Managing One Water

The Clean Water America Alliance's National Dialogue Report

Clean Water America Alliance

It's Time to Look at America's Water in a Different Light.

Challenges to our nation's ability to provide clean and safe water for future generations abound. The need to consider approaches that encourage watershed planning, focus on sustainability, and embrace the concept of green cities is critical to our clean water future. Clearly, the silo thinking of the past has kept clean water, drinking water, stormwater and water reuse interests segregated – and while it has driven progress, it has not encouraged comprehensive thinking, planning and management of our waters on the transformational scale now necessary.

An integrated national water policy – that balances our commitment to social, environmental, and economic needs – is essential to guide the development of our Nation's environmental statutes and inform water-related decision-making. Both policy makers and the public must grow to understand that water is a finite resource that must be managed in a sustainable way to allow for continued and unrestricted access. Environmental sustainability must be advanced, water use must be efficient, and clean water must be available for human and ecosystem needs.

Clean Water America Alliance
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Acknowledgements

The Clean Water America Alliance believes that we, as a nation, cannot move toward national water sustainability until water is viewed and managed holistically and through an integrated mindset focused on the future. That idea was the genesis of our third national dialogue aptly titled “Managing One Water”. This third and final dialogue continued where March’s “What’s Water Worth?” event left off. This report summarizes our findings.

Taking place in Los Angeles on September 28 & 29, discussions focused on breaking down the silos within the clean water community to better integrate drinking water, wastewater, groundwater, reused water, and stormwater; improving stakeholder relations; and advancing regional water sustainability. It brought together the nation’s leading water policy experts and innovators to integrate water management at the local and regional level.

The national dialogue series brought the best and brightest together from around the country to determine the practical steps needed to ensure clean and safe water for future generations. The Alliance continues to address the major issues of a changing water landscape. The non-profit educational organization was formed to change the water paradigm – to one in which water is viewed, managed and valued as one resource – with a focus on sustainability and green cities.

The success of this event is the result of the hard work of many individuals – too many to list individually. We would like to thank the panelists, participants, and observers that joined us for the dialogue and ensured its success – as well as our Board Members and Founding Members. Special thanks are also due our guest Jim Thebault and host Adel Hagekhalil.

I would especially like to thank the Chair, Ben Grumbles; Facilitator, LaJuana Wilcher; Tom Sliter for his contributions; and the staff of the Alliance for their assistance in organizing this highly successful dialogue and preparing this report. Thank you for all your hard work.

Finally, the national dialogue would not have been possible without the vision and leadership of our dedicated and committed sponsors: MWH Americas, AECOM, Siemens, Black & Veatch, CDM, Veolia Water, GE Power & Water, HDR, Malcolm Pirnie, United Water, City of Los Angeles Sanitation Department of Public Works, the Metropolitan Water District of Southern California, and Tetra Tech.

I hope you view this report with an eye toward a sustainable future – one in which water is managed as one.

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November, 2010

Foreword

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Water is a valuable and renewable, but fixed resource that has no substitute. It plays a unique role in our lives. It serves to sustain our environment, our economy, and life as we know it. But our world is changing and our system of managing water, while adequate for the past, must change with it to ensure that we can continue to provide for this most basic of human needs well into the future.

Our colleagues in the water community have done a worthy job of managing this resource. Surface water quality is dramatically better today than it was 30 years ago. Drinking water is much safer, too. We have a new appreciation for the critical benefits provided by the environment to our systems and vice versa. Water conservation, recycling, and reuse programs are being implemented in more and more communities. And both green infrastructure and low impact development are important and growing facets of our profession.

Yet too often we operate as if water is defined by *our* labels – stormwater, drinking water, wastewater, and so on. In fact, the more we learn about water and its interdependencies with our life and our economy, the more we appreciate that it is, in fact, 'One Water', which must be appropriately valued and holistically managed for the many purposes it serves.

That is the mission of the Clean Water America Alliance and it is the primary inspiration for the series of national dialogues that the Alliance has sponsored over the past year. By bringing together more than 100 experts and leaders from the water community and beyond, in three national dialogues, the Alliance has sought to expand the discussion about the future course of our nation's water policy and to help chart a new path forward.

Just as war is too important to be left to the generals, so too is water policy too important to be left only to water professionals and practitioners. The broader the dialogue, the better the resulting policy will be – and the more sustainable it will be. This fact is critically important at a time of constrained budgets, political divisions, economic challenges, and risk-averse leaders.

The Alliance is proposing a *new* way of thinking, a *new* way of interacting, and a *new* way of achieving our shared goals. Water policy in this country is at a crossroad. Without decisive, timely action, we will fail the American people and our nation will be ill-prepared for the water challenges which lie ahead. In good conscious we cannot let that happen.

This dialogue, like the two before it, did not strive for consensus. Even so, there was much common ground uncovered, positions that will form the basis of the Alliance's *National Water Policy Framework* and will result in a sustainable water policy worthy of our nation, its people, and its future.

Introduction

The Clean Water America Alliance recently convened *Managing One Water*, the third in a series of national dialogues focusing on one of the most urgent and serious challenges we face – how to secure our water future so that economic prosperity and environmental vitality can continue to benefit us and future generations. *Managing One Water* brought together over 40 of the best thinkers and doers in the water community in Los Angeles in September 2010 to continue the Alliance's exploration of how to achieve a more comprehensive, integrated approach to managing our water resources.

As in previous dialogues, the goal of Managing One Water was to involve the broad water stakeholder community in identifying the areas of greatest concern and specify the concrete actions that can be taken to achieve meaningful collaboration among often disparate water disciplines. By bringing together the experts and leaders in the drinking water, wastewater, stormwater, water reuse, and water management fields with their counterparts in the agricultural, industrial, environmental, finance and planning areas, the dialogue tapped the expertise and experience of a broad range of knowledgeable individuals all of whom are joined in the pursuit of common ground and practical solutions.

The first national dialogue – *The Need for an Integrated National Water Policy* – resulted in a call for a national water policy based on sustainability and looked into the details of how such a policy would address such pressing issues as the energy/water nexus, water quality and water quantity, green infrastructure, and watersheds. The second dialogue – *What's Water Worth?* – examined the economic, environmental and social consequences of continuing to significantly undervalue this precious asset. The reports summarizing both dialogues are available at *www.cleanwateramericaalliance.org*.

The wisdom and insights gained through these three national dialogues have laid a strong foundation for the Alliance's efforts. And while each dialogue had a unique focus, the ensuing discussions revealed many elements common to all three. Among these were the urgency of the problem, the need to shift the water paradigm from a culture of conflict to one of collaboration, and the importance of bringing more voices and viewpoints into the discussion. The following pages will elaborate on some of these common issues and the more specific discussion related to *Managing One Water*.

Today's Water Management

Water is one of our most precious natural resources. It is vital to life, our economic well-being and to the advancement of our standard of living. Throughout our history, we generally managed our water in a manner that provided for most of the demands made upon it. Mistakes were occasionally made, but they usually were overcome by the application of technology and by the sheer the abundance of the water supply.

Today, however, water shortages are occurring in more areas of the country and there is much less flexibility in the system as a whole. The demands from a growing population, healthy ecosystems, energy supply and food production, combined with the apparent shifting of climate patterns are beginning to stress some of our water systems to the brink. All these trends suggest that more severe challenges lay ahead. Adding to the difficult future is the legacy of an aging infrastructure, with some systems using pipes and equipment many years past their design lifetime, and an institutional and regulatory framework better suited to dealing with individual problems than interdependent systems.

What's Working

In pondering our water future, we must remember and learn from the past. Knowing what has been successful can help to provide a more certain course ahead. And building on the work of those who have gone before brings their accumulated wisdom to those who will build the future.

Looking at the management of our water resources today, participants in the dialogue believed that there were several areas that were basically on the right path. Better, more efficient water treatment technology is one such success story. While sometimes forced by regulatory requirements, technological advances are often driven by the marketplace. This is especially true in the recycling and water reuse fields. University research and public-private technology partnerships are also more common now than they were 30 years ago.

Another accomplishment is the safety of our drinking water. Periodic outbreaks of acute water-borne illnesses – a major challenge in the early 20th Century – are a distant memory for most Americans. And while there remains some concern about newer contaminants, removal technologies, compliance and costs, the public health benefits derived from drinking water systems have been a significant achievement.

Improvements in surface water quality all across the country are another result of the current system. Since the passage of the Clean Water Act, more rivers, lakes and estuaries have been rehabilitated and returned to conditions suitable for fishing and swimming. And although the progress by some measures is incomplete or stalling, even those water bodies that have fallen short of the current standards have largely avoided further degradation, even as increasing population and economic activity have put more pressure on them. Participants also thought that greater participation of Wall Street and private investors in water systems marks an advance in the maturity of the current system

and a visible demonstration that water is valuable. The increasing use of asset management and other financial management tools to optimize system operation are positive signs that need to be encouraged.

Finally, there was the belief that the public recognizes the importance of water quality, as judged by its appearance at or near the top of many polls on the environment. But, at the same time, the public seems to have not yet embraced the practical steps needed to achieve that goal, perhaps because those steps are unclear, sometimes conflicting or expensive, and often not presented in a clear, understandable manner.

What's Not Working

Most participants felt that a major cause of the growing dysfunction in water policy was the result of dealing with individual water problems one at a time, separate from other issues. Much of this is exemplified by the relatively narrow focus of Federal and State laws, by congressional and legislative committees with disparate jurisdictions, by agencies with a single purpose or mandate, and by funding that is limited to narrow categories of eligibilities. Some of this problem also has arisen through the actions of individual States and courts, such as varying State water laws, which complicates integration of a national policy.

"we are beginning to understand that not only are many water problems inter-connected, but they are also connected to critical issues beyond water"

A piecemeal approach to water management may have seemed logical at a time when the problems appeared unrelated. However, with the benefit of better science, we are beginning to understand that not only are many water problems inter-connected, but they are also connected to critical issues beyond water – such as species and habitat conservation, energy supply, air pollution deposition, urban development, transportation, housing, and the list goes on. Furthermore, while a one-size-fits-all system may have seemed appropriate when problems were viewed through a national lens, it seems counterproductive now given the reality of many often significantly different regional and local problems. To continue making progress, we will have to stretch our thinking and look at things in a new way.

Yet even as science is documenting these inter-connections, we lack even the most basic nationwide institutional and regulatory frameworks to integrate the needed policies. For example, watersheds may be scientifically valid, and even preferable boundaries for water management, but they remain a questionable basis for a legal and regulatory structure. We are left to rely on informal networks and accumulations of localized approaches in attempting to fashion a more comprehensive approach. Furthermore, States continue to actively guard their jurisdictions over waters within their boundaries.

Another contributor to the dysfunction is inconsistent funding. Many of the plans and facilities necessary to implement an integrated water plan require years to fulfill. Yet the vagaries of Federal funding and its impacts on States and communities often frustrate these projects and greatly

complicate their management.

These complications and dysfunction also detract from a clear, consistent message to the public, rate payers and taxpayers about the necessity for, and benefits of, specific water plans or projects. Often, too little public participation is sought on major water issues. No wonder then that public comprehension of the need for better coordination of water and related plans is inconsistent, at best. Some local efforts to increase public participation and public understanding of specific projects – such as Los Angeles's recent Proposition "O" bond issue and Seattle's experience with rate changes – have succeeded. However, with few exceptions (such as California's recent comprehensive water reform legislation), there is almost no broader public discussion, let alone comprehension, of the more holistic water issues, such as the critical role water plays in job creation, economic growth, and national security.

Efforts to enhance public discussion of water issues are often impeded by the lack of a common metric for measuring water usage. In addition, there is often an absence of even the most basic information about the nature of water sources in a watershed. There was optimism, however, that the recently enacted Secure Water Act will provide the stimulus – and money – to Federal, State and local agencies to begin compiling this critical information.

Participants also discussed the current regulatory reliance on prescriptive rules at the expense of performance measures. Since the advancement of scientific information seems to be outpacing regulatory developments, many felt the current system was behind the 'power curve' and that without a major shift in focus, even the application of more resources would result in lower performance.

Finally, there was the worry that even if the "perfect" integrated water policy were to appear tomorrow, the capacity of existing institutions to manage the transition to and implementation of that policy would be wanting. Many governmental, utility, and other organizations, especially those operating with constrained budgets and staffing, would be hard pressed to manage a paradigm shift of such magnitude. That is all the more reason to make transitional considerations a key element of any new water policy and possibly to look to other organizations' experience in how to manage such large-scale transitions.

Tomorrow's One Water

The concept of 'One Water' flows from the developing scientific evidence that the current narrow definition of water policy, and our divisions of it into separate management silos, do not adequately reflect the real world. For example, stormwater is often a valuable water supply source. Yet in many locations, it is treated and managed as if it were a waste or a problem. Similarly, water reuse and groundwater recharge are often afterthoughts. And environmental flows to sustain necessary habitats are frequently shoe-horned into water policy through the back door of the Endangered Species Act, rather than as a primary objective of water policy.

No rational organization could hope to build a successful strategy for tomorrow by applying patchwork fixes to the policy of the last century. A more thorough-going and comprehensive reform is required. But we haven't yet made that commitment. Today's system tries to cope by applying more exemptions, exceptions, and additions to fundamentally inadequate laws. In short, the tail is wagging the dog more than ever.

"by targeting water policies that are sustainable over the long term, we can also encompass activities in related fields . . . which have a direct effect on water resources"

Participants in the dialogue had many views of what 'One Water' meant to them. But several common themes emerged from the discussions. One such theme was the use of sustainability – that is, utilizing resources today without compromising the ability of future generations to use the same resource – as a guiding principle. As mentioned in earlier dialogues, sustainability is becoming the organizing principle of the future in many areas. By targeting water policies that are sustainable over the long term, we can also encompass activities in related fields, such as housing, transportation, energy and agriculture which have a direct effect on water resources, and vice versa.

If sustainability becomes the organizing theory, then stewardship and collaboration are the operating principles. According to many participants, stewardship and collaboration are key organizational and interpersonal lessons from the past. The complexity of problems and the diversity of solutions for tomorrow's water issues will demand a more open approach, with a broader range of skills and talents brought to bear. Bringing more stakeholders into the discussion is also recognition that solutions to local problems must involve the local community.

Such an approach also is likely to meet with broader acceptance by the public and water professionals than one based on command-and-control or one-size-fits-all. 'One Water' is neither a bottom-up nor a top-down model. It must combine the best of national (though not necessarily federal) policy, guidance and funding with local/regional implementation and cost sharing, such as through a multi-stakeholder watershed policy approach. Similar comments were prominent in earlier

dialogues, as well.

Nearly all of the participants believed that reforming our current water policy was an 'urgent' task – yet few believed that policy makers or the general public currently share that belief. Some of this disconnect was ascribed to the lack of information and public understanding, some to the enormity of the task, and maybe a little to self-interest in the status quo on the part of some stakeholders. Furthermore, as might be expected, those in arid areas were thought to have a greater sense of urgency than those in water-rich areas. But with changing patterns in long-term climate, today's water-rich area may soon become tomorrow's arid location.

Finally, many participants felt that the vocabulary of water policy needs to be reworked to make it more relevant to the public and more understandable to the non-water professionals who will be involved in its development. They also believed that emphasizing more positive terms such as 'security' instead of 'scarcity' and making explicit the links between water and everyday activities, such as energy, food and jobs would foster greater appreciation for water's ubiquitous role in our lives and well being and for the actions needed to sustain it.

Achieving One Water

Many ideas to achieve a 'One Water' policy were explored during the dialogue. What evolved was a two-track discussion which elicited suggestions for both short-term improvements to our current water policy, as well as more fundamental, far-reaching proposals to build the case for a 'One Water' policy.

Near Term Improvements

There was near unanimous agreement that one of the earliest changes should be to better align or coordinate the many existing Federal programs to comport with a 'One Water' philosophy. Options for achieving this step could include guidance or directives from the President's Council on Environmental Quality or the Office of Management and Budget. This alignment could start with research and funding programs, including the state revolving fund (SRF) and grants from the Departments of Agriculture and Interior. Progress also could be made by better coordinating the various agencies which have some purview over water regulation. And State and Federal agencies could temporarily swap personnel to encourage sharing of information. While this change would not alter the underlying statutes, it could help foster sound working relationships among different governmental entities and expose key personnel to different approaches.

Other changes proposed by the participants that may not necessarily require significant changes in law include developing national water monitoring protocols for use by Federal, State and local organizations. SRF money should be available on the condition that it include an integrated water resource management plans or similar 'One Water' elements.

Already there is some hope for optimism that these kinds of measures may have a positive effect. Currently, the Environmental Protection Agency, the Department of Transportation and the Department of Housing and Urban Development are coordinating their activities relating to sustainable communities. Similar efforts in the water arena could be pursued.

Furthermore, establishing a National Water Census, a goal recommended in previous dialogues, has been signed into law as part of the Secure Water Act. Funding for such basic information gathering at the Federal, State and local levels should be a priority.

Another idea to improve the situation in the near term might be to 'green light' projects that incorporate 'no regrets' policies – that is, policies that have only positive outcomes. For example, certain water conservation measures, or some green infrastructure projects may have 'no regret' features that could earn a project expedited review through the approval process. On the other hand, projects featuring more controversial investments, such as reliance on energy intensive equipment or processes, for example, might merit a 'red light', signaling the need for more intensive review.

Building the Case

In today's world, leadership and innovation increasingly come from the rank and file. Whether it is business, entertainment, the arts or government, new ideas, new approaches, and new developments frequently originate with those closest to the problem. Thus, any shift to a 'One Water' policy must involve those on the ground – people with actual knowledge of both the problems and the range of possible solutions. This is a major shift from the way today's policy is developed. And while it may be difficult at first to manage such a broadened network of players, the result will be both better, more practical ideas, and perhaps just as important, greater buy-in by those actually implementing the new policy.

The other essential prerequisite for successful policy change in an era of risk-averse leadership is the development of overwhelming public support for change. One participant expressed the sentiment by saying, "If you get sufficient public support, the government will follow". Elected officials are unlikely to make bold moves and long term investments without public support. Building support requires public information and outreach to a variety of stakeholders, with a concentrated effort to educated the media. Messaging must be succinct and compelling.

"some type of equivalent tool (LEED) for effective water management might allow individuals and organizations to make similar decisions and advances"

First, the message. According to some polls, the public is receptive to the message about clean water. It is often high on their list of environmental concerns. But that priority can be overshadowed by broader issues such as the economy and education or by narrower, more parochial water issues. Participants believed that it was essential to craft a simple message, one that is clear enough to convey the point, strong enough to withstand distractions, and broad enough to have staying power. Such a message, however, must go beyond slogans, such as "Do One Thing" or "Water is Life", though they are important. It must speak in a language relevant to people's daily existence since it will have to compete with other priorities in people's lives. And it must bear up under repetition, as repetition is the agent of successful messaging.

Participants also said that it would help if there were simple metrics to help convey the message. The Green Building Council has the LEED (Leadership in Environmental and Energy Design) certificate (available at one of three levels) to help simplify the message about how 'green' a building is. It also acts as an incentive for more environmental and energy friendly design. Some type of equivalent tool for effective water management might allow individuals and organizations to make similar decisions and advances in terms of water issues.

The information/entertainment media, both traditional and new, are how most Americans get their news and form opinions on issues. Thus, it is a prime ally in building public support for a 'One Water' policy. Media coverage of issues is driven by crises and water has certainly had its share of those. But the message that people receive from crisis reporting can be confusing.

Second, the media. A sustained effort to help the media understand the nature of the water policy

crisis and the steps needed to address it is both badly needed and required. But it cannot be merely lectures to reporters and press releases about abstract policy. There must be concrete examples (preferably "bright, shining examples" in the words of one participant) that make the policy issues real for the media's readers, listeners, and viewers. An ancillary benefit from a 'media understanding' campaign is that since political attention follows media attention, any message reaching its intended audience (the reader) also reaches policy-makers (the elected officials).

To maximize the clarity and the importance of the 'One Water' message, it must be spoken with one voice. Many participants believed that the water community must come together to find common ground in a single, simple message. Otherwise, disparate voices risk further confusing a perplexed public and diminishing the impact of the message. This could include broader efforts to coordinate outreach, information and education activities among all water organizations.

Finally, today's society places a premium on celebrities. Companies and causes vie to attract a recognizable 'star' able to connect their issue to their target audience. Having a charismatic champion for the water cause, backed up by a broader leadership cadre of less famous but knowledgeable individuals, can greatly help break through the cacophony of other messages in the media and bring home the 'One Water' word to the average American. The spokesperson need not be a Hollywood celebrity. Leaders with the right qualities from business and other sectors can also function effectively in this role.

Who Is Involved?

Previous dialogues have examined the organizations and disciplines that should be represented to build a constituency for 'One Water'. This dialogue affirmed many of the earlier suggestions, such as the importance of including the agriculture and energy sectors. But it also added some new perspectives on why two other fields in particular should be included.

The private sector, for example, has many experiences that can be usefully brought to bear in addressing a major change in water policy. Many companies are intimately familiar with transitioning to newer, more inclusive management models. Such experience can be valuable in understanding potential pitfalls. Many of these companies are also leaders in the techniques of collaboration and bring with them knowledge of how organizations and cultures adapt to and manage change. Often, they are agents of change themselves in their industry or have dealt with others as those agents. And many have extensive experience with public relations efforts.

Another field frequently underrepresented in water policy discussions is banking and finance. With budgets at all levels under serious pressure and demands increasing for major investments in infrastructure – whether green, gray or 'One Water' – the use of newer financing mechanisms must be expanded. Otherwise, good intentions will certainly meet an early demise.

Next Steps

Through its national dialogues, the Alliance has sought to inspire visionary thinking that can influence policy and advance sustainable water quality. Each discussion has identified actions to advance water policy. All have embraced the need for an integrated national water policy.

The challenge is immense; uniting a wide range of agencies that have long been constrained by their individual silos will not be easy. The resources are slim given the currently tough economic times and the public's poor understanding of the true cost and value of water. But there is an urgent need, one that becomes more pressing each day with climate change, growing populations, deteriorating ecosystems, aging infrastructure, and regulatory pressures.

Building on these dialogues, the Alliance's next step is preparation of a blueprint, in essence the framework for what the new policy should be and the actions needed to achieve it. First and foremost, a national water policy framework must be inclusive, welcoming all stakeholders who seek a sustainable water future. It must balance the tension between suggestions for bold action and for actions tempered by reality and experience.

In addition to the policy parameters, this blueprint needs to include strategies for building public support, gaining media attention and understanding, and gathering a record of successes – small at first and growing over time. Success builds credibility and the blueprint should have accomplishments to point to as it proceeds forward. Funding for the projects necessary to implement a new 'One Water' policy will be essential.

Daunting as it may be, the task is too important for the risk of failure to deter action. The Alliance welcomes your active participation as we lay the groundwork and chart the course for a sustainable 'One Water' national policy.

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Founders

The Clean Water America Alliance (Alliance) is dedicated to working with individuals, organizations and entities throughout the country — both public and private — to forge a new vision for a sustainable water future. The following organizations have elected to support the Alliance's efforts to achieve an integrated, holistic water policy that will sustain generations of Americans to come.

Alliance Founders as of November 15, 2010

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Hydro International

Infilco Degremont/United Water

Insituform Technologies, Inc.

Malcolm Pirnie, Inc.

MWH Americas Inc.

PennWell Publishing Corp.

Siemens Water Technologies Corp.

Veolia Water North America

Public & Non-Profit

Alexandria Sanitation Authority, VA

Bay Area Clean Water Agencies, CA

California Association of Sanitation Agencies, CA

City & County of Honolulu Department of Environmental Services, HI

City of Atlanta Department of Watershed Management, GA

City of Los Angeles, CA

The Conservation Fund, VA

DC Water, DC

Gulf Coast Waste Disposal Authority, TX

Independence Water Pollution Control Department, MO

JEA, FL

Little Blue Valley Sewer District, MO

Low Impact Development Center, DC

Metro Wastewater Reclamation District, CO

Metropolitan Sewer District of Greater Cincinnati, OH

Metropolitan Water Reclamation District of Greater Chicago, IL

Milwaukee Metropolitan Sewerage District, WI

National Association of Clean Water Agencies, DC

National Association of Water Companies, DC

National Rural Water Association, OK

Northeast Ohio Regional Sewer District, OH

Philadelphia Water Department, PA

Sewerage and Water Board of New Orleans, LA

Upper Trinity Water District, TX

Water & Wastewater Equipment Manufacturers Association, DC

Clean Water America Alliance

Shaping water policy for a sustainable future.

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