

# Mayors Meet in Chicago to Discuss the Nation's Water Problems

By Rich Anderson

The Conference of Mayors' Urban Water Council convened the annual Urban Water Summit in Chicago on September 10-12. Trenton (NJ) Mayor Douglas H. Palmer and Sugar Land (TX) Mayor David G. Wallace hosted Mayors and their staff at the two-and-a-half day conference to discuss the water problems faced by many cities across the nation, and to hear about the steps they are taking to deal with those problems.

## Chicago's Water Agenda

Chicago Mayor Richard M. Daley, joined by his Special Assistant Joe Deal, presented Chicago's Water Agenda. Daley told the participants that 95 percent of the United State's fresh water supplies resides in the Great Lakes. He said that many Americans suffer the mistaken assumption that water is unlimited and always safe to drink, adding that the role of the mayor is to provide leadership on water issues, and that cities must be the example for water stewardship.

Some of the things Chicago does to protect their water resources are to divert salt, oil and gasoline from city streets into sewer collectors instead of the Chicago River. The city helps industry and commercial establishments audit their water usage and develop conservation measures to save water. The mayor also described the work of the Great Lakes Cities Initiative (aided by a grant from the Joyce Foundation) to get surrounding cities involved with water resource stewardship.

## Protecting and Providing Water

Mayor Palmer and Stephen Gorden of American Water presented a discussion of what is expected of the mayor and senior water and sewer staff in protecting and providing water in cities. Gorden described his experience running the city of Detroit's water department for six years. He said that water departments are often given the charge to develop drinking water and wastewater systems with little funding and less help. They have to learn to deal with all of the associated problems with system development, operation and maintenance, and then deal with the public, federal and state reg-

ulators and the press. Palmer emphasized that the complexity of solving water problems leads many cities to consider tapping the expertise of the private sector in public-private partnerships.

## Aging Infrastructure

Wallace led a panel focused on rehabilitating aging water infrastructure. Alex Margevicius, Assistant Commissioner of Water from Cleveland, talked about the city's problems with water main breaks and flooding streets that also appeared on the evening news. He stated that there were no good records of the underground system of pipes and how old they were. Fragmented records indicated that some of them dated back to the 1880s. Margevicius conducted a scientific study to identify the pipe systems by date and construction material. One of the important findings he presented was that it is not necessarily the oldest pipes that break the most frequently, it is pipes that were manufactured with flaws in design or materials that are less reliable. His study provided essential information for

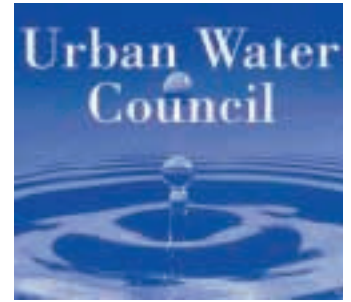
other mayors to more easily assess the state-of-the-technology of underground pipes and programs to replace them that are more cost-efficient.

Bob Yoshimura of Parsons presented a template for program management that helps city decision-makers become more effective in assessing, maintaining and replacing capital infrastructure. Yoshimura indicated that the failure to employ modern program management techniques usually results in greater expenses after system failures.

Jim Hanlon, EPA's Director of Wastewater added that water infrastructure investment in the U.S. is the lowest of all the developed nations. He said that in order to stay in place with the current water infrastructure consumers must spend 5 percent more each year for the next 20 years. Director Hanlon stated that the EPA estimates that over \$500 billion worth of investment in water infrastructure will be needed over the next 20 years just to comply with the Clean Water Act.

## Water System Security

Palmer and Wallace moderated a panel that discussed water system vulnerability. Nick Damato of EPA Region 5's Homeland Security office talked about the grant program in 2002 that provided money to 464 water systems to conduct vulnerability assessments. He said that the result of the assessments led to development of security action plans that served to help water



systems harden their defenses against terrorist assaults, and provide emergency response plans for use if an attack occurs. John Sullivan, Chief Engineer, Boston Water and Sewer and President of the Association of Metropolitan Water Agencies discussed AMWA's role as the Water ISAC (a federally chartered designation to disseminate information on water system vulnerability and security). Mr. Sullivan indicated that many water system managers have come to rely on the Water ISAC as a strategic resource. He said that water managers could get reliable and up-to-the-minute information by participating with the system via computer.

Greg Merrill, Director of State Government for the Chlorine Chemistry Council talked about some myths concerning the role of chlorine usage in water system and system security. He

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**Chicago Mayor Richard M. Daley discusses Chicago's water agenda and mayor's leadership on water issues.**



**Environmental Committee Chair Augusta (GA) Mayor Bob Young discusses inter-basin transfer issues.**



**Conference President Hempstead (NY) Mayor James A. Garner presides a legislative briefing session at the annual Urban Water Summit.**

## USEPA Assistant Administrator for Office of Water Addresses Mayors

By Rich Anderson

G. Tracy Mehan, III, Assistant Administrator for the EPA Office of Water, was the keynote speaker at the U.S. Conference of Mayors 2003 Urban Water Summit held in Chicago, September 10-12. Mr. Mehan began by praising Chicago Mayor Daley and the City's Water Agenda. Mehan recognized Chicago's efforts to conserve residential and industrial water use. He also recognized the difficulty the city faces in placing new water meters in over 350,000 homes.

The Assistant Administrator gave a historical perspective on EPA's work in the water area. Pointing out that EPA is driven by Congressional mandates, Mr. Mehan referred to EPA's water mission as the National Water Program. Past efforts centered on identifying and imposing technology-based effluent guidelines as an "end-of-pipe" approach to protecting the nation's waterways. The new thrust, according to Mehan, is focused on water quality based standards that consider the capacity of waterways and the risks to humans and sensitive ecosystems.

Mehan indicated that about 40 percent of the nation's waters are currently not meeting expectations. A large part of the problem is non-point

sources that are not regulated as well as point sources (industry and municipal discharges). EPA has increased its focus on non-point sources. Mehan suggested that, "The National Water Program is playing without the ball", inferring that not enough is yet known about non-point source water pollution and how to best control it. He stated that non-point sources are not limited to roads and agricultural land uses, they also include deposition of air emissions. The President's Clear Skies Initiative, for example, would dramatically reduce mercury emissions from combustion sources, and this would reduce airborne mercury that deposits in streams, lakes and estuaries.

Mehan identified four major themes he is pursuing in his tenure to better achieve success in the National Water Program. First, the EPA will place greater emphasis on information as a policy driver, where currently there is a lack of needed data to make better decisions. Second, a comprehensive watershed management approach is required to ensure that decisions affecting one part of the watershed are complimentary with decisions affecting another part of the watershed. Third, more attention must be paid to water infrastructure. The U.S. devotes 0.05 percent of household income to water



Left to right, Trenton (NJ) Mayor Douglas Palmer, Office of Water USEPA Assistant Administrator Tracy Mehan III, and Sugar Land (TX) Mayor David Wallace.

infrastructure. This is the lowest investment among developed nations. Even if Congress gave more money to cities to invest in infrastructure, the cities would still have to improve asset management to avoid water supply shortages or water quality problems.

Trenton (NJ) Mayor Douglas H. Palmer presented Mehan with a letter of commendation for the EPA's adoption of the new Water Quality Trading Policy. The Conference of Mayors adopted a resolution at the Annual

Meeting in Denver to support the policy. The trading policy provides incentives for cities to invest in water quality protection measures in the watershed that are cheaper but more effective than investing in water pollution controls at other points in the watershed. Palmer stated that this is the kind of flexible and intelligent approach to watershed management that will help cities provide adequate and safe water now and in the future.

## Pending Water Legislation Discussed at UWC Meeting

Conference President Hempstead (NY) Mayor James A. Garner moderated a briefing on September 12 for Mayors and Urban Water Council meeting participants on the various bills before Congress affecting the financing of water and wastewater infrastructure projects, security issues, and water quality. Giving presentations were Jon Pawlow, Counsel for the House of Representatives' Water Resources & Environment Subcommittee, Judy Sheahan of the Conference staff, and Andy Shea of Poseidon Resources.

Pawlow presented four bills that the Water Resources Subcommittee has been working on and moving forward through the legislative process. They include the Wastewater Treatment Works Security Act of 2003 (H.R.

866), the Water Quality Financing Act of 2003 (H.R. 1560), the Twenty-First Century Water Commission Act of 2003 (H.R. 135), and the Water Resources Development Act of 2003 or WRDA (H.R. 2557).

Pawlow outlined the major components of each of the bills including the Wastewater Treatment Act that has been designed to help communities ensure wastewater treatment plants and sewers are protected from intentional disruption and terrorist acts by authorizing \$200 million for vulnerability assessments and security enhancements, \$15 million for technical assistance on security for small wastewater utilities and \$5 million for the further development and refine-

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photo caption

# Mayor Ethridge Discusses Nonpoint Source Pollution

By Brett Rosenberg

The Waco (TX) metropolitan area, including McLennan County, is home to over 213,000 people and 41,000 dairy cows. The high proportion of dairy cows to residents presents a unique challenge for regional cooperation to ensure high quality water supply without harming the economic vitality of the cattle industry. Waco Mayor Linda Ethridge and Commissioner Kathleen Hartnett White of the Texas Commission on Environmental Quality (TCEQ) presented regional strategies to achieve environmental goals related to animal wastes and non-point sources of pollution at the Conference of Mayors 2003 Urban Water Summit.

Lake Waco, the city's primary water supply, is a precious asset for an otherwise arid region. The Bosque River flows into the lake and introduces agricultural and storm water runoff from the area dairy farms. Consequently, Lake Waco receives large quantities of pathogens posing health risks to area residents, and nitrogen and phosphorus loads that encourage rapid algae growth. When the algae dies, a chemical substance known as geosmin coats water filters and creates odor and taste problems. The decomposition also depletes oxygen levels.

Waco implemented several strategies to alleviate the phosphorous pol-

lution from dairy farms. The initial strategy was to apprise citizens of the challenges facing the Lake and open lines of communication to educate them about the problem. Waco also raised the Lake level by seven feet at a cost of \$36 million to provide additional storage capacity and improve habitats. Over \$70 million was spent on numerous improvements to water treatment and storage infrastructure. However, these efforts, the construction of a wetlands area and a state-subsidized composting program did not hasten progress in meeting water quality standards.

It soon became apparent that solving the animal waste related water quality problem was beyond local authority. With the help of White and several members of the Texas Congressional delegation, Ethridge was able to form a coalition with the U.S. Department of Agriculture, the Texas Farm Bureau and other stakeholders to address the issue.

White explained that Waco's water quality was the shared responsibility between state and local governments. While TCEQ was initially slow to act, Waco's immediate needs and efforts hastened state action. Several encouraging outcomes ensued including progress on the Total Maximum Daily Loads (TMDL) for phosphorous and pathogens; a \$7 million EPA grant for composting projects; incentives for CAFO self audits; and a state law iden-



Photo by Wendy L. Wilkinson

**Waco (TX) Mayor Linda Ethridge describes Waco's strategies for addressing nonpoint pollution and confined animal feeding operations.**



Photo by Wendy L. Wilkinson

**Texas Commission on Environmental Quality Commissioner Kathleen Hartnett White addresses state efforts at improving regional water quality.**

tifying sole source impairment zones, such as Lake Waco.

White was asked whether TCEQ has the regulatory and technological means to ensure a margin of safety in managing animal waste lagoons to meet the current 25-year/24-hour storm event standard. She responded that the regulatory approach includes enforcing the standard by addressing the lagoons' contents coupled with managing land applications in a rational manner to reduce runoff. Ethridge noted that a margin of safety in lagoon design and operation is key to protecting Waco's water supply and indicat-

ed that updating the standard to reflect a 10-day/24-hour storm event would be more protective.

Given the difficulties of ensuring a clean, healthy water supply while working to minimize economic harm to an industry vital to the region, Waco and its collaborators have shown remarkable progress in addressing such complex issues. Their efforts, as White expressed, indicate that regional watershed approaches to water quality management are a vital means of realizing environmental goals.

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said that public concern over chlorine storage and transportation has focused on the potential for explosions in a terrorist attack. Mr. Merrill emphasized that chlorine shipped in liquid form does not "blow-up". He also said that since the early 1900s, records have indicated that chlorine explosions and spills, and transportation accidents were rare and unexpected. He further emphasized that more than 90 percent of the nations' water supply systems continue to use chlorination as the preferred disinfection treatment method. He said those water systems that use ozonation and other treatment techniques still use some chlorination in the process, particularly in distribu-

tion pipes to ensure public safety. Mr. Merrill also pointed out that chlorine is the single most preferred treatment agent to protect against anthrax in water supplies.

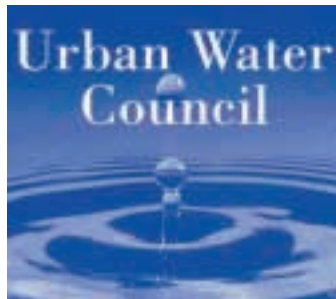
### Milwaukee Metro's Best Practices

Greenfield (WI) Mayor Tim Seider was joined by Kevin Shafer, Executive Director of the Metropolitan Milwaukee Water System (MMWS) to update the Mayors on the current practices of the MMWS. Shafer and the mayor pointed out that Milwaukee has invested 2-3 billion dollars in water infrastructure over the last 30 years. He also stated that the MMWS has entered into public-private partnerships to achieve cost-savings to ratepayers. Shafer informed the may-

ors that the system continues to successfully recycle sewage sludge as Milorganite, a high-quality fertilizer distributed nationally for use by homeowners.

### Garner's Sustainable Development Focus

Conference President Hempstead (NY) Mayor James A. Garner led a briefing session on the final day of the Summit. Garner talked about his visits to foreign countries and his participation in the U.N. Environmental Summit held in Johannesburg, South Africa last year. Garner stated that everywhere he went water issues were at the top of everyone's priority list. Garner has stewarded his sustainable cities initiative at the Conference of Mayors, and he said that water quality and



access to clean water are essential components of sustainability.

Mayors Palmer and Wallace thanked all the mayors and other presenters for their participation. They indicated that the Urban Water Council would announce the meeting schedule for next year this December.

## NOAA Chief Kelly Outlines Water Challenges

By Brett Rosenberg

The U.S. Conference of Mayors Urban Water Council was fortunate to have as a keynote speaker during the 2003 Urban Water Summit in Chicago Brigadier General (USAF Retired) John J. Kelly, Deputy Under Secretary of the National Oceanic and Atmospheric Administration (NOAA). Gen. Kelly, who is also an assistant administrator for the NOAA National Weather Service (NWS), presented "From the Oceans to the Tap: NOAA Responds to Water Resources Challenges." He provided the Urban Water Council with a unique perspective on much of the science behind global water quality and quantity issues.

General Kelly described NOAA as an agency within the U.S. Department of Commerce with a staff of over 12,000 people and a budget upwards of \$3 billion. The NWS, a major department within NOAA, is responsi-

ble for fusing cutting edge meteorological forecasting technology, over 75,000 citizen weather observers and the American public's demand for accurate weather information. General Kelly emphasized that the Earth's climate and weather compose extremely complex systems in which, for example, western Pacific weather can affect snowfall in Washington (DC). The job of the NWS is to harmonize, organize, and coordinate data collection and analysis to effectively describe how weather patterns occur so that communities and citizens can prepare for extreme weather in a timely manner.

The National Weather Service and NOAA are also working on tools for communities to use to manage a number of natural resource issues. General Kelly identified drought prediction models that are being used to predict water levels in lakes, reservoirs and rivers, providing a useful means of



Left to right, Waco (TX) Mayor Linda Ethridge, Environmental Committee Chairman Augusta Mayor Bob Young, Deputy Under Secretary of Commerce, NOAA John Kelly, and Urban Water Council Co-Chair Sugar Land (TX) Mayor David Wallace.

addressing municipal water supply concerns in advance of shortages. Similar models are used to predict forest fire threats in arid parts of the US so that local and regional officials can mitigate the dangers of wildfires before

they occur. He also noted that NWS data could be used to inform policy decisions, in particular those regarding water availability and accessibility and predicting regional air pollution and atmospheric deposition.

## Mayor Daley Presents Chicago's Water Agenda

By Cynthia Zhao

On September 10 at the Urban Water Summit in Chicago, Chicago Mayor Richard M. Daley and Joe Deal, Special Assistant to the Mayor presented Chicago's Water Agenda 2003, mapping out how Chicago will use water more wisely and increase protection for Lake Michigan and the Chicago River. The Agenda guides the city's water-related activities. It calls for multi-departmental coordination and an understanding that the water resources work as a complex and inter-connected system. The agenda defines a comprehensive approach to the city's water issues.

Four actions will be taken by the city to protect the Michigan Lake and the Chicago River. They are: water conservation, improving water quality, managing stormwater and educating the public and surrounding communities about lake stewardship.

**Conservation:** By repairing and upgrading water infrastructure, the city of Chicago has dramatically reduced use, despite population increases. The city has carried out sev-

eral conservation projects which include installing custodian caps on fire hydrants, retrofitting drinking fountains, conducting water efficiency audits for large industrial water users; developing a comprehensive metering system aimed at promoting responsible water use.

**Water Quality:** Joe Deal pointed out three areas of focus to strengthen water quality: drinking water, recreational use and habitat water. Contrary to the traditional perception that the discharge from an industrial process is the main source of water pollution, many smaller and more numerous problems such as invasive species, stormwater, and air pollution have become new challenges to the city's clean water efforts.

**Stormwater Management:** Joe Deal stated that there are two key measures the city has taken to manage stormwater, one is building deep tunnels; the other is creating green infrastructure opportunities. He stated "The city encourages large new developments to incorporate green infrastructure into their design." Green infrastructure includes: Rooftop Gardens,

Permeable Alleys and Parking Structures, Rain Gardens, Open Space and Wetlands, use of Cisterns and Rain Barrels. One successful example is the Ford Motor Company. It has incorporated green infrastructure into site designs at their Chicago facilities. Chicago also has developed a guide to stormwater "Best Practices" that have been implemented in the area.

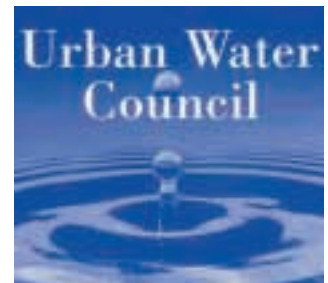
**Education:** Recognizing that long term solutions to managing water resources will require public education, a program has been implemented to ensure that citizens understand the importance of the waterways, their role in protecting water resources, and changing their behavior to help improve stewardship. Several programs for families and schools have been developed with useful tools for educating people such as "Issues to Actions" brochures, municipal cable videos and internet tools.

Joe Deal stressed that they have worked closely with mass media, area schools, and have established partnership with groups like Urban Water Council of U.S. Conference of Mayors, the Lake Michigan Federation

and Friends of the Chicago River to get their message out effectively.

Recently, the city of Chicago began inviting mayors from around the Great Lakes to "organize their efforts and concerns into a strategy for protecting and restoring the entire ecosystem as cities on the Great Lakes have common concerns related to the Lakes, such as controlling invasive species, deciding issues of water allocation and sharing the resource with far-away regions".

Deal reiterated that the key to the successful implementation of the 2003 Chicago Water Agenda is the coordination and partnership between public and private sector and each resident of Chicago.



# Dan Evans Separates Facts from Fictions on Water and Wastewater Public-Private Partnership

By Cynthia Zhao

Don Evans, President of OMI and Chairman of the Water Partnership Council, discussed water and wastewater public-private partnerships at the Chicago Urban Water Summit. Evans identified the advantages of partnership approaches, and he addressed some common criticisms and false perceptions about partnerships.

A public-private partnership is a contractual arrangement between a public entity and a private company for the purpose of delivering the best possible services at the lowest possible cost to ratepayers. It recognizes that both the public sector and the private sector have certain advantages relative to the other in the performance of specific tasks. By allowing each sector to do what it does best public services and infrastructure can be provided in the most economically efficient manner.

One of the false perceptions some have about partnerships is that the public sector somehow loses control of their water infrastructure and its services to the public. Evans maintains that this is not the case. Rather than losing control, the public partner maintains control and enhances services by managing the implementa-

tion of the partnership rather than engaging in day-to-day operations. An essential element of a partnership is that the contractual arrangement usually specifies the responsibilities of the private operator. Many of these responsibilities (e.g., service provision, compliance with environmental regulations, maintenance of the facility, etc.) are shifted from the public to the private sector. The role of the public sector is to oversee the implementation of those responsibilities by the private operator.

Evans indicated that in 2002 private firms operated more than 2,400 publicly owned water and wastewater facilities for nearly 2,000 municipal clients. He suggested that partnerships are on the up swing because local government has learned how to better manage them and save money at the same time.

Another false perception about partnerships is that they always adversely affect employees. Evans challenged that notion. He stated that private operation usually results in better educational and training opportunities for employees, which translates into more and better opportunities for professional growth and advancement. Moreover, he stated, private

operators prefer to hire employees locally or keep existing employees on board. He said that the experience and skills of existing employees is invaluable because they are the best source of knowledge and tend to be motivated employees.

Evans also addressed sensitive environmental concerns. He stressed that one of the significant element in securing a private firm to get new contracts is its ability to maintain a safe and clean environment and keep the water and wastewater systems in compliance with regulations at all times. It is private sector's responsibility to work closely with environmental stakeholders and regulators to ensure public facilities meet specific performance standards. There is a clear financial incentive since the contractual arrangements often shift the responsibility for compliance and associated penalties and fines onto the private operator.

In conclusion Evans reiterated that the partnership and collaboration



**Don Evans, President of OMI and chairman of the Water Partnership council discusses the advantages and false perceptions about water and wastewater public-private partnership.**

between the private sector and public sector offers both partners the opportunity to achieve their respective goals better, faster, more efficiently and at lower cost.

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ment of vulnerability self-assessment methodologies and tools for wastewater utilities.

The Water Quality Financing Act's goal is to close the estimated \$10 billion wastewater infrastructure annual funding gap by increasing investment in wastewater infrastructure and

reducing the cost of constructing and maintaining that infrastructure. The bill authorizes \$20 billion in Federal grants over 5 years to capitalize Clean Water State Revolving Loan Funds (SRFs). The bill also extends repayment periods to up to 30 years and encourages alternative methods of financing projects, and planning for capital replacement needs.

Sheahan outlined the Conference of Mayor's legislative priorities including the latest efforts to prevent MTBE, a fuel-additive intended to improve air quality but which has also been found to contaminate water supplies from being granted liability immunity in the Energy Legislation. It is feared, Sheahan said, that if the provision is includ-

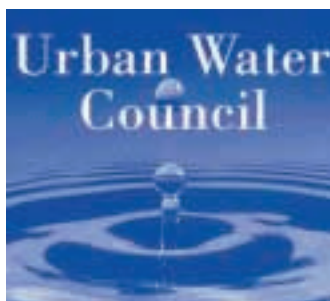


**Andy Shea**

ed in the legislation, the cost of clean up will be entirely borne by local governments. The legislation is currently being negotiated in conference.

Shea announced the introduction of a bill by Representative Kevin Brady (TX) that would permit the issuance of tax-exempt bonds for certain air and water pollution facilities and to provide that the state volume cap not apply for these types of bonds. The bill, the Clean Air and Water Investment and Infrastructure Security Act of 2003 (HR 3042), has been a priority issue for the Conference of Mayors and the Urban Water Council. These bonds, more commonly known as private activity bonds, could potentially provide additional monetary resources to improve water and wastewater infrastructure.

For copies of the presentations, please visit our website at [www.usmayors.org/uscm/urbanwater](http://www.usmayors.org/uscm/urbanwater).



# Honeywell Presents Performance Contracting Concept

## Cost-Effective Method for Local Governments to Achieve Water Conservation

By Rich Anderson and Cynthia Zhao

Stephen Smith and Ron Blagus of Honeywell, a new sponsor of the Urban Water Council's Water Development Advisory Board, addressed Mayors at the Chicago Summit about performance contracting approaches to water conservation. Honeywell is a company with over 1 billion dollars of performance contracting experience, and a long history as a municipal service provider. They discussed how this option could help cities conserve water and save money or possibly increase revenues at the same time.

Smith indicated that performance contracting has been around since mid 1980s and has gradually been accepted by federal and local governments. It provides a good solution to many utility construction problems. Performance contracting is a way for cities to implement programs or projects that have direct benefits in the short- and long-term. Some of the general advantages of choosing performance contracting include: reduced overall project costs; reduced overall time to complete a project; improved communication; ease of project management; and, reduction or elimination of risk by more clearly focusing on the project elements.

Smith and Blagus suggested that one of the biggest attractions to performance contracting is that it can be a "self-funded solution for infrastructure and operational improvements." One example the speakers presented involved a \$3.2 million installation of modern water meters. The new meters increased annual water billing revenues by \$480,000, and saved the

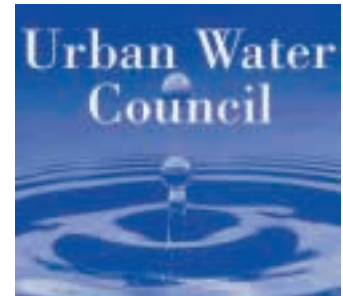


Stephen Smith and Ron Blagus of Honeywell describe how performance contracting approaches could help cities conserve water and save money.

city \$120,000 annually in operational savings. Hence, new revenues and cost avoidance added up to a \$600,000 annual value. Annual maintenance costs were calculated as \$100,000 and annual debt maintenance was \$400,000, for a total of \$500,000. Thus, there was a net gain of \$100,000 to the city that installed the new meters – the project was "self-funded" and provided additional annual income.

Honeywell makes head-on comparisons of performance contracting to traditional bid specification approaches, and the results favor performance contracting. Seven critical factors can be compared between the performance contracting and traditional bid approaches, (see Table 1). The comparison makes the point that the advantages of reduced project costs, reduced project completion time, ease of project management, and reduction or elimination of risk by more clearly focusing on the project elements can be achieved via performance contracting.

CostSmith and Blagus discussed how Honeywell's "total solution" is tailored to a community's needs, using innovative technologies and delivering



a wide range of services beyond the traditional scope of meter services. Honeywell also provides usage analysis and leak detection and plant improvements services to add value to their customers. They concluded that performance contracting is "a partnership to effectively utilize technology to optimize customer service and delivery capabilities, a self-funded solution for infrastructure and operational improvements and a guarantee to deliver results."

**Table 1:  
Comparison of Performance Contracting and Traditional Bid Project Approaches**

Key Factor	Bid/Spec	Performance Contracting
Financial Source	Budget Expense	Self Funding
Contract Terms	Only during install and warranty	5-10 years
Up Front Fees	Yes	No
Guarantee	No	Yes
Change Orders	Yes	No
Implementation	Multiple vendors	Complete Turnkey
Value Added Services	Not Typical	Tailored to your needs

## Chicago Water Summit Presents Best Practices in Public-Private Partnerships

By Rich Anderson

The U.S. Conference of Mayors' Urban Water Council held its Urban Water Summit in Chicago on September 10-12, 2003. The Summit is an annual event where the mayors traditionally hear Best Practices case studies on water partnerships and discuss other issues such as watershed management, water conservation and water supply. This year, eight Best Practices case studies were presented. This article summarizes some of those case studies. The remaining Best Practices are described elsewhere in this publication.

### Water Supply Planning:

Augusta Mayor Bob Young presented information concerning contentious arguments between local and state governments over access to water. Known as "interbasin transfers", attempts by one state to enter into agreement for use of water from another state are fraught with complexity and political intrigue. Florida wanted to protect the Apalachicola Bay oyster industry by transferring water from the Flint River Basin water supplies used by Georgia for drinking water, hydropower, agriculture and recreation. Georgia objected to the proposed transfer and the state of Florida sued both Georgia and Alabama. Similarly, Atlanta tried to transfer 12 million gallons per day from the Savannah basin to the Chattahoochee basin to support growth in the Metropolitan Atlanta region. Such a transfer would benefit growth in the Atlanta region but impede growth in the Savannah basin region.

Young emphasized that a best practice is to develop and implement sustainable development considering current and future water supply needs. It is inequitable to penalize regions that implement sustainable growth by allowing their water resources to be transferred to areas that do little to control growth. He said that federal leadership is needed in this area of water supply controversy, especially when waters bordering one or more states are involved.

### Stockton, CA:

Stockton Councilman Gary Giovanetti presented information describing the city's recent approval to proceed with a major new Design-Build-Operate (DBO) public-private partner-

ship that would rehabilitate parts of the water and wastewater facilities. The city has 38,000 water accounts and purchases treated water or pumps groundwater. The city has 76,000 wastewater accounts, and is responsible for stormwater services in a 56-square-mile area.

The city was faced with new permit requirements that necessitated major wastewater treatment plant upgrades. Need for upgrade to meet new permit requirements. The mayor and city council wanted to consider alternatives to the traditional design-bid-build process to: avoid cost overruns; reduce cost and risk; and, offset the need for a large rate increase.

The two key city goals were to reduce the risk for utility performance, and reduce the risk for environmental compliance and business conditions. Cost savings for capital investment and operations, provision of adequate water supplies and protection of all current employees were specific goals the city had in mind.

Jim Binder from Alternative Resources, Inc. was retained by Stockton to help develop a model service agreement that bidders would propose against. Current city water and wastewater programs were used as a benchmark to determine if an outsourcing approach could save money, and by how much.

Eric Petersen from Hawkins, Delafield & Wood was retained to help the city determine what risks could be shifted from the public sector to the private operator. Mr. Petersen identified areas that the city would maintain control: ownership of assets and revenue streams, setting user rates, capital planning, and bond financing (tax-exempt). The city also wanted to include a clause for convenience termination (set at \$1 million). Mr. Petersen described areas where the private operator would assume risk: environmental performance (air emissions, effluent and residuals management), odor control, finished water quality, liability up to \$100 million, etc.

Gary Miller, Executive Vice President of OMI who teamed with Thames Water on the project, presented the private sector perspective of the partnership. The team agreed with the city that there was a pressing need to make the capital improvement, and there was a "champion" among the local elected officials who would sustain the difficult effort to win over the



Left to right, Gary Giovanetti, Councilman of Stockton (CA), Jim Bender from Alternative Resources Inc., Eric Petersen from Hawkins, Delafield & Wood, and Gary Miller from OMI present a new DBO public-private partnership in the city of Stockton.

other city leaders on the concept of savings through a DBO.

The contract is valued at \$600 million over 20-year term; and capital improvements amounted to \$57 million. At the end of the day, the project would avoid a 25% rate hike to rate payers. Instead, the improvements could be made with only a 7% rate increase. Capital and operating savings were valued at \$21 million.

Overall, the partnership approach will provide \$175 million in savings over 20 years—approximately \$2,800 per household. The partnerships will provide budget predictability, something that could not be realized by choosing the traditional financing and construction approach. There will be a single point of responsibility for the project development that translates into faster project delivery. Finally, there will be significant transfer of risk for compliance from the city to the private operators.

### Indianapolis, Indiana, Water Supply:

James Keene, Vice President of US Filter, presented information on a major and innovative public-private partnership with the city of Indianapo-



Agusuta (GA) Mayor Bob Young discusses "Interbasin transfers" issues.

lis to assure clean water supply for the future. In 1870 the city franchised the right for a water company to supply clean water but retained a legal right to reacquire the water supply facility. By the year 2000 the Indianapolis Water Company, privately owned, had revenues of \$96 million, served a population of 1.1 million, had an average daily production of 140 mil-

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lion gallons per day (GPD) of finished water, employed 468 employees, and experienced numerous complaints about bad taste and odors.

Mayor Bart Peterson, his Administration, and the City-County Council were concerned about what would happen to the water works when they found out that the parent company of the Indianapolis Water Company was required by federal law to divest the asset due to a merger. The mayor wanted to ensure that water rates, supply volumes, water quality and service response would not be upset, and local control of water related decisions would be maintained. These concerns prompted the mayor and the Council to exercise the right to repurchase the water works.

As a result of a competitive bid process, the city entered into a public-private partnership with US Filter that was unique because it contained an incentive based contract to operate and improve the water system. Eighty percent of the fee involved in the partnership is comprised of fixed and variable costs associated with managing and maintaining the waterworks. The remaining 20 percent is in the form of an incentive fee. This innovative approach involves objective and measurable criteria that relate to specific areas of improvement that the city and county have identified. For example, some of the criteria identified include: six performance metrics related to customer service, (e.g., providing 24/7 telephone access to customers, responding to calls within 30 seconds, reduction of call abandonment,

responding to emergency situations within one hour, etc.).

Another incentive category is water quality and other environmental measures, (e.g., meeting primary and secondary water quality standards, reducing taste and odor problems, etc.). Other measurable criteria include: capital asset replacement cycles; capital investment adjustments; and, planned (preventive and predictive) maintenance measures.

**City of Gary, Indiana, Wastewater Treatment**

Gary Mayor Scott King was instrumental in developing a competitive procurement for a public-private partnership to operate and improve the Gary Sanitation District (GSD) wastewater treatment facility. The wastewater system processes 60 mgd, serves 180,000 customers, and is composed of 390 miles of sewer lines with 28 pump stations. In 1998 the GSD entered into a contract with White River Environmental Partners (i.e., United Water Services, Suez Lyonnaise des Eaux and IWC Resources Corporation, referred to as "WREP") for a 10-year partnership. United Water Services was responsible for operating the wastewater plant and pumps, and GSD was responsible for customer service activities.

GSD Board President Otho Lyles explained that the District was facing an EPA consent decree that would have imposed financial liabilities and onerous requirements for the District. The wastewater system was in distress and the District needed outside assistance in defining infrastructure needs. The consent decree involved adding advanced wastewater treatment capa-



photo caption

bilities that involved multi-stage treatment. The collection system needed a new management approach, and the industrial pretreatment program required revisions.

The GSD looked to the private sector for assistance in meeting the consent decree requirements. The District, however, did not want to simply turn over the facility to a private operator. There were concerns about the 144 GSD employees that ran the plant, and who were also Gary residents. The city and District negotiated a partnership structure that allowed all of the employees to remain in their jobs with guaranteed benefits and compensation comparable to or better than what the city offered.

The District also had expectations about protection of capital investment; developing a maintenance management system; maximizing treatment capacity of the plant; coordinating rehabilitation of the plant; and, they wanted to do all this while achieving cost savings from private operation of the plant.

The partnership arrangement provided a suitable vehicle to accomplish many of these goals and expectations. The overall plan was successful in reducing the requirements, and ultimately the cost, of meeting the consent decree. The partnership implemented a performance based management system that resulted in improved asset management and annual savings of

\$2 million. Savings over the life of the partnership are expected to reach \$20 million. WREP agreed to pay the city and up-front \$10 million concession fee. The city agreed to commit \$5 million from the concession fee toward capital improvements recommended by WREP.



**Gary sanitation District Board President Otho Lyles III, and the West Region President JC Goldman of United Water explain how a public-private partnership help the city of Gary (IN) rehabilitate its water and wastewater facilities.**



**James Keene, Vice President of USFilter describes their unique water public-private partnership with the city of Indianapolis.**

# Focus on Regionalization: A New Approach to Regional Partnerships in Water Supply and Wastewater Treatment

By Brett Rosenberg

Given the challenges brought by aging utility infrastructure, rapidly changing business and regulatory environments, and rising utility costs, regional municipal partnerships often make sense when shared water resources are involved. During the Urban Water Council's 2003 Fall Summit in Chicago, Suffolk (VA) Mayor E. Dana Dickens and Clayton Walton of Williams Mullen presented a compelling discussion about their experiences with regional partnerships, citing the basis for creating partnerships, strategies for improving them, and promising examples of regional cooperation.

Walton noted several reasons for communities within a particular region to pool their resources to address water issues. As capital costs rise, many communities are finding that their utilities are already financially leveraged to their maximum extent, yet existing user rates are often far below operational costs. Additionally, market imbalances exist in many cases. For example, older cities may own utility systems and control the rates and suburban expansion may inequitably drive rates upward. Most importantly, water supplies are often regional in nature, with multiple jurisdictions within a watershed sharing the same supply. Some communities, projecting rapid growth, are faced with depleting water supplies located within their borders, and that forces

them to look outside the watershed to meet long-term demand. This supply/demand problem could lead to attempts by some communities to seek inter-basin transfers.

Local government goals of increasing service, promoting modernization and coordinating cost savings may best be satisfied through regional approaches to water treatment systems. This new mode of water supply economy and efficiency is a departure from the traditional practice. Walton suggests that cities should consider regional partnerships as alternatives to older ways of doing business to provide additional and innovative strategies, a broad range of options, and custom fit solutions. These solutions, approached through partnerships, authorities or consortia can yield numerous public benefits, including: economies of scale and cost sharing; higher capacity utilization; coordinated development and use of infrastructure; coordinated management of regional water resources; and the opportunity to restructure debt and capitalization arrangements. Such coordination, instead of competition, could help communities in the region better plan for the future. Walton's explained that his experience indicates that regulators have reacted favorably to regional partnerships.

Dickens discussed a real-world example of regional water supply partnership. He described the city of Suffolk's partnership with Isle of Wight

**"It just made sense to work together on joint resources rather than fight over them."**

**- Suffolk, Virginia Mayor Dana Dickens**

County forming the Western Tidewater Water Authority. Suffolk, one of many communities in the Hampton Roads region of southeastern Virginia, has experienced rapid development and population growth over the past 10 years. While Suffolk's water supply exists entirely within its own borders, the city shares it with Isle of Wight County and other cities in the region. As demand pressures became apparent, the Tidewater Water Authority developed a comprehensive, long-range planning process geared toward creating and updating interconnecting supply infrastructure to share capacity within the region. Hundreds of millions of dollars worth of water infrastructure and future investment is at stake. Dickens noted that, "It just made sense to work together on joint resources rather than fight over them."

Several concerns developed after the Western Tidewater Water Authority was established. Many of the participating individuals expressed fear of losing sovereignty and control of local land use authority as well as loss of ownership, control and operation of existing water systems and infrastructure. Concerns were expressed reflecting a reluctance to cede control of management and protection of water resources. By engaging in on-going discussions, the Western Tidewater Water Authority has been able to allay most of these concerns. One of the more immediate results to come out of these discussions was an agreement to construct a pipeline between the water supplies of the cities of Suffolk and Norfolk. Although both water supplies are with-

in Suffolk's political boundaries, they recharge at different rates; consequently, when one city is experiencing draught conditions, the other may find its water supply adequate for its immediate needs. Through the partnership, Suffolk and Norfolk built the pipeline between the two water supply reservoirs to augment each other's water supply to address drought situations and supply shortages. Historically, planning and building similar projects takes two to three years; this one took less than 12 months.

Walton described several guiding principals for developing and maintaining regional partnerships and

**See NEW REGIONALISM  
on page 10**



**Suffolk (VA) Mayor E. Dana Dickens describes the positive results his city realized from partnering with other regional communities.**



**Clayton Walton of the firm Williams Mullen presents some of the benefits cities can achieve as a result of a regional partnership.**

# Augusta Mayor Young and Parsons Corporation Describe Public-Private Partnership Project on Watershed Public Outreach Program

By Cynthia Zhao

Augusta (GA) Mayor Bob Young and Teresa Crisp of Parsons Corporation introduced a new form of public-private partnership involving public education. In contrast to the traditional public-private partnership, which usually deals with water supply and treatment, this innovative partnership addresses on watershed protection with an impressive array of successful public education programs.

Education has long been recognized as one of the important and effective tools of watershed management and source water protection programs. Crisp discussed how Parsons and the Augusta Utility Department work together to help protect the city's creeks and streams. In order to meet various State regulatory requirements for watershed assessment and to ensure a safe water supply the city of Augusta created a cost-effective program to educate the community.

The education program includes the following: partnerships with watershed stakeholders, school education programs, newsletters, web-based information, public presentations, brochures, media coverage, and informational mail-outs. The guiding principle for information dissemination has been set clearly from the very beginning: utilize existing programs and partnering with local organizations. This, according to Crisp, "has resulted

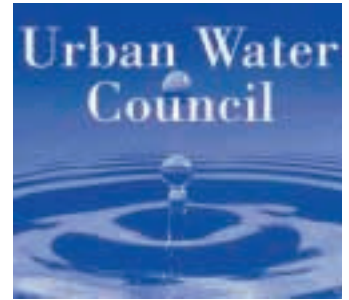


**Augusta (GA) Mayor Bob Young and Teresa Crisp of Parsons Corporation introduces Augusta Watershed Public Outreach Program.**

in Augusta being able to make efficient use of existing and new resources by leveraging people and funds for educational activities instead of using those resources to reinvent the wheel. Young opined "It is the added value that the partners bring into the partnership that makes it worthwhile."

The partnership approach is truly efficient because instead of communi-

cating with one group at a time, the city formed a Watershed Roundtable composed of key focus groups dedicated to water quality issues. The Roundtable has proven to be very effective in listening to different viewpoints and generating consensus on issues. It also provides a unified voice in espousing policies and actions to protect the watershed. Several part-



nership projects (such as green space protection, stream clean-ups, etc) have been developed through the Roundtable.

Another successful approach to educating the public about watershed protection is targeting city's schools. The Roundtable participants recognize that students can be key players in affecting attitudes and actions of adults with regard to watershed protection. Focusing on student education and tailoring different programs to various targeted groups, has resulted in award-winning programs such as "enviroscape". This is a model demonstration project involving water treatment plant tours for area schools.

These student education programs offer teachers throughout the region the opportunity to involve their students in projects to protect, enhance, analyze and provide solutions to water resource problems in their community. They address responsible citizenship through knowledge of issues like water quality monitoring, identifying potential pollutant sources, delineating watersheds and wetlands, and their role in healthy ecosystems.

Young stated that the Augusta Watershed Education program has gained tremendous success and been well received by the community.

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addressing some of the concerns that arise. Each phase of a partnership's lifetime must remain cooperative and consensual at all times, with equitable cost-sharing among its members. Each partner should retain ownership and operation of its existing water system,

infrastructure and sources of supply unless the partners agree to a change in concert with the partnership. Actions by the partnership should not conflict with local members' land use authorities. These activities are easier said than done, but if partner cities bear in mind that their actions result in net regional benefits such partnerships can create a smorgasbord of alternatives for meeting economic and environmental goals.



