What's Water Worth?

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, storm-water 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
www.CleanWaterAmericaAlliance.org

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Acknowledgements

The Clean Water America Alliance (Alliance) believes that we, as a nation, cannot move toward national water sustainability until water is appropriately valued. To that end, the Alliance selected *What's Water Worth?* as the focus of its second *National Dialogue* on March 25-26, 2010. This report is a summary of this event.

The success of this event is the result of the hard work of many individuals. We would like to acknowledge our panelists Andrew Fahlund, Michele LaNoue, John Scholl and David Scott for their engaging and valuable participation. We would also like to express our gratitude to the 34 participants that joined us for the *National Dialogue* and ensured its success. Special thanks are also due our guest speakers, Robert Glennon and Nancy Stoner for taking time out of their busy schedules to inspire us to explore this important issue.

I would especially like to recognize and thank the Clean Water America Alliance's Board of Directors and Founding Members, as well as the *National Dialogue* Chair, Ben Grumbles; Facilitator, LaJuana Wilcher; Tom Sliter for his contributions; and, the staff of the Clean Water America Alliance for their assistance in organizing the *National Dialogue* and preparing this report. Thank you for all your hard work.

Lastly, the *National Dialogue* would not have been possible without the encouragement and financial support provided by Black & Veatch, CDM, Insituform Inc., and Greeley and Hansen.

I invite you to review this report as you give further thought to what's water worth.

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June, 2010

Foreword

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"Water is valuable and must be valued." This simple phrase was a key finding from the Clean Water America Alliance's first *National Dialogue,* held last September, on an integrated national water policy. It also set the stage for the second *Dialogue* by focusing on one of the pillars of a sustainable water policy, namely, what *is* water worth – to us as individuals, to our community, to our society? Only by answering this question can we begin to lay a solid foundation for the actions that will be needed to assure a continued supply of clean, dependable and economical water. And by engaging the entire range of water policy stakeholders in the discussion, we also can build the broad support necessary to take those actions.

As a nation, we often take water, our most precious yet most underappreciated natural resource, for granted until a crisis emerges. This is a poor basis on which to invest the money, time and energy that will be required to meet our future water needs. The Alliance believes that if we can better identify and articulate the range of economic, ecological, social, and cultural values we attach to water, we can not only change how we as a country view and value water but, perhaps more important, we can begin to more fully incorporate water's tangible and intangible benefits into every facet of water management. This positive vision of the value of water is essential if the needed investments in our water resources are to be realized.

To delve more deeply into this issue, the Alliance brought together 42 of the most knowledgeable and innovative individuals in the field of water policy. Several of them participated in the first *National Dialogue*. They came from many different backgrounds – agriculture, conservation, energy, technology, business, government, and law – but they were all united in the desire to seek common ground and forge consensus on this critical issue. The work of the Alliance is, after all, about bringing voices and views together to look for concrete solutions to the challenges confronting water management and to find the common ground that can propel us forward.

The result of the first *National Dialogue* demonstrated the widespread desire for a profound shift in our management of water resources, from one which was built on multiple independent, usually uncoordinated, organizations often with little ability to see the whole water picture, to a more holistic one, based on integration and sustainability, with greater cooperation and innovation.

This second *National Dialogue - What's Water Worth?*, held March 25-26, 2010, added to that initial effort by exploring one of the key underpinnings of a new water policy. We look forward to joining with the participants in this dialogue and others concerned about the future of our water supplies in attaining that goal.

Introduction

There is little doubt that one of mankind's single most valuable assets is clean water. It impacts our lives and our livelihoods in a multitude of ways every day. It supplies our body's daily needs, helps grow our food and fiber, contributes to our manufacturing and service industries, creates and supports energy production, sustains and nourishes our unique biodiversity, undergirds much of our transportation system, and provides us with recreational opportunities. Indeed, the very quality of our life depends on a reliable supply of clean, abundant water. As the recent oil spill disaster in the Gulf of Mexico tragically illustrates, people's way of life, the environment, and the economy can be devastated without it.

The importance of water to our society is, of course, nothing new. Over the years, federal, state, regional and local governments, and the private sector, have embarked on many technological and institutional efforts to assure just such a supply and the prosperity that comes with it. It is the relative success of this broad, but often uncoordinated, range of water development measures that has contributed to unparalleled growth in our economy and our population.

What is new today is the realization that the status quo is unsustainable, both economically and environmentally. The traditional disparate mechanisms for managing our water resources are no longer sufficient to meet society's needs amid new and difficult challenges. The confluence of new patterns in population, weather, energy production, and climate is demanding that we approach our water resources in a more holistic, integrated fashion, using not just new techniques and new organizations, but a whole new mindset and ethic about water, its use, its management, and its worth. In essence, we need a deeper and more secure foundation for water management in the 21st Century, and beyond.

Our quality of life depends on clean and abundant water.

The challenges before us are clear. But can we muster the critical mass for change?

The Clean Water America Alliance (Alliance) believes we must. The Alliance was founded on the belief that the nation must re-evaluate how it uses and manages its water resources if it is to continue to have a reliable source of water. To that end, it initiated a series of *National Dialogues*, the first held in September, 2009, which called for an integrated national water policy based on sustainability. That *National Dialogue*, which brought together nearly 30 of the best and brightest minds in the water community from around the country, aimed to turn today's water policy, which views drinking water, storm water, waste water, and water reuse as separate entities, into a holistic policy for tomorrow – a "One Water" policy.

Among the issues discussed at that session were four key elements of that new policy, namely the intersection of water quality and water quantity, the nexus of energy production and water supply, the necessity of expanding 'green' infrastructure, and the use of watersheds to exemplify our aquatic interdependence and to organize our water policy. The report of that meeting, *The Need for an Integrated National Water Policy*, is available at www.CleanWaterAmericaAlliance.org.

The first *National Dialogue* also identified many obstacles in the path to this new policy. For example, it became clear to the participants that further progress in developing a national water policy focused on sustainability would be hindered without a better appreciation of how we, as individuals and as a society, value our water. Without this fundamental understanding, any policy will not only lack economic and technical soundness but public legitimacy as well. How water is valued – and priced – serves as the basis upon which local communities, state governments and the nation, not to mention industry, agriculture, and others, make water resource management decisions and investments. Indeed, one of the key findings of the first *National Dialogue* was that "water is valuable and must be valued". But how?

The second *National Dialogue*, held on March 25-26, 2010, examined this question in more detail. It was titled: *What's Water Worth?* and it brought together 42 leading experts in water policy, including representatives from state water authorities, the federal government, municipal water and wastewater agencies, engineering firms, energy, conservation, agriculture, and academia. Participants engaged in a wide ranging exploration of the personal, social, industrial, agricultural, ecological, and institutional perspectives on the value of water. As in the first *National Dialogue*, they came together not as representatives of their respective organizations, but as individuals willing to share their expertise and perspectives in searching for common ground and concrete solutions.

It was designed to build on the results from the first *National Dialogue*, namely, to identify the issues, hurdles and problems inherent in valuing the many different uses of water by many different users. It also sought to expand on those overarching principles that support the blueprint for a sustainable national – not just federal – water policy.

One Water – Many Values

What IS water worth? How do we value something that at one place or time falls free from the sky, and at another place or time must be pumped to the surface from hundreds of feet underground? Or that usually runs off the land in moderation, but that sometimes sweeps that very land away in torrents, or occasionally leaves it parched and dusty, ready to be blown away?

Furthermore, a fisherman on the Gulf Coast, a farmer in the Midwest, a utility operator in Georgia, a manufacturer in New England, an inner city resident, a tourist along the Colorado River, a wildlife refuge manager in Florida, a tribal community on a reservation, or a restaurateur in Los Angeles, are likely to each have their own personal and regional perspective on what water is worth to them. While each may place a different value on water, all would probably agree that their answer reflects a value for water that embodies both its economic and intrinsic worth.

During this *National Dialogue*, there was considerable discussion about the importance of understanding both the economic and intrinsic values of water in attaining a new sustainable water ethic. The price one pays for water, indeed the price one pays for most commodities, usually determines one's behavior toward it. Do we use it responsibly, or do we waste it? However, changing water consumption habits only in response to economic pressures will not be sufficient to achieve a more lasting change in our attitudes about water and a deeper understanding of it. Nor is it likely, by itself, to create respect for other's value of water or instill in each of us its importance to environmental sustainability. The bottom line is that participants felt that we must foster a deeper appreciation for the many uses – economic, environmental, cultural and social – of this finite, but renewable, resource among all the stakeholders in water policy… which really means all of us.

A number of participants also criticized some current water pricing models, which often result in a price that reflects little more than the operating cost for delivering that water. And, with rare exceptions, a wide range of subsidies, externalities and other market distortions can further interfere with the use of price as an indicator of water's full cost or real value.

Any discussion of price and value naturally reflects many underlying assumptions about water, such as its value as a resource or the replacement costs of water service; or the sustainability of management based on ownership versus stewardship; or the responsibility to pay for water service versus the affordability of that service. Furthermore, some of the newer economic values of nontraditional water infrastructure, such as the broad range of ecosystem services water provides, are only now being understood with the same sophistication as more conventional techniques.

Of course, price sends an important signal about society's priorities and economic values. But when price does not recognize the full cost of a resource, it sends a confusing message about the resource's long term value, and instilling an ethic of sustainability and conservation becomes more difficult.

The great variety of viewpoints and underlying assumptions expressed during this *National Dialogue* yielded two common themes: First, any national water policy must take into account regional differences, values, cultures, and economics; and second, finding the commonly accepted values for water on which to base such a policy requires the active participation of *all* stakeholders.

Impediments to Better Valuing of Our Water

As with many human endeavors, history and habit help to explain the low value we attach to most water use today. After all, historically, water seemed to be a free commodity, available to most anyone with a bucket and perhaps a shovel. In some areas, water is abundant, while elsewhere it can be a rare sight. Economies of scale also distort our sense of the value of water. Small amounts of water, say in a plastic bottle, can be extraordinarily expensive, while large quantities, as in a Midwestern irrigation project, can be exceedingly cheap. Furthermore, most of the facilities for supplying water, from collection and treatment to distribution and disposal are typically located away from human settlements or underground, resulting in an "out of sight, out of mind" neglectfulness. Little wonder, then, that most of us are willing to pay more for our cable TV and cell phone service than for our water. Worse yet, human nature tends to ignore chronic challenges like this until there is an acute crisis, such as a massive oil spill, flooded streets or dry reservoirs.

As was discussed in the first *National Dialogue*, one impediment to more realistic pricing and valuation of water is the fragmented and compartmentalized approach we use to manage it. In addition to the multiple organizational 'stovepipes' we have created to manage water according to its multiple uses, we have invented a variety of legal structures to govern it and adjudicate disputes over it. Among the most prominent and problematic is the distinction between basic water rights laws prevailing in western states, the general principle being that water rights are unconnected to land ownership, and can be sold like other property (prior appropriation), and those laws existing in eastern states, which are based on physical proximity to a water body (riparian law). Both of these approaches are increasingly under stress from the new climatic realities that were obviously not anticipated when these differing concepts of water rights emerged.

We have 19th century platforms and 20th century laws for 21st century problems.

There is also the proliferation of statutes that govern our water, especially at the federal level. From the Clean Water Act, Safe Drinking Water Act, and Flood Control Act, to the Endangered Species Act, Energy Policy Act, Food, Conservation, and Energy Act of 2008 (the most recent Farm Bill), and the National Reclamation Act, a variety of laws have substantial direct and indirect effects on and implications for water policy and water managers. Yet, there is no "National Water Policy Act" to bring coherence to this dispersed landscape. Finding a common set of values for managing water within this profusion of legal frameworks, congressional committees and administering agencies – federal, state, and local – will be daunting, but at the same time, essential.

An artificially low price for water is frequently an impediment to understanding its full value and hence, its wise use. So, too, is our history of using natural resources, even renewable ones, which has typically been more oriented to rapid growth and consumption rather than conservation and stewardship. The perception of abundance, temporary though it may be, such as a wet spring, a heavy snowpack, or a full reservoir also distorts the broader public understanding of the value of this resource and the actions needed to sustain it.

Related to the “out of sight, out of mind” attitude toward water facilities is the invisibility of much water use, especially that related to its production, manufacturing, processing, development and transportation, which complicates the valuation of that water. As was discussed in the first *National Dialogue*, calculating the water footprint of an activity is an important and understandable measure of the effect of various activities on water supplies and a step to better understanding of the value of that water.

Finally, most people rarely consider the full cost or the real value of water to them. Yes, they may think about it when they fill their glass, or open their water bill, or see a flooded street after a heavy rain, or sit on a beach on a summer vacation. But, absent a massive environmental disaster, these associations are probably too fleeting and too shallow to instill a deeper sense of water’s worth to them. Many participants agreed that reconnecting people to their water supplies in more tangible ways is a crucial step in reconciling what we say we want from water with what we seem willing to pay for water.

In summing up the broader impediments to setting a more complete value on water, *National Dialogue* participants cited the lack of holistic thinking about a resource that affects virtually all human activity and that this lack of vision is compounded by the piecemeal approach embodied in our statutes and regulations. They also decried the absence of sustained, overarching leadership, not just from the national level, but from state and community leaders, even from water managers themselves. All these shortcomings contribute to the scattershot approach we use today to manage water. Clearly, continuation of the status quo will harm our water resources, create economic instabilities, and degrade our quality of life.

Focused Steps to Achieve a Sustainable Value of Water

The *National Dialogue* participants brought hundreds of years of experience in water issues to the table. This includes many years seeking concrete solutions to often difficult and apparently intractable problems. The participants' suggestions reflect that experience and their realization that without broad and bold action to chart a new course for our nation's water policy, we risk serious economic, social and environmental consequences.

Following are some of the key educational, cultural and institutional steps that can be taken to cultivate sustainable values for water. Some of these ideas are similar to, or expand on, those made during the first *National Dialogue*. Many of them require no broad implementing legislation and can be initiated at local or regional levels. A few may be controversial. But they are all directed toward taking *action* to build the foundation for a new water policy that incorporates the worth of water into every facet of water management.

Much of this work begins with better public education programs. But the participants believed that such efforts need to extend beyond the usual target audiences of schoolchildren, the general public or ratepayers. They also must focus on water managers and others involved in day-to-day water management decisions. These front line workers often have the best knowledge and credibility on water issues that affect individuals and thus are best positioned to lead discussion in their own communities. They often are also in the best position to recognize needed changes and implement them. These individuals need to become among the strongest advocates for appropriately valuing healthy, sustainable waters.

This education effort is also part of a larger dialogue. As in the previous *National Dialogue*, participants wanted to see the discussion of sustainability and valuation expand outside of the usual 'circle of insiders' to encompass other professions and disciplines, such as conservation, public health, development and agriculture. In particular, they desired to have more involvement of business, both those in the water sector and those which depend on the availability of good quality, reliable water supplies. A broad base of understanding and support is fundamental to achieving a sustainable water policy.

Fortunately, the focus on value and sustainability is not just taking place within the water sector. In fact, many organizations, agencies and industries are endorsing these practices as a way of improving the overall quality of life, their marketplaces and encouraging development of a sustainable culture. This affords the water community great opportunities to work with others in transportation, housing, economic development, industry and agriculture to foster greater cooperation and inclusivity in reaching these shared goals.

Another part of the broader conversation on the value of water is better connecting people to the sources of their water. Water may be integral to human life – we are each 98% water – but as individuals, we have become detached from the source of that sustenance. Many local communities have successfully re-established that connection by making the local rivers or lakes more accessible, such as with river walks or waterfront developments. Others have begun to celebrate the connection between a water body and the community it serves with events such as the salmon festivals in the Pacific Northwest. Appreciation of our local water sources and infrastructure is a necessary step in

better appreciating water, and understanding its full value.

Using a 'water footprint' to help clarify the total water use picture would be a valuable tool in understanding the value of water to a particular activity. This concept was endorsed at the first *National Dialogue* and is useful on many levels, from facilitating decisions in a city's or state's land use and procurement policies to helping business manage their supply chains more sustainably. Even individuals could use it!

From the beginning, participants in both *National Dialogues* were clear that the call for a national water policy was not an appeal for a federal water policy. Given the plethora of state, regional and local entities involved, and the leadership that some are already showing in promoting sustainability, federalizing water policy would constitute a step backward, at best. The work toward a national water policy must involve all players in a cooperative, constructive and coordinated partnership. Similarly, the *National Dialogue* participants were not willing to have the push for a national water policy interrupt or discourage the continued exploration and experimentation of concrete actions that could be taken now at the state, regional or community level.

However, there are clearly areas in which federal assistance, cooperation and encouragement would be productive. One such area is the development and broader use of manuals and guidance to foster more effective pricing and more efficient use of water by communities. Many managers would welcome this kind of support. Also, using federal funds to leverage greater application of sustainability features in water projects would further advance the state of the art.

Another area of worthwhile federal involvement is promoting better integration of water management. Programs that operate in isolation have a difficult time properly valuing water. Altering the current organizational pattern of 'stovepipe' or 'silo' management, whether through policy changes, pilot projects, coordination mechanisms, or other approaches, could be an early indication of federal leadership and commitment to better value and greater sustainability in water policy. Pilot projects could be used to test and improve upon more integrated methods of water resource management, such as some states are now doing.

Such efforts should avoid more centralized planning or another bureaucracy. Yes, we need a national policy, but one which suggests, promotes, and supports local solutions. More productive partnerships, not greater command and control, is the goal.

Harnessing more innovation and imagination is another crucial element of a sustainable national water policy. As water management systems become more centralized, their ability to nourish creative and innovative ideas and solutions tends to diminish. Yet encouraging such resourcefulness is often the most effective way to resolve technical, managerial, and political stalemates. This is further evidence of the desirability, even the necessity, of blending national and regional/local leadership in the development and implementation of a national water policy.

Finally, as was discussed in the first *National Dialogue*, the new challenges confronting water systems will demand an evolution from today's more centralized systems approach to more distributed systems. Efficiency and economies of scale may no longer have the dominance over decision-making as was often the case in the last century. Resilient, flexible, and adaptable systems are better able to respond to a future of inherent uncertainty.

Conclusions

It was clear from the two-day *National Dialogue* that there is no one answer or solution to the question of the value of water. Social, cultural, historic, economic and other factors all flow into an individual's sense of value. But what *was* clear from the participants is that, as a whole, we significantly undervalue the water we have today, sometimes dramatically. This leads us to squander the resource, and waste money, energy, time and effort. Without dramatic improvement in how we price and value water – and use it – we will face severe consequences, to our economy, to our environment, to our lifestyle, perhaps to our existence.

Participants were agreed that the seriousness of these challenges requires the development of a new approach to water management, an ethic based on understanding the many values of water – in short, a new water ethic. Such an ethic must have a strong sense of stewardship and collective responsibility and respect. It will take considerable education to develop this ethic, not just among the general public and ratepayers, but also among elected officials, water managers, and leaders in the business, agricultural, and industrial sectors. It must also include a sustained effort to reconnect people with their local waters on a more intrinsic level so that the full range of water values becomes a reality and not an abstraction.

We need to think differently, and holistically, about the problem and the solutions.

A common thread through much of the *National Dialogue* was the need to think differently, and holistically, about the problem and the solutions. We cannot afford to think about water based on whether it is rain water, drinking water, wastewater, flood water, or reused water. Nor can we continue to focus on centralized organizations as the source of leadership and direction. New partnerships, based on a common national policy, which seek to encourage the best from every organization, which can maximize innovation and creativity, yet provide a coherent vision and effective management and stable resources, must become the norm. Other disciplines, such as transportation, housing, agriculture, industry, and economic development, also must become involved since their work on sustainability can reinforce our own.

The phrase "we're all in this together" is not so much a slogan for the new water ethic as it is a more accurate reflection of the path forward. The solutions to our water challenges lie within each of us, individually and collectively. The Alliance believes that only by bringing together all of those with a stake in our water future, can we successfully meet those challenges and continue to have a nation with reliable water supplies for all its needs.

Next Steps

The Clean Water America Alliance's first two *National Dialogues* have set the stage for action on a national water policy, and increased awareness of the need to value water appropriately and the profound impacts that true valuation can have on management decisions, infrastructure investment, and business and consumer choices.

The Alliance's third *National Dialogue* will be held in Los Angeles, California in September 2010. Its focus will be how to manage water – whether it is drinking water, wastewater, stormwater, groundwater, or reused water – as "one water." Participants in this third *National Dialogue* will include a diverse mix of academic, agricultural, energy, environmental, industrial, municipal, and other water interests, as well as state, regional and federal decision-makers.

Upon completion of the *National Dialogue* in September, the Clean Water America Alliance will begin working on a policy framework. This blueprint will balance our commitment to social, environmental, and economic needs and serve as a road map for how the nation should move towards a sustainable and integrated national water policy.

The solutions to our water challenges lie within each of us, individually and collectively.

Starting in 2011, the Clean Water America Alliance plans to begin hosting a series of "One Water" workshops around the country. These workshops will focus on understanding the barriers and opportunities in developing and implementing a holistic and integrated water management policy and how best to break down the silos that have kept drinking water, stormwater, wastewater, groundwater, and water reuse management interests and management separate.

The Clean Water America Alliance looks forward to continue partnering with local, state and federal decision-makers and *all* water stakeholders on these efforts to foster and realize a new vision of water sustainability – a "One Water" vision.

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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 June 9, 2010

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Control Department, MO

Little Blue Valley Sewer District, MO

Low Impact Development Center, DC

Metropolitan Water Reclamation
District of Greater Chicago, IL

Metro Wastewater Reclamation District, CO

Milwaukee Metropolitan Sewerage District, WI

National Association of Clean Water Agencies, DC

National Rural Water Association, DC

Northeast Ohio Regional Sewer District, OH

Philadelphia Water Department, PA

Sewerage and Water Board of New Orleans, LA

Water & Wastewater Equipment
Manufacturers Association, DC

Clean Water America Alliance

Shaping water policy for a sustainable future.

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