the interest recognizes how the two industries have become dependent upon one another.

Finally, the new commissioners participating in the Forum suggested a topic to cover the elements of a rate case and more about decoupling. It was suggested that the Eastern and Western Utility Rate Schools, hosted by the NARUC Committee on Water, presented opportunities to explore rate making in more detail.

XIII. NARUC RESOLUTION SUPPORTING CONSIDERATION OF REGULATORY POLICIES DEEMED AS “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) passthrough 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 adversely 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

