October 26, 2016

CLEAN AND SAFE DRINKING WATER:
EPA's LOCAL GOVERNMENT ADVISORY COMMITTEE'S FINDINGS AND RECOMMENDATIONS

Protecting America's Waters Workgroup

From the LGAC's Charter, defining general goals:

The LGAC is a policy-oriented committee. To assist the agency in ensuring that its regulations, policies, guidance and technical assistance improve the capacity of local governments to carry out these programs, the LGAC provides advice and recommendations to the EPA Administrator.

"As public officials we have no greater concern than the welfare of our families and communities. Clean and safe drinking water is the lifeblood of all our communities. We must be good stewards of our drinking water and work at all levels of government to ensure that it is protected for now and the years to come."

Mayor Bob Dixson,
LGAC Chairman

"All Americans should have access to clean, safe and affordable drinking water. A collaborative approach is essential to solving longstanding and emerging issues. Working together, our community and industry leaders can heighten awareness and inspire actions that ensure clean, safe and affordable drinking water remains of utmost priority throughout the nation."

Susan Hann,
LGAC Water Workgroup
Chairwoman

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EXECUTIVE SUMMARY

The Local Government Advisory Committee (LGAC) is a federal advisory committee chartered to provide recommendations representing the views of local government stakeholders to the EPA Administrator. On July 28, 2016, the LGAC was charged by the EPA Administrator with providing recommendations and input on the National Drinking Water Action Plan, currently under development at the EPA. Several charge issues were identified, including:

- Advancing the Next Generation Safe Drinking Water Act Implementation
- Addressing Environmental Justice and Equity in Infrastructure Funding
- Strengthening Protections against Lead in Drinking Water
- Emerging and Unregulated Contaminant Strategies

All of these issues are also considered in the context of overarching themes such as source water protection, economic development, communication and partnerships, showcasing best practices and optimizing investment of scarce resources.

The charge was assigned to the LGAC's Protecting America's Waters Workgroup, which solicited input from all LGAC Workgroups, the Small Communities Advisory Subcommittee and external stakeholders. The report includes a detailed response to the charge in consideration of the input received. However, several strong and consistent themes emerged as the Workgroup heard from diverse stakeholders. First and foremost, safe, clean and affordable drinking water is essential for all Americans. Further:

- Every American should have an awareness of the value of water as a driver of public health, economic prosperity and quality of life.
- The ability to pay (on an individual and community basis) for safe, clean drinking water is a growing issue and a significant threat to delivering safe, clean drinking water across the nation.
- Education and communication are paramount to long term success. Local and tribal government officials are closest to the public and need the tools to effectively advise their citizens.
- New ways of doing business, new partnerships and new ways of thinking will be needed to achieve success.
- Integrated planning has been successful under the Clean Water Act and can be an effective tool under the Safe Drinking Water Act.

Safe drinking water concerns are now at the forefront of the daily news cycle. The National Drinking Water Action Plan offers the opportunity to learn from the past and innovate in the future to bring clean, safe and affordable drinking water to all Americans. The LGAC's report provides a detailed "boots

on the ground" perspective from local and tribal agencies that can assist the EPA in developing effective strategies for our diverse communities. Local governments and public water systems are experienced in overcoming challenges and innovating ways to better serve their constituents. The LGAC provides the connection between the EPA and citizens through local and tribal government leaders. The EPA's engagement with the LGAC on the development of the National Drinking Water Action Plan is a commendable step towards strengthening the federal-local partnerships that are needed to succeed in delivering on the commitment of safe, clean and affordable drinking water across the nation.

I. INTRODUCTION

The EPA's development of the National Drinking Water Action Plan has provided an opportunity for the EPA to collaborate with its Local Government Advisory Committee regarding strategies for advancing the agenda of clean, safe and affordable drinking water for all Americans. Because drinking water providers, systems, source water and customers are so diverse, the EPA Administrator charged the LGAC's Protecting America's Waters Workgroup with outreach and collaboration in developing recommendations for the National Drinking Water Action Plan. This report is a compilation of perspectives representing urban areas, agricultural communities, special districts, border communities, financially struggling communities, communities advancing best practices and many others. Many common themes, as well as innovative ideas, emerged through our work.

> ***"This is the Year of Drinking Water, and we need to look at how to combine private and public sector interests to invest in water infrastructure."***
>
> **Administrator Gina McCarthy**
> **EPA Administrator**

Special thanks to the members of the Protecting America's Waters Workgroup, Small Communities Advisory Subcommittee, Environmental Justice Workgroup, Cleaning Up Our Communities Workgroup, LGAC members and others who have contributed their time and their ideas to this report.

A. THE LGAC'S PROTECTING AMERICA'S WATERS WORKGROUP

The LGAC Protecting America's Waters Workgroup was established in December 2010 to address the LGAC's need to provide input on the nation's water infrastructure and quality with the local community perspective. It consists of 26 local government officials.

Protecting America's waters by improving and maintaining water quality, protecting drinking water and addressing water infrastructure needs are priorities for the EPA.

The EPA's charge to the LGAC is to provide recommendations on the following priorities:

- Water infrastructure needs
- Local strategies (including green infrastructure) for addressing nonpoint source pollution, including stormwater runoff
- Protecting great water bodies and neglected urban rivers

In the past, the Protecting America's Waters Workgroup has provided recommendations on:

- Integrated municipal stormwater and wastewater planning framework
- Stormwater management practices

- Lead and Copper Rule
- Toxic algal blooms
- Clean Water Rule
- Managing the environmental impacts of hydraulic fracturing

B. COMMITTEE CHARGE

The EPA charge outlines the content areas where the LGAC's advice and recommendations are requested on a National Drinking Water Action Plan.

The following are Charge Issues identified by the EPA for LGAC input:

1) **Advancing Next Generation Safe Drinking Water Act Implementation:** Identify key opportunities for federal, state, tribal and local governments to work together for implementation of Safe Drinking Water Act regulations and programs, including ways to increase communication, public awareness and accountability.

2) **Addressing Environmental Justice and Equity in Infrastructure Funding:** Identify ways in which federal, state, tribal and local governments, and utilities can work together to ensure that drinking water infrastructure challenges of low-income environmental justice communities and small systems are being appropriately prioritized and addressed. This could include increased information sharing, replicating best practices and building community capacity.

3) **Strengthening Protections against Lead in Drinking Water:** Identify opportunities to coordinate and collaborate on implementing the current Lead and Copper Rule, particularly in environmental justice communities. Expand and strengthen opportunities for stakeholder engagement to support the development of a revised rule.

4) **Emerging and Unregulated Contaminant Strategies**: Develop and implement improved approaches through which the EPA, state, tribal and local governments, utilities and other stakeholders can work together to prioritize and address the challenges posed by emerging and unregulated contaminants such as algal toxins and perfluorinated compounds (PFCs). Determine ways to increase public awareness about emerging and unregulated contaminants, especially in vulnerable populations.

5) **Other Issues:** The Committee will identify issues the agencies could use to help protect local communities' interests in clean drinking water, where public and private sector partnerships have advanced economic solutions, where source water protection saved taxpayer dollars, and where communities have created jobs and produced public savings by ensuring clean and healthy water infrastructure.

   The Committee will also develop recommendations on how the EPA can better work with local governments and engage local governments on issues such as:

- ✓ What additional interactions between the EPA and local governments would most effectively help local governments understand and best utilize health advisories for unregulated and emerging contaminants?

- ✓ How can the EPA best work with local governments to assure effective implementation of drinking water regulations such as the Lead and Copper Rule so that public health improvements are realized?
- ✓ What resources are needed at the local level to assist with implementation? How can communities enhance economic opportunities while improving water systems?
- ✓ What resources do communities need to achieve protection of water at its source rather than through installation of treatment?

C. IMPETUS FOR CHANGE

While the drinking water crisis in Flint, Michigan may have been the most widely publicized, various other states and towns have contaminated water supplies as well. In Ohio, toxic algal blooms threaten Lake Erie and the water supply for many. A chemical spill in Charleston, West Virginia cut off hundreds of thousands of people from clean water. Many other communities are also threatened by uncontrolled runoff, pollution, aging infrastructure and issues of water affordability and shut-offs, particularly in low-income and minority communities.

Hamilton Bridge, Flint River, Michigan

"Michigan is the Great Lakes state and has an abundance of fresh water. With the lead contamination of drinking water in Flint and tens of thousands of water shut-offs in Detroit, far too many residents lacked what should be a guarantee in our state - access to clean, safe and affordable water. The EPA must play a critical role in working with state, local and tribal governments to address the growing challenges of lead and other contaminants, aging and costly infrastructure, and affordability across the country."

Representative Stephanie Chang
Michigan State Representative

Lead Contamination in Flint, Michigan

The nation's eyes turned to Flint, Michigan as one of the most tragic drinking water contamination issues that led to serious health concerns for citizens and at-risk populations, including children. Lead contamination in Flint was first noted in April 2014, after the City of Flint switched its water source from treated water at the Detroit Water and Sewerage Department to Flint River water. After this switch, the corrosive nature of Flint River water became apparent, as did the lack of treatment to prevent corrosion and leaching of lead. As water traveled through aged service lines, lead from the pipes, solder and fixtures leached into the drinking water supply. Tested water was found to contain elevated levels of lead, the effects of which can include brain damage, developmental delays, speech impediments, increased risk for behavioral problems and other serious chronic symptoms. Although citizens expressed concerns regarding the color, odor and taste of their water following the April 2014 switch, their comments were neglected until August 2015. Despite officials' continued claims that water in Flint was safe and lead levels remained below the legal limit, it took two studies by local doctors and researchers regarding blood-lead levels in children and corrosion levels of Flint River water for appropriate action on

the drinking water problem to occur.[1] On October 16, 2015, the EPA established the Flint Safe Drinking Water Taskforce to provide the Agency's technical expertise through regular dialogue with designated officials from the Michigan Department of Environmental Quality and the City of Flint. On January 16, 2016, President Obama signed an emergency declaration ordering federal assistance to support state and local response efforts in Flint. In the interim, many lives were placed at risk because of lead poisoning and its subsequent health concerns, and millions of dollars have been spent in mitigation strategies. The situation in Flint has had a massive impact both locally and nationally.

West Virginia's Contaminated Water Supply

One of the worst drinking water contamination incidents in the nation occurred in Charleston, West Virginia, when a coal-washing chemical spill contaminated the Elk River, the primary drinking water source for 300,000 residents. The spill happened as a result of a chemical storage facility's neglect to maintain its above-ground storage tanks. Each state is responsible for creating legislation and infrastructure to fulfill the EPA's federal Clean Water Act, and many have state-level regulations in place to enforce the law. The relevant chemical spilled in Charleston's case - 4-4-methylcyclohexane methanol (MCHM) - was not listed on the federal Toxic Substance Control Act (TSCA) Inventory of 82,000 toxic chemicals. Since this incident, Congress has enacted TSCA reforms where the EPA will require tighter standards to include more unregulated chemicals. For local officials, incidents like these raise important questions about emergency response and methods for instructing the public to protect themselves when there is little to no information available on the chemicals to which they are being exposed. Methods for determining safe exposure levels during cleanup and remediation processes are also being explored. The full health impacts of the crisis and the monitoring of long-term illnesses and diseases relating to exposure from the spill are costly. Resulting illnesses currently have no formal means of being tracked, and the significance of this unfortunate event on public health may ultimately be lost.

Toledo's Toxic Algal Blooms

In 2014, the City of Toledo, Ohio's water supply was shut down as a result of the emergence of toxic algal blooms in Lake Erie, the water's source. Unregulated runoff contributed to elevated phosphorus levels - a major cause of these harmful blooms. Microcystin levels were recorded over the legal limit. This led Toledo to issue a "do not drink" mandate for 3 days, preventing about 300,000 people from accessing safe drinking water during that time. The City of Toledo was not aware that microcystin levels were at levels of concern until tap water had already been contaminated and residents were already placed at risk of illness as a result of the algae. In 2015, a similar issue occurred. However, this time, the City of Toledo was better equipped and prepared to deal with it. An early warning system had been implemented that was able to monitor potential microcystin contamination. Its intent was to provide enough time after detection of a spike in toxin levels for the city to run a carbon filtration system that could reduce toxin levels below the legal limit. The challenge for local officials is to monitor water sources for toxins in order to inform residents, while balancing the costs of running these tests. The Great Lake states are currently working on nutrient reduction strategies to curb runoff laden with nutrients that results in harmful algal blooms.

[1] http://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2015.303003

LGAC July 27-29, 2016 Meeting
EPA Headquarters
Washington, D.C.
Photo Source: LGAC Member Jeff Tiberi

D. PUBLIC MEETINGS

In response to the drinking water charge, the Workgroup held a face-to-face public meeting on July 28, 2016 in Washington, D.C. to engage with representatives of several national associations and hear initial input for the development of Workgroup recommendations to the LGAC and to the Administrator. The associations that were represented included: U.S. Conference of Mayors; National League of Cities; National Association of Counties; National Association of City and County Health Officials; Association of State Drinking Water Administrators; Environmental Council of the States; National Conference of State Legislatures; and National Governors Association. Local, state and tribal officials have tremendous knowledge and offer unique, on-the-ground perspectives on environmental issues that impact their communities; and water is an issue that takes all levels of government working together. Other Workgroup meetings were held via teleconference to invite a wide range of elected and appointed officials, as well as intergovernmental organizations and practitioners. These meetings were held in August and September 2016.

These meetings have been part of a collaborative and solution-based process that has afforded the LGAC the opportunity to hear from diverse and varied perspectives from coast to coast. Therefore, this Report extends beyond the LGAC members' own perspectives, and provides meaningful, representative input from local governments across the country. The goal was to develop suggestions for the chartered LGAC to consider in writing its advice and recommendations to the EPA Administrator, who can then use the feedback in developing a National Drinking Water Action Plan.

II. WATER AT ITS SOURCE

There is a general consensus that protecting the nation's water resources is important to local government. Local governments realize that poor water quality affects the health and economies of their communities, disproportionally impacting those that are low-income. Local governments also realize that protecting source water bodies like rivers, lakes, streams, wetlands and groundwater is paramount to protecting drinking water.

A. WATERSHED & SOURCE WATER PROTECTION

Protecting Water at the Source

Source water is surface and groundwater that serves as a source of drinking water for the general public, as well as supplies water to private wells. These bodies of water can include streams, lakes, rivers and aquifers. Source water protection is the concept of maintaining the integrity of these water sources at all costs, in order to protect the health of the public and reduce costs associated with potential mitigation issues. Furthermore, source water protection can reduce the costs of water treatment (and costs to ratepayers). It is much less expensive to protect water at its source than it is to remedy the effects of contamination, which can include wage loss, medical expenses, extensive water treatment, finding new water sources, decrease in property value and loss of citizens' trust and confidence in their drinking water.

There are a multitude of management strategies that communities can adopt in order to protect their local sources of water. These can include assessment of contaminant threats in a protection area, identification of management measures for threats, and implementation of those measures. By taking proactive measures, communities can experience huge cost savings with the bonus of healthy and sustainable water sources that can provide clean water for future generations.

The Source Water Collaborative is a group of 26 organizations working together to protect the nation's drinking water sources.[2] Their goal is to integrate water protection into land use planning and stewardship in order to ensure safe and reliable drinking water for the country. It is of vital importance that a wide variety of organizations collaborate on the topic of drinking water because it is an interdisciplinary concern. The quality, quantity and cost of drinking water depends not only on treatment and distribution, but also on land stewardship and planning decisions. With populations continuing to grow and the global climate fluctuating toward extremes, it is imperative that the water sources we depend on for clean drinking water remain pure.

Watershed Approach

Watersheds are areas that drain to common waterways such as streams, lakes, wetlands, estuaries, aquifers and oceans. The Watershed Approach considers both water and air inputs, and requires the involvement of all stakeholders in the area (federal, state, local, tribal and private) to improve the environment. Green infrastructure is one aspect of water management that protects, restores or mimics the natural water cycle.

The City of Quincy, Washington is one example of an area that is using a watershed approach to manage and conserve water, and protect its aquifer.[3] By managing industrial and municipal wastewater, potable water and reclaimed water holistically, the City is able to supply water to the Quincy Basin sustainably.

The EPA has identified nine minimum action items to improve environmental water quality in watershed areas that are threatened or impaired by pollutants:

- Identify causes and sources of the pollution
- Estimate levels of pollutant leaking into the watershed
- Describe management measures to achieve load reduction and target critical areas

[2] http://sourcewatercollaborative.org/

[3] http://quincywashington.us/images/Q1W_Newsletter_January_2016_1_21_2016.pdf

"In Appalachia, communities are struggling. Many do not have running water, and trucks must distribute loads of water. Appalachia has provided coal to power the country and now we need help to restore these communities. This is an EJ issue and providing clean and safe water is a necessary start!"

Mayor Steve Williams
Huntington, West Virginia

- Estimate amount of technical and financial assistance needed to implement the plan
- Develop education component
- Develop project schedule
- Describe the measurable interim milestones
- Identify indicators to measure progress
- Develop monitoring component

Case Study: Watershed Approach Protection of Source Water

The Bog Brook Channel Stabilization Project in New Hampshire utilized the Watershed Approach to improve source water quality. Erosion, due to previous removal of woody shrubs along the banks of Bog Brook, caused the stream channel (from which citizens sourced their drinking water) to become unstable. Measurements indicated that the stream experienced up to 120 tons of sediment buildup per year, impeding water quality and threatening fish habitat.[4] Using the Watershed Approach, a comprehensive stream morphology assessment was conducted and a plan was designed to restore the stream to its original condition. As a result of this approach – which carefully considered using the action items listed above - the channel quickly stabilized and erosion subsided, returning the stream to its original, clearer conditions.

B. DRINKING WATER & ENVIRONMENTAL JUSTICE (EJ) COMMUNITIES

Access to clean, affordable and safe drinking water is needed for all communities, regardless of the area's average income, average level of education, geographical region or racial, ethnic or cultural background. For many communities, unreliable access to clean drinking water remains a large concern. Citizens in these areas risk their health every time they use local river water – the quality of which is too often connected to their economic livelihood. Providing equity through focus on environmental justice communities in a National Drinking Water Plan will empower the EPA and local governments to better protect these communities.

"The drinking water charge by the Administrator is appreciated, as we need to assure equity in resources and infrastructure for safe drinking water protection and healthy communities for all. We especially need to seek environmental justice for those most vulnerable."

Dr. Hector Gonzalez, M.D.
Director of Public Health
Laredo, Texas

Reliable Clean Drinking Water

Lack of access to reliable clean drinking water disproportionately affects low-income communities and vulnerable populations across the country. Often, these communities' water sources suffer due to downstream impacts of agricultural runoff, sewage, industrial waste and/or mining. The Rio Grande is one such body of water affected by all of these activities that supplies drinking water for more than two million people.[5] The communities that rely on the Rio Grande for drinking water include predominately Latino '*colonias,*' in which 25 percent of residents lack treated water and one-third live below the poverty line.[6] Communities like these around the nation are disproportionately affected by drinking water contamination. Additionally, disadvantaged

[4] https://www.epa.gov/sites/production/files/2015-11/documents/nh_bog.pdf
[5] http://www.ibwc.gov/crp/riogrande.htm
[6] http://www.pacinst.org/wp-content/uploads/sites/21/2013/02/water_and_environmental_justice_ch33.pdf

communities may be affected by mass residential shutoffs of water due inability to pay increasingly expensive water bills.

Public Health

Contaminated water bodies can significantly harm community health. In 2010, 1.1 million pounds of toxic waste from nearby industrial plants was discarded, directly and via streams, into the James River in Virginia.[7] This waste contained arsenic and benzene – known carcinogens that have also been associated with developmental disorders. These were effects that the local community had to deal with. Even those who do not have direct contact with polluted water can still experience the health effects of water contamination. For those whose water is so contaminated it cannot be used or whose water has been shut off, lack of water may affect simple tasks such as cleaning a wound, preparing infant formula or maintaining basic hygiene.

Water Dependent Economies

Communities with economies embedded in fishing, tourism and manufacturing are more susceptible to harmful changes in water quality. American Indian tribes, like those in the Puget Sound region, exemplify this highly dependent relationship. In 2007, hatchery and harvest operations reeled in about $18 million to tribal personal income.[8] In areas where the average annual per capita income is around $10,000, a decline in the availability of healthy fish can significantly impact the economies of these communities. Additionally, communities that are not located near water still suffer the effects of water pollution and its impact on drinking water. As certain types of manufacturing (such as food and beverage) require high quality water, the livelihoods of communities housing these industries are tied to the health of water sources, even if they are miles away. Improving water quality is not just a public health initiative, but itis also a step toward a sustainable economy.

> ***"Drought conditions in watersheds concentrate contaminants. This issue is preventing growth in some communities because of drought."***
>
> **Chairman Shawn Yanity**
> **Stillaguamish Tribe**

[7] http://www.environmentvirginia.org/news/vae/virginia-second-worst-state-toxic-chemicals-dumped-its-waterwaysdri

[8] http://www.westcoast.fisheries.noaa.gov/publications/hatchery/ps_deis/pshatcheries_deis_full_07-10-14.pdf

III. WATER AND AGRICULTURE

"Riparian vegetated buffer zones not only filter nutrients from the water, but also provide habitat for wildlife, promote good farming practices and protect source water."

Jeff Tiberi
Policy Director,
Montana Association of Conservation Districts

Agriculture accounts for about 40 percent of the nation's water use.[9] Aside from groundwater, much of the water used for irrigation in agriculture originates in rivers, wetlands and other surface waters. Pollution of these sources affects the quality of crops that can be produced and sold. Toxins like PCBs and arsenic, found in some of the waters previously mentioned, are absorbed by plants via roots and can cause harmful health effects if ingested. These contaminants can end up in surface water, and can infiltrate aquifers and groundwater.

A. NUTRIENT RUNOFF

Nutrient pollution is one of America's most widespread, costly and challenging environmental problems. When too much nitrogen and phosphorus enter the environment – usually resulting from a wide range of human activities - it impacts many streams, rivers, lakes, bays and coastal waters. Over the past several decades, excess runoff in various areas has resulted in serious environmental and human health issues, also impacting the economy.

Excessively high levels of nitrogen and phosphorus in water causes algae to grow faster than ecosystems can handle. Significant increases in algae harm water quality, food resources, habitats and oxygen levels that fish and other aquatic life need to survive. Large growths of algae called algal blooms can severely reduce or eliminate oxygen in the water, leading to illness and death in large numbers of fish. Some algal blooms are harmful to humans because they produce bacterial growth that can make people sick if they come into contact with polluted water, consume tainted fish or shellfish, or drink contaminated water.

Photo Source: Bill Yates

Nutrient pollution in groundwater - which millions of people in the United States use as a drinking water source - can be harmful, even at low levels. Infants are particularly vulnerable to nitrogen-based compounds called nitrates in drinking water.

B. GULF OF MEXICO 'DEAD ZONE'

Hypoxia is an environmental phenomenon in which the concentration of dissolved oxygen in the water column decreases to a level that can no longer support living aquatic organisms. The second largest hypoxic zone in the world is in the United States, in an area known as the 'Dead Zone' in the northern Gulf of Mexico, where concentrations of dissolved oxygen are less than 2 mg/L (2 ppm). The approximate extent of this hypoxic zone is 5,483 square miles (about the size as the state of Connecticut).[10]

[9] http://water.usgs.gov/edu/wateruse-diagrams.html
[10] https://coastalscience.noaa.gov/news/coastal-pollution/noaa-partners-predict-average-dead-zone-gulf-mexico/

The Hypoxia Task Force (HTF) is a partnership of 12 states, five federal agencies and a tribal representative that work collaboratively to reduce nutrient pollution in the Mississippi/Atchafalaya River Basin and the hypoxic zone in the Gulf of Mexico. The Mississippi River watershed drains 41 percent of the contiguous United States and includes waters from several major river systems, including the Missouri/Platte River Basin, the Ohio/Tennessee River Basin and the Arkansas/Red/White River Basin. The tributaries of the Mississippi River, which run through many rural farm communities, are often sources of nutrient leakage to the river. The Task Force has been developing initiatives that are voluntary, incentive-based, practical and cost-effective to reduce nutrient runoff. Member states have developed nutrient reduction strategies specific to their areas. Some states have already completed their strategies, while others continue to draft final plans. The HTF is also working with the agricultural industry to reduce nutrient runoff and improve water quality in the Gulf.

Atchafalaya Delta. Photo Source: Hypoxia Taskforce

C. AGRICULTURE: WORKING TOWARDS CLEANER WATER

Precision Agriculture

Precision agriculture, also known as 'site-specific crop management,' is an information- and technology-based agricultural management system used to identify, analyze and manage variability within fields for optimum profitability, sustainability and environmental protection. By applying precision agriculture practices, producers are able to specify farm input needs (including nutrient and pesticide application, tillage and irrigation) throughout an individual field, reducing cost and runoff while improving water quality. Precision agriculture can also help to conserve water.

Louisiana farmer learns about crop rotation.
Photo Source: USDA NRCS

Precision agriculture often requires a willingness to experiment in order to determine what is most effective for particular sites. For example, analyzing natural soil variability of different areas can allow decisions to be made about which crops should be planted according to irrigation needs. Not only is this more

sustainable, precision agriculture is typically a more economical approach for farmers because it allows more precise application of fertilizers and reduces irrigation costs.

> ***"Green infrastructure is not just for urban areas but can be utilized for managing wetlands and riparian areas. In rural areas, green infrastructure filters water and improves water quality."***
>
> **Dr. Robert Cope, DVM**
> **Commissioner**
> **Salmon, Idaho**

Soil Health

Quality soil health is crucial in the maintenance of functional living ecosystems that support plants and animals. By using farm practices that preserve soil health – including no-till, cover cropping and diverse rotations – American agriculturalists can improve soil quality. Utilizing these methods increases microbial activity in soil, which allows for more carbon sequestration, water retention and improved wildlife habitat. Furthermore, healthy soil usually increases yields that make farms more sustainable and economically competitive.

In the context of water, healthy soil helps regulate the system by controlling infiltration of rainwater, snowmelt and irrigation water. Nutrients dissolve as water flows over soil, which is beneficial for crop growth. Making decisions about the most productive soil is site- and crop-specific; however, sandy soil tends to drain more quickly than clay soil, thus requiring more frequent irrigation. Deeper soils have more room for roots and thus increase water retention, when compared to shallower soils that lie closer to the surface of the bedrock. Soil health assessments can help farmers determine whether certain sets of practices are sustainable for their land.

Water Conservation

Agriculture accounts for 40 percent of the nation's consumptive water use (water lost to the environment by evaporation, crop transpiration or incorporation into products).[11] The increased demand for water to support a growing population can put stress on water resources. One of the most prominent technological improvements is the installation of drip irrigation systems, which can save up to 80 percent more water than conventional irrigation by delivering water directly to a plant's roots. Instituting an irrigation schedule has also been effective in minimizing wastewater, as well as adding remote monitoring and control systems on some farms. Other farmers have decided to maximize use of natural water sources by capturing and storing water both through municipal water wells and manmade ponds on their own farms. Elevating awareness about drought-tolerant crops in arid climates has become particularly important for the 17 western states that produce most of the United States' food.

> ***"We must do a better job of differentiating between the cost of water and the value of water. Maintaining and improving water infrastructure is a small investment that is essential to public health and welfare."***
>
> **Representative Tom Sloan**
> **Kansas State Representative**

California, the nation's largest agricultural producer, has a particular need to conserve water. Largely encompassing an arid Mediterranean climate, the state is a leading producer of some commodities that require large amounts of water, including almonds, rice, alfalfa and cattle. To sustain these goods, in one average year, California irrigates 9.6 million acres using 34 million acre-feet of water of the 43 million

[11] http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib99.aspx

acre-feet diverted from surface or groundwater.[12] Some California agriculturalists are turning to "dry farming" methods as a solution for some crops, which require less constant irrigation through the use of water-retaining compost and mulch.

Food Waste

Another important factor in both agriculture and water conservation is better management of food waste. Food waste costs the American public about $165 billion each year. Waste also ends up in landfills and accounts for the largest component of U.S. municipal solid waste and methane emissions. Current estimates put global food waste between one third and one half of all food produced. In terms of water and energy, this is a major loss of resources. Studies show that the water wasted on this uneaten food could be enough to meet the domestic needs of 9 billion people.[13] In 2013, the U.S. Department of Agriculture and the U.S. Environmental Protection Agency launched the U.S. Food Waste Challenge, calling on entities across the food industry – farms, agricultural processors, food manufacturers, grocery stores, restaurants, universities, schools and local governments – to join efforts to reduce, recover and recycle food waste. Better management of food waste will not only conserve water but have other positive environmental and economic impacts as well.

An example of river restoration using conservation practices such as fabric and willow planting.
Photo Source: Jeff Tiberi

[12] http://www.water.ca.gov/wateruseefficiency/agricultural/
[13] http://feedbackglobal.org/food-waste-scandal/

IV. CITIES TO FOLLOW

A. MILWAUKEE, WISCONSIN

For the past 20 years, the Milwaukee Metropolitan Sewerage Department (MMSD) has been involved in a variety of projects that promote wastewater recapture and usage. Approximately 1.1 million people fall under the jurisdiction of the MMSD, so their task is a large one. By using two water reclamation facilities (Jones Island and South Shore), coupled with their deep tunnel systems, the MMSD has managed to capture 98.3 percent of water and wastewater for treatment. The deep tunnel systems have been in place since 1994, and enable the two water reclamation facilities to hold and clean far more water than they would otherwise. By promoting this type of infrastructure, Milwaukee has seen massive success in wastewater capture and treatment, and can thus extend its efforts into managing energy efficiency. The MMSD began work on further mitigation goals, including Greenseams, green infrastructure, green roofs, rain barrels, the landfill gas project and solar energy installation, as well as many others. These projects have reduced treatment costs and carbon emissions but increased water capture, land preservation, career opportunities and sense of community. Milwaukee's case study has shown that proper funding and integration of various infrastructures can promote sustainability across numerous environmental and human sectors. Recent reports show that these water quality improvements have demonstrated economic output to Milwaukee citizens and taxpayers, supporting 1,368 jobs and generating $57.2 million in annual wages and salaries.[14] For more information, visit: http://www.mmsd.com/.

> ***"Everyone is upstream or downstream from someone else, so we always need to consider that when we're treating wastewater that ultimately becomes someone else's drinking water down the road."***
>
> **Kevin Shafer**
> **Executive Director,**
> **Milwaukee Metropolitan**
> **Sewerage Department**

B. NEW YORK CITY, NEW YORK

The New York City Department of Environmental Protection has historically funded a long-term water protection program that protects high quality upstate sources of drinking water for nine million water consumers.[15] It maintains the largest unfiltered water supply in the United States. A partnership was formed to implement a comprehensive and innovative watershed protection plan, through a New York City Watershed Agreement (MOA) signed in January 1997. The Agreement addresses protection and ensures that New Yorkers continue to enjoy high quality, affordable drinking water, and avoid the need for expensive filtration - a cost estimated at $8.0 to $10.0 billion to construct the facility and approximately $1.0 million each day to operate and maintain the filtration plant. Most of the supply water is provided by precipitation (rain and snow), and is collected within the reservoirs, where it is managed extensively to protect its quality. Regular monitoring for lead exposure, as well as weekly sampling for C*ryptosporidium* and *Giardia,* has been conducted since the 1990s. The rehabilitation of the Gilboa Dam, which was designed to improve the dam's ability to withstand flooding from large storms that could affect water quality, was completed in 2014. Various municipal programs, including some that increase efficiency standards, have been implemented to conserve water as well. For more information, visit: http://www.dec.ny.gov/lands/25599.html.

[14]Economic Impact of the Milwaukee Metropolitan Sewerage District, prepared by Bret J. Maybee, Milwaukee Region 7 Regional Economic Development Partnership, December 2015.
[15]http://www.nyc.gov/html/dep/html/watershed_protection/index.shtml

C. DUBUQUE, IOWA

The city of Dubuque developed a unique partnership of local, state and federal funding partners and private sector vendors to implement innovative technologies and empower citizens and businesses with information and tools needed to reduce water costs and use. Dubuque's Smarter Water pilot study was conducted in conjunction with the City's community-wide water meter replacement project. Technology interfaced with the City's system to process water consumption data and provide real-time visibility into the overall city water consumption. More than 300 households participated in this 12-month study, which helped reduce water utilization by 6.6 percent and increased leak detection and response eight-fold among participants. The online Smarter Water Portal provided a customer-specific, integrated view of water usage, collecting data hourly and transmitting it daily. Usage data could be displayed in gallons, cost or by carbon footprint. The Portal also provided leak detection and notification, historical usage data and comparative data. Additional information is available at www.cityofdubuque.org/smarterwater.

D. BOISE, IDAHO

The Boise River in Idaho faces challenges associated with nutrient runoff – specifically, the emergence of algae blooms due to high phosphorus levels. Upcoming regulations require the city to reduce its phosphorus runoff by 98 percent; 93 percent of which can be completed by improving treatment facilities. To address the remaining 5 percent, Boise has devised an innovative solution it calls 'Dixie Drain' – a new facility that collects ground and surface water from agricultural operations in the lower watershed. Its construction cost the same as upgrades to existing facilities, but helped remove twice the amount of phosphorus with double the processing. Since the 'Dixie Drain' was installed, the river's sediment levels have also greatly decreased, improving river aesthetics and habitat for fish and other wildlife. For more information, visit: http://publicworks.cityofboise.org/news-releases/2016/08/boise-city-opens-national-precedent-setting-phosphorus-removal-facility/.

E. WASHINGTON, DISTRICT OF COLUMBIA

In September 2016, the District of Columbia launched the nation's first Environmental Impact Bond (EIB) to fund its DC Clean Rivers Project, a $2.6 billion program to control stormwater runoff and improve the District's water quality. The new $25 million, tax-exempt EIB offers a new type of financial mechanism to fund environmental capital projects. It is part of a pilot program in partnership with Harvard University's Kennedy School of Government, in which the university provides technical assistance to DC Water to explore using 'Pay for Success' financing models. This model serves as private sector debt financing for the entire costs of a government project. However, investors receive a repayment only if the environmental performance is successful, though it does accrue interest. The government entity carries no financial risk for the project (unlike in a traditional municipal bond, where the bond buyer receives principal and interest payments regardless of the environmental outcome). The EIB proceeds will be used to construct green infrastructure designed to mimic natural processes to absorb and slow surges of stormwater by reducing the frequency and volume of combined sewer overflows (CSOs) that pollute the District's waterways. This is a growing environmental challenge due to increased frequency and severity of intense rainfall events. The EIB allows DC Water to attract private sector investments in green infrastructure whereby the costs of the green infrastructure are paid for by DC Water, but the performance risk of the green infrastructure is shared amongst DC Water and private investors. As a result, the EIB payments will vary based on the success of the environmental outcomes, which are

measured through a rigorous evaluation. The DC Water EIB could serve as a model funding mechanism that other municipalities can leverage to advance the use of green infrastructure to improve water quality in their communities. For more information, visit: https://www.dcwater.com/news/listings/press_release783.cfm.

F. MESA, ARIZONA

The City of Mesa underwent an extensive process to develop a comprehensive Water Resources Master Plan to identify actions needed to provide its city with reliable water supplies, focused on meeting current demand and ensuring continued future protection. The Plan extensively exploits opportunities for maximizing reclaimed water resources. The City of Mesa also developed a comprehensive drought plan to ensure it meets necessary requirements to protect the water supply portfolio. The Plan also has provisions to protect groundwater through aquifer management strategies and robust local and regional recharge. In its development, the City underwent a public engagement process and specifically worked to assist tribes in the area. Mesa has also been a leader in advocating for renewable water supplies and in bringing parties together toward regional cooperation to protect water supplies for the future. For more information, visit: https://www.mesaaz.gov/home/showdocument?id=5456.

V. LOCAL GOVERNMENT CONCERNS

The Protecting America's Waters Workgroup conducted open public meetings as well as Workgroup meetings to hear from diverse local and tribal governments across the country. Despite diversity in size, governmental structure and demographics, local governments had many common concerns and challenges. Issues such as affordability, communication and trust consistently emerged during the Workgroup's outreach. Similarly, diverse local government representatives all desire to protect the economy and health of their communities. They view safe, clean and affordable drinking water as a cornerstone of their communities' well-being. This is a broad summary of the issues of concern for local and tribal governments.

A. REBUILDING TRUST

The disastrous situation in Flint has undoubtedly fueled a systemic lack of public trust regarding the safety of our nation's drinking water - an issue that we need to work on together to resolve. Many local governments are now concerned with the challenges of rebuilding trust in their communities – primarily, determining how to ensure that events of the past serve as learning experiences and are not repeated. When citizens' lives have been compromised as a result of administrative problems or dismissal, it is very difficult for communities to trust any policy or regulation that follows.

> ***"What is important is what the real harm is, what the real risks are and how they are addressed. How do we communicate drinking water concerns without people shifting to bottled water and not having faith in our local resources?"***
>
> **Judy Sheahan,**
> **U.S. Conference of Mayors**

In Flint, Michigan, addressing trust issues and accountability will be of utmost importance as will be improving drinking water itself – regardless of the safeguards (water filters and testing) put in place. Many citizens will still be extremely wary of drinking tap water for years to come as a result of the crisis that occurred. Federal, state and local governments must work together on continued monitoring and public engagement to restore trust in the community. When communities cannot trust their drinking water to be safe, many other cornerstones of environmental policy are at risk of crumbling.

> ***"One of the challenges of Flint is the notion that water systems are unsafe everywhere in the United States. That is not true, but we have a lot to do to rebuild trust and to share best practices as part of that message."***
>
> **Jim Taft**
> **Executive Director,**
> **Association of State Drinking Water Administrators**

In Colorado Springs, Colorado, a lack of information delivered in a timely manner from federal and state sources to the local Security Water and Sanitation District about an EPA Health Advisory for PFOA/PFOS contaminants produced citizen alarm about the safety of drinking water. Without clear information, citizens responded to the crisis by buying bottled water because they thought it was a safer option. Even though the District has worked to eliminate these contaminants, the public is still distrustful of their water, questioning why they must pay their water bills when they are also purchasing bottled water.

In Toledo, Ohio, where toxic algae blooms threatened the drinking water supply and health of its residents two summers in a row, there will be trust issues to overcome while action is still being developed.

In Charleston, West Virginia, where water supplies were contaminated after a coal-washing chemical spill, it is imperative that local, state and federal government continue to work together to study health impacts. These entities must also be able to provide peace of mind and rebuild trust for these communities - not only in their officials, but also in their water supplies.

In all communities, we must work together toward developing the cooperation and collaboration necessary at all levels of government to rebuild the trust necessary to provide clean and safe drinking water for all our citizens.

B. DIRECT COMMUNICATION TO LOCAL & TRIBAL GOVERNMENT

Much discussion has been recently raised regarding the lack of direct communication among all levels of government. In an August 12, 2016 letter,[16] the LGAC stated that there seems to be an assumption that when the EPA puts out important and pertinent information meant to be disseminated, it trickles up and down all levels of government, eventually reaching the area where will be most valuable. The Committee cited recent widespread confusion among local governments regarding water and lead-testing protocol after the Flint crisis. While the Committee recognized that direct communication is an especially challenging task in the context of modern tendency toward information overload, it emphasized that "*getting information into the hands of the public, often where it will do the most good, must be a priority for all levels of government*."

[16] https://www.epa.gov/sites/production/files/2016-08/documents/lgac_2016_communications_letter.pdf

At the federal level, the EPA has started putting these recommendations into action by working directly with states, beginning by sending letters out directly to governors in an attempt to be more direct. This action is a first step toward a larger, more comprehensive communication strategy that needs to be developed by the EPA. By opening direct lines of communication between the agency and all levels of government, misinterpretation can more easily be avoided and missing information can be eliminated altogether. This could also improve the reputation that the EPA holds in regard to transparency. While methods of communication within each level of government seem to be effective, across the board, they are inconsistent. By maintaining different communication plans, confusion and misunderstanding can arise, which is particularly problematic in the context of important issues like drinking water safety. In addition, the EPA should explore guidance needed for local governments to notify the public about water and contamination issues in a timely manner. This notification should be provided in the languages necessary to reach all residents. For example, Flint residents did not hear about initial TTHM in the water until several days after the violation was discovered. After lead contamination was discovered in some Latino communities, residents had no idea that they should not drink the water. When they finally were effectively notified, some boiled the water because they thought that would help. They had not been told, in Spanish, that filters or bottled water were necessary. More dialogue needs to occur in order to develop common communication practices, which could be beneficial for the EPA and governments at all levels.

> ***"The Drinking Water State Revolving Fund (DWSRF) needs to be emphasized for environmental justice communities."***
>
> **Teri Goodmann**
> **Assistant City Manager**
> **Dubuque, IA**

> ***"It is exciting to be a part of such a collaborative effort to protect America's water supply. We owe it to our citizens to make sure there is clean and affordable water for everyone in our community. The delivery of clean water as a necessity should not be cost prohibitive."***
>
> **Mayor Karen Freeman-Wilson**
> **Gary, Indiana**

C. COST BURDEN ON LOCALS

One of the main focuses of the Safe Drinking Water Act is its core philosophy of "clean, safe drinking water for all." However, in many small and low-income communities, there are not adequate resources available to meet needs. Local governments and officials are concerned with ways that changes made to infrastructure and other investments can impact their residents and stretch them beyond their means. At its core, this is an environmental justice issue, in which many residents and communities who do not have the resources for high-technology water infrastructure could be left with drinking water that is not clean and safe.

Local officials question how funding and other resources will be provided to support these communities. Residents themselves can hardly be expected to cover the full cost of clean and safe drinking water. Therefore, state and federal government resources will be needed to deliver the necessities that they require. Programs such as increased funding and grant opportunities, incentivizing the private sector to invest and continued monitoring of at-risk areas are all strong methods that can relieve the financial burden of clean drinking water on locals. As was seen with the water shut-offs for thousands of Detroit residents in 2014, passing the cost of old infrastructure onto residents in a city suffering from high levels of poverty is not sustainable or effective. The EPA should provide guidance on the public health impact of shut-offs.

> ***"We need a change in culture to solve the water crises in our cities. We must work together to solve the problems rather than impose financial fines on cities who already cannot pay."***
>
> **Mayor Elizabeth Kautz**
> **Burnsville, Minnesota**

D. BEYOND THE SAFE DRINKING WATER ACT (SDWA)

Under the Safe Drinking Water Act, states are able to establish and enforce drinking water treatment standards. However, protecting water quality, safety and health concerns at the source is a more thorough and cost-effective approach. Preventing contaminants from entering source water prevents exposure to pollutants consumed by fish, as well as reduces contamination by toxic algal blooms, both of which can introduce pathogens and other risks into the realm of human health. Runoff from construction, urban and agricultural areas can also introduce problems into water sources that become more difficult to mitigate and overwhelm treatment plants.

The New York City case study is one model in which a municipality is monitoring its citizens' drinking water through direct source water protection in order to achieve the highest quality standards. The City's Source Water Assessment program has proven this approach cheaper, as well as a way that the cost is not borne by the ratepayer. One concern the EPA has noted is the fact that private wells are not covered by SDWA. Protecting water at its source rather than exclusively focusing upon drinking water treatment could be part of a solution to that issue. The LGAC has recommended that the EPA partner with the Source Water Collaborative and other groups active in source water protection in order to achieve effective communication about these issues to all levels of government.

E. WATER AND ENERGY NEXUS

> ***"When you save energy, you save water. And by saving water, you save energy."***
>
> **Scott Bouchie**
> **Director of Sustainability**
> **Mesa, Arizona**

Energy and water are closely linked. A clean and safe reliable water system consumes energy. Clean water that flows out of a faucet needs energy in many stages of processing and transport before it gets to the tap. A system of pipes and delivery water, depending on source water locality and quality, often requires electricity for pumping and treatment. The EPA estimates that drinking water and wastewater systems account for approximately 3 to 4 percent of national electricity consumption, equivalent to approximately 56 billion kilowatts or $4 billion each year. For municipal governments, water utilities can account for about 30 to 40

percent of total energy consumed.[17] Water conservation and energy conservation means moving and treating less water, which helps reduce the strain on water supplies and delivery systems. New technologies in the energy and water sectors could shift water and energy demands. Water availability will affect the future of the water-energy nexus, and steps must be taken to ensure this system remains in balance. An important element of the infrastructure planning process is the evaluation of all of the alternatives for meeting infrastructure needs. A more integrated approach to the interconnected energy and water challenges could stimulate the development and deployment of solutions that address objectives in both domains. Water Sense is an EPA water efficiency program which has information on saving water and labeling products that use at least 20 percent less water than their less efficient counterparts.[18] The EPA's Re-Powering America's Land Initiative encourages renewable energy development on current and formerly contaminated lands, landfills and mine sites.[19] The Initiative identifies the renewable energy potential of sites and provides other useful resources for communities, state and local governments, or anyone interested in reusing these sites for renewable energy development. This program may be of assistance in identifying alternative energy opportunities for water infrastructure needs.

F. SMALL SYSTEMS AND SUSTAINABILITY

More than 97 percent of the 150,000 public water systems across the United States serve fewer than 10,000 people.[20] More than 80 percent of these systems serve fewer than 500 people. Small drinking water systems face challenges in providing reliable drinking water and meeting federal and state regulations. These challenges can include a lack of financial resources, aging infrastructure and retaining and recruiting systems operators.

More mandates added for small systems exceed the resources the community has to pay. The **City of Salmon, Idaho** was faced with adding treatment technologies to address *Cryptosporidium* at an approximate cost of $6 million. This action raised the water rates from $18.00 to $65.00 per month. In this community, with many living below the poverty line, this increase in costs is difficult to sustain. Likewise, the **City of Hattiesburg**, **Mississippi** was forced to raise water rates by 55 percent. This community has many individuals living below the poverty line, and is still in recovery from the Gulf Coast's Hurricane Katrina.

> ***"Ensuring safe drinking water for all Americans, whether they live in a small town or a big city, is a priority for EPA."***
>
> **Joel Beauvais**
> **Assistant Administrator,**
> **EPA Office of Water**

[17] https://www.epa.gov/sustainable-water-infrastructure/energy-efficiency-water-utilities
[18] https://www3.epa.gov/watersense/
[19] https://www.epa.gov/re-powering
[20] https://www.epa.gov/water-research/small-drinking-water-systems-research-0

"Small and rural communities in Mississippi need direct on-site assistance. Webinars, online tools and fines do not help us at the local level. What we need is immediate help. We are very grateful for the EPA funding assistance which has allowed many rural and small communities in Mississippi to have access to drinking water that would not have been otherwise affordable. We want to be partners to make clean water accessible for all our citizens."

Mayor Johnny DuPree
Hattiesburg, Mississippi

G. LEAD & COPPER

The crisis in Flint has brought increased attention to the challenge of lead in drinking water systems. However, over the past three years, EPA data shows that 41 states had Action Level Exceedances (ALEs), showing levels of lead in drinking water that exceed the threshold considered safe. In 1986, Congress amended the Safe Drinking Water Act (SDWA) to prohibit the use of pipes, solder or flux that were not "lead-free" in public water systems or plumbing in facilities providing water for human consumption. Despite this ruling, estimates indicate there are between 6.5 to 10 million lead service lines in thousands of drinking water systems across the country. Many older buildings including schools and homes possess plumbing materials that contain lead.

The Safe Drinking Water Act establishes drinking water regulations that either establish a maximum contaminant level (MCL) or a treatment technique "to prevent known or anticipated adverse effects on the health of persons to the extent feasible." The Lead and Copper Rule (LCR) is a treatment technique regulation which requires water systems to conduct tap sampling for lead and copper to determine the actions that must be taken to reduce exposure. The LCR established action levels of 0.015 mg/L (15 ppb) for lead and 1.3 mg/L (ppm) for copper based on feasibility.

"What we need is an actionable plan to figure out what we need to do, for our public systems to replace pipes, solder or whatever it takes. Ultimately, we need solutions for actions at the state, county, home and business level as well."

Commissioner Victoria Reinhardt
Ramsey County, Minnesota

On April 29, 2014, the LGAC provided recommendations to the EPA, which are being carefully evaluated in developing proposed LCR revisions.[21] The EPA established a working group under its National Drinking Water Advisory Council (NDWAC) which provided the EPA with extensive recommendations addressing a range of topics, including lead service line replacement, public education, corrosion control treatment, monitoring requirements and establishment of household action lead/copper requirements on December 15, 2015. The EPA is actively working on revisions to the LCR and expects to issue a proposed rule update in 2017.

In response to the Flint water crisis, the EPA bolstered its efforts nationwide by sending out letters to governors outlining specific steps to enhance oversight of the EPA's Lead and Copper Rule implementation in states.[22] In Michigan, officials are exploring the possibility of implementing a stricter lead and copper standard in the state.

[21] https://www.epa.gov/sites/production/files/201510/documents/lgac_copper_and_lead_letter_of_recommendation.pdf
[22] https://www.epa.gov/dwreginfo/epa-letter-governors-and-state-environment-and-public-health-commissioners

As part of the EPA's increased oversight of the LCR implementation, the EPA sent letters in February 2016 to governors and state environmental commissioners to ensure consistency with EPA regulations and guidance. The letters requested that states work collaboratively with the EPA to address deficiencies and improve transparency and public information regarding the rule's implementation. States' responses indicate they are taking steps to strengthen implementation of the LCR. The EPA will continue to follow up on LCR implementation and will seek to promote adoption of best practices among states in this area. Lead can enter drinking water when leaded plumbing materials such as pipes and fixtures corrode, especially where the water is highly acidic or has low mineral content. Many of these lead sources are found in private homeowners' service lines, making regulations difficult to address.

> ***"The schools in Tompkins County were at the forefront of discovering lead in drinking fountains and sinks. Of course the lead itself is a problem, but the confusion and delays around communication and testing protocols highlights the need for a cohesive planning approach where we can be on top of such occurrences."***
>
> **Carolyn Peterson**
> **Former Commissioner,**
> **Tompkins County, New York**

Schools and Daycare Facilities

One of the greatest concerns on Americans' minds is the safety of children in the context of water crises, as lead and copper poisoning can have serious developmental consequences. Therefore, it is imperative that schools and daycares be a top priority for ensuring a high water quality standard, free from any contamination.

Residential Homes

Communities are also worried about how to remedy residential sources of lead and copper contamination in drinking water. As in the case of Flint, many of the water service lines that provided residential areas with water were constructed with lead. However, the exact locations of these lead lines were unknown, thus officials could not specifically say that water from a lead line had been tested. Communities and local officials are concerned about lead contamination in residential homes and how those might be replaced if lead is determined to be a concern. Officials and communities alike support the modification of these aging lines, but if not all of them can be found, there may be areas still at risk for drinking water contamination. Therefore, it is imperative that officials and communities be able to identify the locations most susceptible to lead poisoning in order to protect vulnerable groups. There is also concern about liability with no action.

H. HYDRAULIC FRACTURING

Many communities have expressed concerns about hydraulic fracturing. Hydraulic fracturing (informally known as hydrofracking, fracking, fracing or hydrofracturing) is a process that typically involves injecting water, sand and/or chemicals into a bedrock formation under high pressure via a well. This process is intended to create new fractures in the rock as well as increase the size, extent and connectivity of existing fractures in order to extract natural gas. This method of extraction can contaminate drinking water sources, as well as exacerbate potential seismic concerns that disrupt or otherwise negatively impact local communities. Fluid spills, inadequate treatment and disposal of wastewater and fracturing directly into drinking water sources all have the potential to disrupt and contaminate local drinking water, affecting the health of the communities that utilize it.

Congress requested that the EPA study the relationship between hydraulic fracturing and drinking water. The EPA produced an assessment report that synthesizes available scientific literature and data to determine the potential for change in the quality or quantity of drinking water resources as a result of hydraulic fracturing for oil and gas. The report also identifies factors that affect the frequency or severity

of any potential changes.[23] The report may be useful to tribal, state and local officials; industry and the public, in order to better understand and address any vulnerabilities of drinking water resources due to hydraulic fracturing activities. In September 2016, 17 wells were shut down in Osage County due to concerns about drinking water after a 5.6 magnitude earthquake struck the northwestern region of Oklahoma.[24] An increase in seismic activity of magnitude 3.0 or greater has been linked to underground injection of wastewater from oil and natural gas production. Therefore, there still seems to be some uncertainty in understanding the full environmental and public health impacts of hydraulic fracturing. The LGAC urges the EPA to continue its investigation of impacts on drinking water, as well as continue its dialogue with states, tribes and local governments about local impact concerns.

I. DROUGHT & OTHER WEATHER EXTREMES

Persistent drought has imposed dismal impacts on agricultural production and drinking water supplies nationwide. In many areas, the effects of climate change have increased water demand while diminishing water supplies, altering the water cycle dramatically. Rising temperatures cause snowmelt to occur earlier in the year than it has historically, changing the annual schedule for some crop production and eliminating available water supplies during some periods.

Water quality is susceptible to risk in areas experiencing increased rainfall such as the Northeast and Midwest regions. Water overload can overwhelm sewer systems and water treatment plants, threatening drinking water quality in some areas. Extremely heavy downpours can increase pollution and nutrient runoff into water supplies, putting American citizens' health at risk if left unaddressed.

Areas frequently experiencing extreme droughts will face fewer available water resources for raising livestock and crops in the coming years. However, areas that experience heavy rainfall and flooding as a consequence of climate change will also encounter challenges ranging from damaged crops to increased soil erosion that threatens drinking water quality.

A common side effect of drought is increased prevalence of wildfire. Wildfires can change the physical and chemical traits of soil and streams, increasing contaminant content. Severely burned watersheds may experience increased flooding and debris flow, which can overwhelm the drinking water system. Natural disasters can do the same. During 2011's Hurricane Irene, wellheads in many communities were shut down in response to an overwhelmed system. When water was restored to many wellheads unexpectedly, contaminated water was unintentionally pumped into

> ***"The Brownfields job-training program could be a critical resource for municipalities in seeking to leverage local skills and training programs for water treatment operators, especially in small, disadvantaged and low-income communities."***
>
> **Councilor Jill Duson**
> **Portland, Maine**

[23] U.S. EPA. Assessment of the Potential Impacts of Hydraulic Fracturing for Oil and Gas on Drinking Water Resources (External Review Draft). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-15/047, 2015.

[24] https://www.ok.gov/portal/search.php?cref=http%3A%2F%2Fwww.ok.gov%2Fsoonersearch%2Fxml%2Fcse_SoonerSearch.xml&q=osage%20wells%20shutdown&as_epq=&as_oq=&as_eq=&as_occt=any&sort=&num=10&btnG=Search+Now&cof=FORID%3A9%3BNB%3A1%23947

storage tanks, putting drinking water supplies across the Northeast at risk.[25]

One major source of drinking water in the United States is the Colorado River, supplying more than 30 million people in the Southwest region. Over the past few years, drought as a result of climate change has decreased water supply in the relevant reservoirs.[26] Not only does climate change imply uncertainty about drinking water supply, it also affects regional capacity for hydropower and annual expected snowmelt water sources.

VI. RESPONSE TO THE CHARGE: FINDINGS & RECOMMENDATIONS

The following findings and recommendations are provided for the EPA to consider including in a National Drinking Water Action Plan.

A. ADVANCING NEXT GENERATION SAFE DRINKING WATER ACT IMPLEMENTATION

The LGAC identifies key opportunities for federal, state, tribal and local government to work together to implementation of Safe Drinking Water Act regulations and programs, including ways to increase communication, public awareness and accountability.

Understanding the Value of Water

Every American should have an awareness of the value of water as a driver of public health, economic prosperity and quality of life.[27] The EPA can assist local governments in developing "value of water" educational materials and toolkits for local governments so that citizens can make good investment choices in their communities and in their personal budgets.

Recommendations:

- The EPA should develop a comprehensive Communication Strategy as part of a National Drinking Water Action Plan, which aims to assist local governments in communicating messaging for local governments especially in understanding the value of water, citizen actions and a better understanding of health advisories.

- The EPA should take the lead to develop a compendium of best practices, highlighting those communities whose citizens have a strong understanding of the cost of delivering safe, clean drinking water as well as the cost of effectively treating wastewater.

Protecting Water at the Source

Protecting source water from contamination reduces the cost of treatment and also reduces the risks to public health from exposure to contaminated water. Communities who do not have access to regulated public water systems are especially vulnerable to health risks. Because source water does not fit within boundaries of political subdivisions, it is imperative that state, local and tribal governments collaborate on protecting source water at the watershed level.

[25] http://www.waterrf.org/resources/Lists/PublicSpecialReports/Attachments/Hurricane_Irene_Survey_Report.pdf
[26] https://www3.epa.gov/climatechange/impacts/water.html
[27] https://www.epa.gov/sites/production/files/2016-08/documents/lgac_2016_communications_letter.pdf

Recommendations:

- The State Source Water Assessment programs need to be updated. The EPA should provide guidance on protective measures necessary to protect and promote clean drinking water.

- The EPA should assist states, tribes and local governments in identifying ways they could work together to protect source water through regional partnerships.

- The EPA should identify and highlight best practices where local governments and communities have protected source water through local actions, should identify tools and resources, and should also provide appropriate contact information.

- The EPA should continue its efforts with the Science Advisory Board (SAB) to fully investigate the health impacts of hydraulic fracturing on drinking water quality and quantity. This should include a cumulative risk analysis.

- The EPA should continue to work on the Toxic Substances Control Act (TSCA) so that chemicals can be listed and monitored, especially focusing on identifying chemicals that impact drinking water.

- The EPA should fully implement the Pharmaceutical Rule and Waste Generator Rule so that water sources can be protected from improper disposal of pharmaceuticals and other hazardous waste.

- The EPA, in coordination with the Bureau of Land Management (BLM), should identify and monitor the estimated 500,000 abandoned mines and prioritize those most hazardous and most likely to negatively impact source water and wells. Abandoned uranium mines are also an issue.

- The EPA should work with the military installations to identify potential areas of contamination and work on plans to identify these areas of potential contamination on military facilities, identify potential areas for source water protection, and identify impact areas where federal 'good neighbor' policies should be implemented to protect drinking water.

- The EPA should work with the states, local governments and tribes to use tools like EJ Screen to identify and map potential contamination issues where landfill leaching into groundwater, abandoned mines, chemical plants and Superfund sites could potentially impact community water sources and especially communities dependent on private wells.

Restoring, Updating, and Expanding Water Infrastructure

There are ongoing challenges related to aging infrastructure and the lack of system capacity to address emerging contaminants, water scarcity and other challenges expected to increase over time. Most communities nationwide are facing water infrastructure replacement costs as well as increasing regulatory requirements. Residents in many communities remain on well water systems, with little comprehension of the risks. The EPA estimates a total of $384.2 billion is needed for capital improvement needs over the next 20 years, which far exceeds resources

available at any level of government.[28] Federal government funding only addresses a fraction of the resources necessary; therefore, financial assistance to local governments is lacking. Often, there is a lack of understanding about those involved in payments, and how much total investment needs to be done to take in consideration of the demands and requirements for the future.

Recommendations:

- The current Safe Drinking Water Act does not authorize the EPA to regulate private wells. The EPA should work with states to achieve the same levels of drinking water protection from contamination for the approximately 15 million U.S. households who rely on private water wells for drinking water and to develop standards for these wells.

- The EPA should provide coordinators in the Regions to help communities with compliance, monitoring and identifying funding opportunities to address drinking water issues.

- The EPA should identify ways in the Plan to enhance water reuse through use of treated stormwater, constructed wetlands for treatment and other means of reuse.

Drinking Water State Revolving Fund (DWSRF)

The DWSRF is a significant financial tool for drinking water infrastructure investments. Through state programs, the DWSRF delivers access to low interest credit and subsidies for infrastructure investments. The EPA should continue to promote innovative uses of the DWSRF by providing guidance and incentives, as well as flexibility to protect water sources and help public water systems deliver reliable and safe drinking water. The LGAC recommends that the EPA identify and share best practices where these funds have addressed challenges successfully. However, the EPA should also acknowledge that the DWSRF is a tool, not a panacea, for local public water systems facing financial challenges.

Recommendations:

- The DWSRF provides needed funding for water infrastructure. The EPA should include actions for improvements to:
  - ✓ Give states guidance to target underserved and EJ communities;
  - ✓ Promote ease of the application process;
  - ✓ Streamline the process;
  - ✓ Standardize practices across states; and
  - ✓ Highlight case studies where DWSRF has provided needed resources for communities. The EPA should make these studies easily available and promote them through all forms of media.

Expand Integrated Planning (IP)

Integrated Planning offers municipalities the opportunity to meet multiple Clean Water Act requirements by sequencing separate wastewater and stormwater programs while maximizing investments so that the highest priority projects come first. The EPA, states and municipalities have achieved progress in implementing IP approaches while addressing the most serious water quality issues in order of priority to protect public health and the environment. By expanding IP

[28]EPA's (2011) Drinking Water Infrastructure Needs Survey

to include the Safe Drinking Water Act (SDWA), local governments could address drinking water challenges and many related variables such as population growth, aging infrastructure, increasingly complex water quality issues, limited resources and other economic challenges.

Recommendations:

- The LGAC recommends expanding the work the EPA is doing through IP for compliance with Clean Water Act programs to also include Safe Drinking Water Act programs. The LGAC believes that this approach will lead to more comprehensive and sustainable solutions.

- The EPA should create a program to pilot municipalities, tribes and small communities to add drinking water in IP and to develop model IP programs.

- The EPA should work with municipalities and communities where violations have occurred to work on agreements to find solutions instead of leveraging fines.

- The EPA should work with communities that may be left with contaminated source water from abandoned mines utilizing an integrated planning approach. Because these communities must rely on contaminated (either naturally or through prior mining activities) source water for municipal use, compliance with both the Safe Drinking Water Act and the Clean Water Act is required. This situation presents unique and costly challenges for communities facing contaminated source water, especially relating to financial responsibility for restoration of acceptable drinking water quality. An integrated planning approach could provide a framework to define and address these types of challenges when source water is contaminated by natural occurrences or historical business activities.

- The EPA should work with supplemental funds where businesses, industries and others are fined for environmental damages to address drinking water funding issues.

Educating Local Government Officials

The EPA should continue its outreach to local officials on straightforward communication concerning drinking water responsibilities, resources, and infrastructure needs. As they take office, local officials are faced with learning complex federal and state water regulations.

Recommendations:

- The EPA should continue its work to assist local officials to better understand responsibilities and compliance with drinking water programs. This will help local officials better plan and integrate local tools such as codes, ordinances and incentives for better water quality protection.

- The EPA should provide tools for local governments about how to communicate health advisories and risks to citizens effectively, so that risk of exposure can be minimized.

Sharing Data and Risk Communication

The LGAC believes that sharing water monitoring data at all levels of government and to the public will help strengthen the public's confidence and promote a better understanding of drinking water and health issues.

Recommendations:

- The LGAC recommends that the EPA include actions to work closely with health and environmental agency partners to improve data sharing capabilities and technology. This should also include working with states, tribes and local governments to provide best practices for communicating risks.

- The EPA should provide clear and actionable public service communication rather than intimidating and bureaucratic legalese. A good example was provided to the Workgroup in which a community posted a sign that indicated "unsafe to fish" in a temporarily contaminated waterway.

- The EPA should help communities provide information in multilingual formats and should use universally-understood symbols and graphics.

- Small, rural and EJ communities may lack infrastructure for sharing data. The EPA should provide assistance in EJ communities where the threats and risks are greatest by assisting with data-sharing, translating data and risk communication.

Training Water and Wastewater System Operators

The Workgroup heard from several local agencies that it is becoming more and more difficult to find and retain qualified water and wastewater system operators. Training and licensing of water and wastewater system operators is an essential component of any public water/wastewater system. Training operators at the local level can provide employment opportunities as well as create a needed pool of skilled operators.

Recommendations:

- The EPA must accelerate and widen grant programs for recruiting and training operators. The EPA can also compile best practices where local governments have already developed creative and collaborative programs.

- The EPA should work with community college systems to develop pilot training programs to recruit and train water operators.

- The EPA should expand the Brownfields Job Training program to hire and train water operators, especially in disadvantaged and low-income communities.

Emergency Preparedness and Response

The EPA must continue to help prepare resilient communities for the impacts of extreme weather events and other emergencies (such as flooding, wildfire, excess heat and drought) relative to their impacts on drinking water supply and delivery.

Recommendations:

- The EPA Administrator and Senior leaders should continue to make site visits with local, tribal, state and federal representatives where public health, environmental and ecological disasters or emergency situations in which drinking water systems are endangered.

- The EPA should develop new guidance on the "Right to Know," which addresses citizens', employees' and first responders' right to know the chemicals to which they may be exposed. These should be presented in a manner that is clearly understood by all and in languages necessary to reach all populations.

- The LGAC recommends that a Chemical Exposure Standard be made public and accessible upon request, especially when drinking water systems have been compromised. Furthermore, companies should be obligated to ensure their employees, contractors and visitors are not exposed to contaminants at levels above the workplace Chemical Exposure Standard.

- The LGAC recommends that the EPA take a more active role in immediately communicating to local officials on how to respond to any release, spill, exposure or threats to drinking water supplies.

- The LGAC also recommends that the EPA work in partnership with FEMA on conducting training simulations, community awareness and communication to understand the potential hazardous chemical risks to drinking water and to prepare and respond in such an event. All information should be provided in a manner that is understood by the user and should be multilingual.

- Focus should be placed on reducing the risks associated with hazardous chemicals to water operators and owners, workers and communities by enhancing the training, safety and security of threats to chemicals at their facilities.

- The EPA should work with industry to provide and assist local communities with action guides to safeguard the environment (water, land and air) in case of any release, spill or exposure.

- The EPA should continue to coordinate with the Department of Homeland Security, Centers for Disease Control and Prevention, Assistant Secretary for Preparedness and Response and other appropriate agencies in implementing regulations.

- The LGAC recommends that it is equally important to consider the protection of water treatment and conveyance infrastructure to ensure the supply of clean and potable water to our communities. While water security nexus issues are not immediately apparent in the charge, the EPA should take serious consideration of water infrastructure security factors (including cybersecurity) and they should be underlying elements in any future discussions on water protection and water rights issues. The EPA should include a plan to strengthen security and cybersecurity of our nation's water infrastructure.

B. ADDRESSING ENVIRONMENTAL JUSTICE & EQUITY IN INFRASTRUCTURE FUNDING

It is necessary to identify ways in which federal, state, tribal and local governments and utilities can work together to ensure that drinking water infrastructure challenges of low-income environmental justice communities and small systems are being appropriately prioritized and addressed. Methods for

doing so are through increased information, sharing and replicating best practices and building community capacity.

Ability to Pay

This is one of the strongest themes heard throughout the Workgroup's outreach to local communities and intergovernmental partners.[29] Although there is a general consensus that clean, safe drinking water is essential for all Americans, that philosophy is inconsistent with the resources invested, as well as with the typical business model for providing water to residents and businesses. In the past, the EPA has noted that water bills should make up only a certain fraction of household income and this topic of affordability should continue to be explored. Additional regulations aimed at ensuring clean water at the faucet add costs to the ratepayers. The Workgroup heard questions about what happens to those who simply cannot afford to pay, whether on a macro/community scale or a micro/individual scale. While this is not a federal issue per se, more consideration and collaboration is required to find more resources, evolve business models and/or modify approaches to regulatory compliance.

Recommendations:

- As a starting point, the EPA could convene a collaborative "think tank" to focus on financing issue of drinking water in the coming years.
- In the Plan, the EPA should include work with the Federal Deposit Insurance Corporation to identify and provide incentives for private investments in water infrastructure.
- The EPA should encourage state and local governments to use the Environmental Justice (EJ) Screen tool to identify areas of concern for drinking water and EJ communities.
- The EPA should continue to identify the public health concerns of emerging contaminants, especially cumulative risks of these contaminants. The EPA should also provide resources to mitigate the impacts of arsenic and other contaminants to tribal communities.
- The EPA should actively pursue more funding opportunities for EJ communities, both within the Agency and in collaboration with other federal agencies. If EJ communities run successful programs using a grant, that funding should be continued for a period after that to strengthen the program and to ensure its sustainability, especially when such programs could be replicated in other communities. EJ communities often lack the administrative capabilities to identify funding sources, manage grants, and monitor grant status. They need assistance in building this capacity, which can lead to greater resiliency, and improved human and environmental health of these communities. This is especially effective when partnered with clear communication in a user-friendly format offered in multiple languages.
- The EPA should pilot Integrated Planning in EJ communities and a public engagement component should be included in the process.

[29]Note: The LGAC heard from representatives from the U.S. Conference of Mayors, National League of Cities, National Governors' Association, National Association of City and County Health Officials, Association of State Drinking Water Administrators and the National Association of Counties.

- The EPA should work with the Center of Disease Control (CDC) and other health agencies to evaluate the public health impact of mass water shut-offs and identify strategies and policies to ensure residents have access to water regardless of household income.

Water Infrastructure and Resiliency Finance Center

The EPA's Water Infrastructure and Resiliency Finance Center is another important tool to assist local governments.

Recommendation:

- The EPA should continue to promote awareness of the Center as a resource for local officials and community members.

Incentivize Investments

Private-public sector partnerships and investments can be useful tools for modernizing and expanding water infrastructure. Tax rebates or credits for private companies to invest in water infrastructure - especially in rapidly growing areas and in smaller towns - can further incentivize investments. The Workgroup heard from several agencies about the concept of regionalizing and consolidating smaller systems. This concept is worthy of further consideration in collaboration with local governments.

Recommendation:

- The EPA should work with the utility sector and public water systems to design strategies to reduce energy costs of water treatment and delivery. This could substantially lower costs that could be used for treatment technologies.

Interagency Coordination

The EPA must work in partnership with other agencies as part of a national action plan to engage and leverage other agencies in identifying resources, utilizing authorities, and providing technical assistance. The EPA, USDOT and HUD partnership has been very effective.

Recommendations:

- The EPA should create an interagency taskforce and identify actions to be taken across all federal agencies. It should also engage states, tribes and local governments in development of key actions.

- The EPA should continue to work in partnership with other federal agencies on the issue of clean and safe drinking water. This work should expand to include agencies such as the National Institute of Health, the Center for Disease Control and the Bureau of Indian Affairs.

- The EPA should also work to expand the partnerships to include the U.S. Army Corps of Engineers as a high priority for local governments to ensure concurrent and collaborative relationships, rather than those that are sequential and conflicting.

Small Systems

The LGAC believes that every citizen should have access to safe and reliable drinking water regardless of their geographic location, income, racial, cultural or ethnic background.

Recommendations:

- To promote health equity and environmental justice, the LGAC supports a consistent set of drinking water standards for the protection of all Americans. The EPA must work to provide the same level of protection for all communities to have assurance of reliable and safe drinking water.

- Small communities may not have access to licensed professionals or they may be inaccessible due to high costs. The EPA can facilitate regionalization in those communities that desire a cooperative approach to small system management to share resources and reduce costs.

- Although there is no federal law authorizing the EPA to regulate private wells, the Agency should work with state, local and tribal governments in providing water quality information to residents served by private wells. Migrant, border, tribal and rural communities may be particularly vulnerable - especially those that do not have access to a regulated public water system.

- The EPA should provide compliance assistance for small systems. This is especially needed in EJ and rural communities.

C. STRENGTHENING PROTECTIONS AGAINST LEAD IN DRINKING WATER

Opportunities must be identified to coordinate and collaborate on implementing the current Lead and Copper Rule, particularly in environmental justice communities. Expanding and strengthening opportunities for stakeholder engagement to support the development of a revised rule is also necessary.

Lead and Copper Rule

The LGAC has previously issued a letter to the EPA Administrator regarding the Lead and Copper Rule.[30]

Recommendations:

- The EPA should communicate regularly with state and local governments that are pursuing stricter lead and copper standards in their areas.

- The EPA should work with non-traditional partners such as realty associations and the National Homebuilders Association to develop ways to address lead and copper in residential homes. Effectively addressing the problem will require non-traditional partners such as local realtors to ensure that residents are not only aware of the

[30] https://www.epa.gov/sites/production/files/2015-10/documents/lgac_copper_and_lead_letter_of_recommendation.pdf

problem, but aware of ways they can reduce their risks even if they cannot afford to replace lead service lines in their homes.

- The EPA should consider using tools like EJ Screen to target areas of lead and copper contamination and focus resources to address these areas of concern.

Schools and Daycare Facilities

Ensuring all of our nation's children have access to clean, safe drinking water should be a priority for the EPA and all levels of state, local and tribal governments. As traditional models of education evolve to include charter schools, private schools, home schooling, public and private day care and after care, the regulatory framework should also evolve.

Recommendations:

- The LGAC recommends that all schools routinely test for lead in their drinking water. Schools should contact their local health department for appropriate testing protocols.

- School officials and custodial staff should be made aware of state and local plumbing codes, laws and regulations, safe operating procedures and regulations that support water fluoridation.

- The EPA should partner with the Department of Education and other health agencies to launch a public health campaign to educate school officials and students on the importance of drinking water. (This is evidenced by news articles regarding school athletes dying from lack of water and heat.)

- School systems fall under local government jurisdiction, but many are private. The EPA should include, in their guidance, making water more accessible to students throughout the school day and insurance that such access points (such as water fountains) are clean.

- As a starting point, the EPA should collaborate with education-provider associations as well as state, local and tribal governments to determine best practices and resources needed to more comprehensively and consistently ensure children's access to safe drinking water. Testing and monitoring protocols may be a good starting point for the discussion.

- The EPA should update and widely distribute the guidance document entitled "*Drinking Water Best Management Practices - For Schools and Child Care Facilities With Their Own Drinking Water Source.*"[31] The EPA should also offer training to implement the guidance.

D. EMERGING & UNREGULATED CONTAMINANT STRATEGIES

It is necessary to develop and implement improved approaches through which the EPA, states, tribal and local governments, utilities and other stakeholders can work together to prioritize and address the challenges posed by emerging and unregulated contaminants such as algal toxins and perfluorinated

[31]Drinking Water Best Management Practices-For Schools and Child Care Facilities With Their Own Drinking Water Source https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100GOT8.txt

compounds (PFCs). Public awareness about these contaminants must be increased, especially among vulnerable populations.

Toxic Algal Blooms

The EPA must continue to aggressively implement a plan to address toxic algal blooms and partner with rural communities to address agricultural runoff. The LGAC sent forward recommendations to address toxic algal blooms.[32]

Recommendations:

- The EPA should include work to develop a Memorandum of Agreement with the U.S. Department of Agriculture to work with the states and agricultural communities to protect source water and drinking water by reducing agricultural runoff, implementing water quality best practices and fully utilizing precision agriculture.

- The LGAC strongly recommends that the EPA continue to explore how the Safe Drinking Water Act and Clean Water Act programs can be coordinated to better protect source water and our nation's water resources.

- The LGAC recommends that the EPA coordinate with the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) concerning their Soil Health programs that are intended to reduce agricultural runoff. Evidence has shown that healthy soil retains and transforms nutrients preventing water quality problems.

- The LGAC recommends that the lessons learned on nutrient reduction through the Gulf Hypoxia Taskforce efforts be identified and shared with other regions where toxic algal blooms are identified as an issue.

- The LGAC recommends working with states to develop nutrient reduction strategies in areas where harmful algal blooms are most prevalent and threaten drinking water sources.

- The LGAC recommends that the Clean Water Act Section 319 program guidance be used as a tool to address toxic algal bloom and prevent harmful runoff contributing to water quality problems.

Emerging and Unregulated Contaminants

Monitoring, testing for and treating emerging and unregulated contaminants is an evolving field of science.

Recommendations:

- The EPA should continue to work closely with the Science Advisory Board to not only address individual contaminants, but also evaluate cumulative risk impacts.

[32] https://www.epa.gov/sites/production/files/2016-02/documents/lgac-toxicalgal_blooms-dec9-2015.pdf

Collaboration with local governments and public water systems is critical in order to develop a balanced, comprehensive, science-based approach to this evolving issue.

- The EPA should continue to advance the science and technologies needed to address emerging contaminants. The EPA should develop more comprehensive science on the health effects of lead, copper and asbestos as well as other emerging contaminants.

- Water treatment technologies should be developed ideally to address multiple contaminants.

- The EPA should continue work to reduce the harmful impacts of pharmaceuticals in source water and drinking water. The LGAC provided recommendations to the EPA regarding the pharmaceutical rule designed to aid in reducing the impacts of unused pharmaceuticals.[33]

- The EPA, in setting standards for emerging contaminants, should utilize sound science and risk assessment. However, those standards should be set where treatment technologies are commensurate with detection limits.

- Standards for emerging contaminants are important. However, monitoring at the tap is not necessarily an adequate measure and is a poor proxy for the managerial, operational or enforcement aspects of infrastructure. Drinking water quality is highly dependent on the contaminant level in the source water, the treatment train and even the monitoring locations and frequency. Other monitoring techniques need to be developed for emerging contaminants that show, for example, differences in contaminant concentration; when the water did meet standards, and other indicators.

E. ADDITIONAL CONSIDERATIONS

The LGAC was asked to identify issues the agencies could use to help protect local communities' interests in clean drinking water; where public and private sector partnerships have advanced economic solutions; where source water protection saved taxpayers' dollars; and where communities have created jobs and produced public savings by ensuring clean and healthy water infrastructure.

The LGAC was also asked to develop recommendations on how the EPA can better work with local governments and engage local governments.

Other Considerations

The EPA should identify immediate actions to address the highest priority issues and address them through a comprehensive plan.

Recommendations:

- The EPA should create an Interagency Taskforce to work across all agencies in order to identify where actions can be identified, prioritized and implemented. This Taskforce

[33] https://www.epa.gov/sites/production/files/2016-02/documents/lgac-pharmaceuticals-dec-9-2015.pdf

should prioritize communities at the greatest risks; identify tools and data-sharing mechanisms; and identify new resources for communities to utilize.

- The EPA should work collaboratively with state regulators to reduce punitive approaches and increase facilitative solutions. Generally, communities facing fines and citations are already struggling with compliance. Fines rarely increase water quality; fines only reduce the local resources available to achieve compliance. A collaborative approach can be most effective in reaching water quality goals.

1) **What additional interactions between the EPA and local governments would most effectively help local governments understand and best utilize health advisories for unregulated and emerging contaminants?**

Recommendations:

- The EPA should develop a comprehensive strategic plan for communication and information transfer across all program offices and EPA Regions aimed at effective communication and information sharing. One example where the LGAC found this most effective was Plan EJ 2014 (and the newly released Plan EJ 2020), which clearly communicated aims and articulated outcomes. This method can be used and adopted by all levels of government.

- The EPA should look at ways to serve as a facilitator to assist the intergovernmental partnership to be more effective through information sharing, tools and resources.

- The EPA should form partnership agreements with states and tribes to develop communication and outreach materials about the health effects of contaminants and best practices of communication when there is a water contamination threat.

- The EPA Regional offices should be charged and empowered to work with their intergovernmental partnerships to increase the dialogue and information exchange with states, local governments and tribes in their regions.

- The LGAC recommends that the EPA find the most effective way to get important information regarding safe drinking water, such as health advisories and new safety standards, directly to local governments and tribes as well as best practices for local governments to disseminate information to community members in a timely manner. The LGAC fully agrees that finding best practices of communication amongst local and state governments is crucial for the health of our communities.

- Because many local governments have part-time administrative and professional staff, they may not often review EPA websites. Working with intergovernmental partners may be more effective. Examples include leagues of municipalities, associations of counties and rural water associations. Such organizations are more accustomed to communicating with local and tribal governments than are state agencies. Local and tribal governments may be more accustomed to reading and acting upon communications from third party agencies.

- It is important that local governments and tribes receive any notifications, advisories and resources concerning drinking water. We believe that documents such as the aforementioned memorandum and the "*Suggested Directions for Homeowner Tap Sample Collection Procedures*" should be disseminated to local governments, so that local officials can use it as a resource for citizens and their public water systems.[34] We recommend that the EPA regional offices send out these above-mentioned documents directly to local governments as soon as possible. The EPA Regions may also work with state-municipal leagues and other intergovernmental organizations to help get the word out immediately.

- The LGAC recommends that health advisories about emerging contaminants be sent directly to local governments and tribes. This gives local governments the chance to act in a timely manner. Local governments can inform citizens directly and can work collaboratively with the local public works to address any issues.

- The EPA should continue to work on the Local Government Portal and explore other means of communication to be proactive, such as a forum or blog where relevant parties can post information and updates. This will increase transparency in governmental processes between both the government and the general public. This can also serve as a database for information relevant to the issue, and holds individual parties accountable for their actions. To remain updated, people may sign up for email alerts every time someone posts to this site. To keep the site organized, only pre-approved members (members of governments – EPA included) would be allowed to post, but everyone would be allowed to view and comment. The site could be maintained by the Regional offices of the EPA, which will ensure there is constant and active communication among the various governmental agencies.

2) How can the EPA best work with local governments to assure effective implementation of drinking water regulations such as the Lead and Copper Rule so that public health improvements are realized? What resources are needed at the local level to assist them with implementation? How can communities enhance economic opportunities while improving water systems?

Recommendations:

- Local governments will need more financial and technical resources to effectively implement the Lead and Copper Rule.

- The EPA should provide direct means of communication with local governments concerning new regulations, guidance for monitoring and information on risk factors.

- The LGAC recommends that local governments be provided an EPA checklist and guidance for decision-making regarding source water changes. The EPA or a state agency should be advised whenever a source change is being considered to make sure that a check and balance is in place. There should also be an opportunity for public engagement prior to a decision regarding a source change. This can be a helpful tool for a municipality, tribal government or small community in making a water source change.

[34] https://www.epa.gov/sites/production/files/documents/LCR_Sample_Form.pdf

- The EPA should work with State Municipal Leagues and other intergovernmental information to distribute communication materials for local governments.

- In its annual or biannual meetings with State Environmental Commissioners, State Public Health Directors and State Agricultural Directors, the EPA should convene a special session on drinking water and ways to assist local governments, EJ communities and rural communities.

- The EPA should explore ways to create jobs in the field of drinking water monitoring that could create economic opportunities, especially in environmental justice communities.

- The EPA should make it its highest priority to address lead testing, monitoring and remediation in schools, daycare facilities, hospitals, nursing homes, prisons and public housing.

- The EPA should work with small businesses and water-dependent businesses to help with marketing clean and safe water as a business practice. It could potentially even develop or expand EPA programs like Water Sense to register businesses that support clean, safe water and water conservation.

3) What resources do communities need to achieve protection of water at its source rather than installation of treatment?

Recommendations:

- The EPA should work with local communities to utilize the regulatory tools that the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA) provide in order to protect source water, especially for low-income, minority, rural and tribal communities where this threat remains.

- The LGAC strongly recommends that the EPA continue to explore how the SDWA and the CWA could be coordinated to better protect source water and our nation's water resources. In addition, the LGAC recommends that the EPA coordinate a Memorandum of Agreement with the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) to explore ways to reduce agricultural runoff and improve soil health.

- The EPA should continue to promote the use of Integrated Planning so that local governments can coordinate efforts at the local level for highest efficiency to reach water quality goals at the regional and local level.

- The EPA should distribute information on best practices of local, state and tribal governments that have effectively protected source water and addressed toxic algal blooms through source water protection.

- The LGAC recommends that the EPA continue to work with local watershed groups to build their capacity to assist in monitoring source water, raising awareness of emerging contaminations and communicating drinking water information.

- The EPA should identify potential opportunities to provide alternative energy sources for utilities to offset costs of water treatment. This could include capture of methane and heat from landfills or wastewater sludge to fuel water treatment plants. Solar power could also be used at these facilities. Energy cost savings can provide reasonable financial offsets for water treatment and delivery costs.

- The EPA should strongly encourage states and tribes to update their water quality standards, especially to address emerging contaminants and promote a more robust set of public health criteria. Small communities and at-risk populations should also be considered in future rulemaking.

- The EPA should develop outreach materials for local governments to better understand how to use water quality standards to protect the designated uses of their communities' waters. Such tools should include multimedia communication strategies, webinars and multilingual materials, as well as intergovernmental and public-private partnerships and funding programs.

VII. CONCLUSION

LGAC Member Kevin Shafer and EPA Administrator McCarthy

The EPA has recognized that local and tribal governments are closest to the people and, as such, they can bring a valued perspective to the development and implementation of the National Drinking Water Action Plan. Recent events have galvanized support for collaborative planning and strategic actions around the concept of clean, safe and affordable drinking water for all Americans.

Many local and tribal governments, special districts and public water systems are already taking leadership roles in their communities. Best practices are emerging as the national conversation regarding safe, clean and affordable drinking water shifts to the forefront. Locally-initiated collaborative partnerships are forming throughout the country to address clean water issues locally, if at all possible.

Although the LGAC recognizes that the EPA must retain a regulatory function, the more important role and responsibility lies in their facilitative function. The LGAC's response to the charge and recommendations emphasize that the EPA can bring people together to respond to challenges and inspire creative approaches. The delivery of drinking water throughout the nation is accomplished in a variety of different ways. Similarly, source water differs from community to community. The diversity in source water, drinking water delivery and financial models present tremendous challenges but also remarkable opportunities to collaborate and improve our performance.

The EPA has emphasized a "new era of partnership," and its engagement of the LGAC demonstrates its commitment to this approach. Similarly, the LGAC and the Water Workgroup heard from very diverse

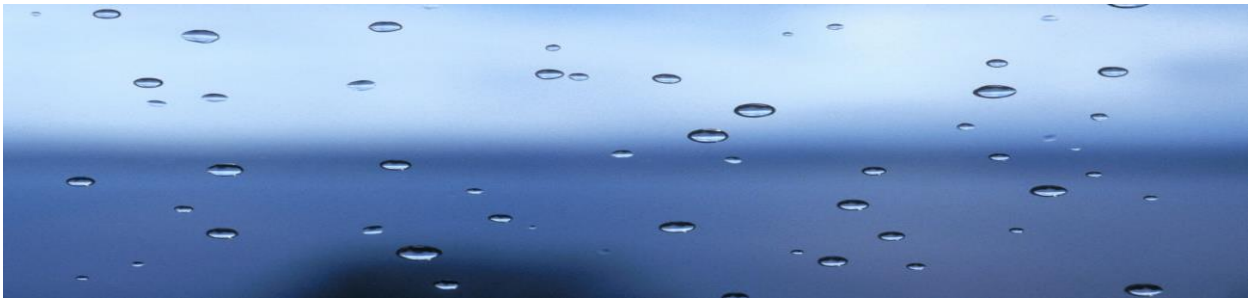
communities and succeeded in providing cohesive and comprehensive recommendations in the report. The recommendations reflect points of common thinking as well as new ways of approaching current and future challenges in delivering clean, safe and affordable drinking water nationwide. Issues such as affordability and resources for infrastructure investment were commonly noted. Innovation such as green infrastructure, precision agriculture, private sector partnerships and integrated planning were cited. However, a foundational theme remains communication.

The EPA and state and local agencies must acknowledge and act upon their shared responsibility to ensure local leaders and citizens are informed. Similarly, the EPA, local governments and public water systems must remain cognizant of those that may not have access to clean, safe and affordable drinking water, and continue planning to rectify this remaining challenge in the United States. Although poverty is one aspect of this disparity, private wells, poorly trained operators and a wide variety of other circumstances contribute to the problem. Partnering with public health officials will help identify and resolve these issues.

Finally, collaboration at the local level is bringing success. A stronger emphasis on interagency collaboration at the federal level can also elevate our work. Partners such as the Center for Disease Control, the U.S. Department of Agriculture and the U.S. Department of Housing and Urban Development can bring ideas and potentially resources to the table as the National Drinking Water Action Plan moves forward.

Clean, safe and affordable drinking water for all Americans is one of the most significant public policy and strategic action issues facing the country. Through the Local Government Advisory Committee, the EPA has formed a team of elected and appointed officials who offer practical and knowledgeable perspectives to contribute to the National Drinking Water Action Plan.

Although the Protecting America's Water Workgroup was the designated lead on preparing the LGAC's report, the Cleaning Up Our Communities Workgroup, the Environmental Justice Workgroup, the Small Communities Advisory Subcommittee, individual members of the LGAC, intergovernmental organizations and practitioners all contributed to this collaborative effort. The LGAC report is much stronger because of this shared investment in the process and the outcome. We have confidence that the drinking water challenges facing the nation can be resolved through teamwork, partnerships and leadership. The EPA's new era of partnership is exactly the framework needed for this work.



VIII. ACKNOWLEDGMENTS

The LGAC wishes to thank the EPA and Administrator Gina McCarthy for reaching out to gather our views and perspectives on the proposed rule and for sponsoring this project. We express our utmost appreciation for Mark Rupp (Office of Congressional and Intergovernmental Relations), Peter Grevatt (Office of Groundwater and Drinking Water) and Eric Burneson (OGWDW). We give the greatest of thanks to EPA OCIR Interns Kathleen Pastor and Martha Zeymo for their contributions to the report. We would also like to acknowledge Ingrid Archibald and Lisa Ng, who have contributed greatly to the development of the charge. We would like to thank the many representatives of communities who have contributed as well. We thank the many local officials and presenters who took time to provide the various perspectives we have gathered in this report.

IX. APPENDICES

A. APPENDIX I: LGAC'S PROTECTING AMERICA'S WATERS WORKGROUP MEMBERS

Ms. Susan Hann (Workgroup Chair)
Director of Planning, Brevard County Schools
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Honorable Elizabeth Kautz (Workgroup Vice-Chair)
Mayor
Burnsville, Minnesota

Honorable Norm Archibald
Mayor
Abilene, Texas

Honorable Dave Bobzien
Council Member
Reno, Nevada

Mr. Scott Bouchie
Director of Sustainability
Mesa, Arizona

Honorable Stephanie Chang
Representative
State of Michigan

Honorable Dr. Robert Cope, DVM
Commissioner
Salmon, Idaho

Honorable Kim Driscoll
Mayor
Salem, Massachusetts

Honorable Jill Duson
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Portland, Maine

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Honorable Cynthia Koehler
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Marin County, California

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Commissioner
Ouray, Colorado

Honorable Sal Panto
Mayor
Easton, Pennsylvania

Honorable Carolyn Peterson
Former Commissioner, Tompkins County Environmental Management Council
Tompkins County, New York

Honorable Brad Pierce
Council Member
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Honorable Shawn Yanity
Chairman
Stillaguamish Tribe, Washington

Honorable Tom Sloan
State Representative
State of Kansas

Honorable Ryan Sundberg
Supervisor
Humboldt County, California

Mr. Jeffrey Tiberi
Policy Director, Montana Association of Conservation Districts
Helena, Montana

Mr. Jeff Witte
Secretary, Department of Agriculture
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B. APPENDIX II: LOCAL GOVERNMENT ADVISORY COMMITTEE (LGAC) MEMBERS

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Honorable Norm Archibald
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Honorable Kitty Barnes
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Catawba County, North Carolina

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Honorable Andy Beerman
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Honorable David Bobzien
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Augusta, Georgia

Honorable Kim Driscoll
Mayor
Salem, Massachusetts

Honorable Johnny DuPree, Ph.D.
Mayor
Hattiesburg, Mississippi

Honorable Jill Duson (Vice-chairwoman)
Council Member
Portland, Maine

Honorable Karen Freeman-Wilson
Mayor
Gary, Indiana

Dr. Hector Gonzalez, M.D.
Director, Health Department
Laredo, Texas

Honorable Jacqueline Goodall
Mayor
Forest Heights, Maryland

Ms. Teri Goodmann
Assistant City Manager
Dubuque, Iowa

Honorable Manna Jo Greene
Legislator
Ulster County, New York

Ms. Susan Hann
Director of Planning, Brevard County Schools
Brevard County, Florida

Honorable Elizabeth Kautz
Mayor
Burnsville, Minnesota

Honorable Cynthia Koehler
Board of Directors
Marin County, California

Honorable Merceria Ludgood
Commissioner
Mobile County, Alabama

Honorable Jeff Morris
State Representative
State of Washington

Honorable Sal Panto
Mayor
Easton, Pennsylvania

Honorable Carolyn Peterson
Former Commissioner, Tompkins County
Environmental Management Council
Tompkins County, New York

Honorable Brad Pierce
City Council Member
Aurora, Colorado

Honorable Victoria Reinhardt
Commissioner
Ramsey County, Minnesota

Honorable Mary Casillas Salas
Mayor
Chula Vista, California

Mr. Kevin Shafer
Executive Director
Milwaukee Metropolitan Sewerage District
Milwaukee, Wisconsin

Honorable Tom Sloan
State Representative
State of Kansas

Honorable Mark Stodola
Mayor
Little Rock, Arkansas

Honorable Ryan Sundberg
Supervisor
Humboldt County, California

Samara Swanston, Esq.
Counsel to NYC Council Environmental
Protection Committee
New York, New York

Mr. Jeffrey Tiberi
Director of Policy
Montana Association of Conservation Districts
Helena, Montana

Honorable Miro Weinberger
Mayor
Burlington, Vermont

Honorable Stephen Williams
Mayor
Huntington, West Virginia

Mr. Jeff Witte
Secretary of Agriculture
State of New Mexico

Honorable Shawn Yanity
Chairman
Stillaguamish Tribe, Washington

Honorable Dawn Zimmer
Mayor
Hoboken, New Jersey

C. APPENDIX III: WORKGROUP MEETING RECORDS

Protecting America's Waters Workgroup

Thursday, August 11, 2016
3:00-4:30 PM EDT
Call-in: 1-(866)-299-3188, Code: 202-564-3115#

LGAC
Sue Hann, Chairwoman
Mayor Elizabeth Kautz, Vice-chairwoman
Mayor Bob Dixson, LGAC Chair
Commissioner Carolyn Peterson
Kevin Shafer
Jeff Tiberi
Chairman Shawn Yanity
Commissioner Kitty Barnes
Mayor Mary Salas
Scott Bouchie
Representative Stephanie Chang

EPA
Mark Rupp, OCIR
Jack Bowles, OCIR
Fran Eargle, OCIR
Demond Matthews, OCIR
Eric Burneson, Office of Water
Lisa Ng, OCIR

OTHER
Akagi Yone (City of Portland, OR)

3:00 p.m. **Call to Order/Introductions**
Susan Hann, Chairwoman
Mayor Elizabeth Kautz, Vice-chairwoman

Chairwoman Sue Hann thanked everyone for joining the call. She thanked Mayor Elizabeth Kautz for chairing the July face-to-face Workgroup meeting.

Chairwoman Hann: On July 29th, the LGAC approved a charge by the Administrator to give input on the development of a National Drinking Water Action Plan (Action Plan). The Water Workgroup will have the lead for the LGAC, but the SCAS and EJ Workgroups will also be engaged, as well as all the other workgroups.

Mayor Elizabeth Kautz thanked everyone for a great meeting, and acknowledged the Committee's movement forward with the charge. She thanked EPA's Eric Burneson and Mark Rupp for their work with the Committee.

Mayor Bob Dixson thanked Sue Hann and Mayor Kautz for their great leadership. He also thanked all of the LGAC members for taking part in the call.

Mayor Dixson: None of this can happen without the leadership of our Workgroup chairs and vice chairs. Drinking water is important for all communities, regardless of size.

3:05- 3:10 EPA Updates
Mark Rupp
Deputy Associate Administrator, EPA's Office of Intergovernmental Relations

Mark Rupp recognized the efforts of the LGAC and how their advice gives guidance to EPA. He acknowledged that Joyce Frank has retired as the career leader of EPA's Office of Congressional and Intergovernmental Relations. He announced that Robin Richardson, formerly of the Office of Land and Emergency Management, has been hired to fill that position. She will help with the transition to the next administration.

3:10-4:15 EPA's Drinking Water Program
Eric Burneson
EPA's Office of Groundwater and Drinking Water

Eric Burneson thanked the LGAC and the Water Workgroup. He also thanked Sue Hann and Mayor Kautz for their leadership and the work they do.

Burneson: It is super valuable to work with stakeholders such as yourself who understand how things work at the local level. We spend a lot of time dealing with water treatment and utility operators. Local governments must know how to balance the demands and do so.

Some of this is a repeat of what Peter Grevatt said when he spoke to the Workgroup a couple of weeks ago. The agency has been evaluating our work to see how we can improve public health and public confidence that our drinking water is safe. We started a series of engagements with various representatives, and we are coming to you to seek your input on key issues. There are four key issues we are addressing:

1) <u>Oversight and Implementation of the Safe Drinking Water Act</u>
Implementation is a federal, state and local activity. We develop regulations and put out technical information and guidance to states, but local operators carry that out. The State

Revolving Fund (SRF) can provide capitalization grants. All states in the U.S. have a paying primacy with implementation of the SDWA, except for Wyoming. Most of the tribes do as well. States work with the local water supply systems to which the regulations apply. We know this model can be improved. How can we enhance the way we provide oversight at the state and federal level? How can we enhance the way we provide that information? The LGAC sent out a letter to the Administrator today, which addresses how EPA can enhance communication between local governments. The letter highlighted areas where we can benefit from further input. We need to figure out how to get the right information to the right people within local governments.

2) Environmental Justice, Equity, and Infrastructure Funding
SRF is one way the agency helps states and local governments address environmental justice. There is an estimated $384 billion in capital improvements needed nationally in the next 20 years. SRF provides about $32 billion to states. There is obviously a huge gap. All sized communities have underserved populations who will struggle to afford the cost of infrastructure improvements. We need to figure out how to better utilize the tools to make sure there is equity in your communities.

3) Lead and Copper Rule
There is no coincidence that we are working on drinking water action plan for implementation and are evaluating how well we are doing. The EPA has been improving the regulation itself to reduce lead and copper exposure. Regulatory revisions take time to develop and put into place. We are also working to improve how we work with states and local water systems. The National Drinking Water Advisory Council (NDWAC) has helped us a lot and we are looking for input.

4) Unregulated Contaminants
No regulations are currently in place. Compounds such as PFOA and PFOS - in widespread industrial use up until 2015 - were made here in the U.S., but have been stopped. These compounds are persistent in the environment and do not just go away. We use these a lot, because they are often in anti-stain materials like Scotch Guard and Teflon. We have health advisories for these that are non-regulatory, rather technical advice that we give to states and locals to address these. How do we test for, treat and remove these contaminants? How do we share this information with the public? We are looking for input on how we can effectively provide you with information. It is important to have good, sound science. But that takes a lot of time, and it can be many years before we know that a chemical is dangerous and before it gets banned. Research shows a lot, but not everything. We are interested in how EPA can work with you at the local level. What do you need to implement the goals in your communities? What resources do communities need?

4:15-4:28 Workgroup Questions and Discussion

Jeff Tiberi: Do you see the format of this report - the headline, thoughts? Are there any sacred cows that we need to be aware of that are major issues? Things that are things we can't change?

Burneson: Everyone has a different meaning of a sacred cow. There is not enough funding to go around. It would be an important issue to talk about, but we need to keep the reality of the situation in perspective. It would be helpful to highlight the need for more federal funding, but we realize that there is not enough to go around.

Carolyn Peterson: About 92% of public water systems are small. What is a small public water system?

Burneson: Those serving 10,000 or fewer people. 25 – 500, 200 – 3300. 3300 – 10,000. There are different categorizations.

Mayor Kautz: One of the things raised by the group was the lack of revenue. SRF funds are very competitive and locals have difficulty in accessing them. States can do what they want based on their priorities. How can we clarify how those funds can be accessed by small communities? How do we address EJ issues? Urban issues?

Burneson: This is a subject for a robust discussion. This is one of the issues where we could benefit from input. Congress appropriated funds and grants for states to put in their revolving funds. Grants have specific requirements depending on how states would use the funds. States ultimately have the discretion to figure out what to prioritize. It is difficult to get direct funds from the EPA.

Mayor Kautz: How can they move forward with consent decrees?

Burneson: As I understand, the agency has worked hard to set up a framework to clarify and set up consent decrees as enforcement actions. Consent decrees are usually for the Clean Water Act and usually for wastewater. But I think there is a question as to how that can be expanded to include SDWA. The LGAC can identify that as one that needs clarification. The LGAC can figure out how SDWA activities should be incorporated. We should consider actions to meet the CWA. The agency would benefit from understanding the difference in how SDWA and CWA provisions can be optimally prioritized.

Mayor Kautz: When we think about SDWA and CWA, all activities we do fall under it. How do we address the Lead and Copper Rule? How do we make everything safe? Everything has a cost. Now we have a charge that gives us the opportunity to holistically approach and to see how these challenges we face can be brought together so that we can deliver safe drinking water to all our communities. They are all interrelated. Together, all the different departments within EPA can solve this. We can do it if we work together.

Chairwoman Hann: This is an excellent discussion.

Shawn Yanity: We are talking about water infrastructure. Some of our rural communities rely on wells in Washington State. Arsenic background levels naturally occur in groundwater. Arsenic levels are stopping people from having clean and safe drinking water on properties. On top of that, there are so many watersheds where we have long periods of dry seasons and drought conditions. Drought conditions in watersheds concentrate contaminants. This issue is preventing growth in some communities because of drought. Low water levels in the river system equal higher concentrations of contaminants and treatment costs. This is particularly true for agricultural communities, such as dairy farms.

Chairwoman Hann: We also have a number of urban residents on private and community wells. Providing them with clean drinking water is a problem. We have people in our communities that do not have access to clean drinking water.

Stephanie Chang: Is there any consideration as to how to deal with customers who cannot afford their water bills and are facing shut off? It is a public health concern. Is there anything that can be done to address it in the public health context to address those who can't afford water and escalating costs?

Mayor Kautz: Those are local issues which need to be addressed between provider and individual. There has to be some grant program. What we are dealing with here is a national issue - with regard to safe drinking water and the actions of the EPA, and with regards to the SRF and the infrastructure. When it comes to activities on the local level - that has to be addressed on the local level.

Chang: Could it even be a footnote in the Report? It is not part of the SDWA, but it is still a concern.

Chairwoman Hann: I wondered about that myself. Mayor Dupree says they took on a lot of debt due to regulatory framework. At the micro level, Mayor Kautz is right. At the macro level, there are systemic implications of adding more add-on costs and requirements. Water becomes more and more unaffordable. We can see it as we start to formulate some of our responses to the charge.

Peterson: Another issue seems to be a lack of trained operators and folks running a water system. This could be a crisis. I would like to know a little more about that. Protection of water at the source is so important. The Clean Water Act can address some of this, and best practices of this are important. I bet we can come up with examples of watershed activities that can keep our water protected at the source, which reduces treatment and makes water more affordable. We can also work together with communities to prevent runoff.

Burneson: This is a critical issue. I had alluded to it when I talked about technical managerial capacity. One of the issues is that there is an infrastructure as well as an operational gap. The workforce that has operated water systems is aging, and the degree to which there are willing and trained folks ready to step is not enough. We need to identify ways to attract trained and ready operators, especially in poorer communities. This is one part of the infrastructure needs we have. We need people as well.

4:28-4:30 Wrap Up/Next Steps

Chairwoman Hann: August 19th will probably be the next Workgroup meeting. We will continue our work through September. We are considering more Workgroup meetings to make things open to the public. We anticipate inviting some intergovernmental organizations to our work. We will be working on putting that together over the next two weeks.

Fran Eargle: Our schedule has been extended to late September. The SCAS and EJ Workgroups will be giving input as well. I appreciate everyone's comments. This has helped.

Chairwoman Hann: Look for correspondence from Fran on meeting times. Let's get the dates on your calendar. Thanks for everyone that has joined. Anything else?

Mayor Kautz: Thanks, Jack for his help in making things go smoothly at July meeting. EPA staff has been really wonderful. The only thing I'd like to see is – on our letters there are so many addendums added

maybe we need to date and put a time on them? There are amendments made, so it would be good to know that.

Mayor Dixson: Thanks to everyone again! We are all public servants, trying to make communities a better place to live and work for all of us. It was a pleasure being on the call, thanks for your leadership and participation. Fran will be in touch.

4:30 p.m. **MEETING ADJOURNED**
Ms. Susan Hann, Chairwoman

Protecting America's Waters Workgroup

Thursday, August 19, 2016
3:00-4:00 PM EDT
Call-in: 1-(866)-299-3188, Code: 202-564-3115#

LGAC
Susan Hann, Chairwoman
Mayor Elizabeth Kautz, Vice-Chair
Mayor Bob Dixson, LGAC Chair
Commissioner Robert Cope, SCAS Chair
Representative Tom Sloan
Scott Bouchie
Mayor Sal Panto
Jeff Tiberi
Mayor Johnny DuPree, SCAS Vice-Chair
Commissioner Carolyn Peterson
Terri Goodmann
Council Member Dave Bobzien
Kevin Shafer
Dr. Hector Gonzalez
Chairman Shawn Yanity
Representative Stephanie Chang

WORKGROUP MEMBERS
Sharon Bailey Lewis (Corpus Christie, TX)
Commissioner Lynn Padgett (Ouray County, CO)

EPA
Jack Bowles, OCIR
Demond Matthews, OCIR
Eric Burneson, Office of Water
Fran Eargle, OCIR
Arnita Hannon, OCIR

OTHER

Deborah Delk (Representing Mayor Karen Freeman - Wilson, Gary, IN)
Jim Taft (Association of State Drinking Water Administrators)
Bridget O'Grady (Association of State Drinking Water Administrators)
Kristin Hildreth (National Conference of State Legislators)

3:00 p.m. Call to Order/Introductions
Ms. Susan Hann, Chairwoman

Chairwoman Sue Hann: The purpose of today's meeting is to begin work on the LGAC charge to give input to EPA from the state, local and tribal governments on what should go into the development of a National Drinking Water Action Plan.

On last week's call, Thursday, August 11, we had Eric Burneson, EPA's Office of Groundwater and Drinking Water, walk through the charge and highlight areas where the LGAC's input was needed. We were also joined in that discussion by Mayor Dixson and the LGAC so that others on the LGAC could learn more about the work ahead.

Today, we are joined by the EJ Workgroup to talk about the cross sections with EJ. We have invited back those from the intergovernmental organizations to join us in our discussion and to share their perspectives with the Workgroup.

We also are welcoming new Workgroup Members but first, I would like to call on Mayor Elizabeth Kautz, Vice-chair of the Workgroup to make some remarks. We also have joining us today, our LGAC Chairman, Mayor Bob Dixson.

Mayor Kautz welcomed new Workgroup Members. She acknowledged the important work of the LGAC to give advice on the very important issue of drinking water. She said that the "brain trust" of the workgroup is very important to give advice to the Administrator.

Mayor Kautz: Water is very important and is the lifeblood of our communities. This is the Year of Water, according to the Administrator. The Administrator has trusted us with a big task of giving recommendations to her on actions that will protect the nation's drinking water. This will take all levels of government working together. We are pleased to begin this work gathering information to arrive at our conclusion. And we appreciate very much the representatives from the intergovernmental organizations who could be a part of this discussion. Action is what we are talking about today - the actions needed to ensure that a repeat of Flint, Michigan does not happen. I'd like to acknowledge Representative Hansen and other state leaders who are a part of the Workgroup. States play a key role. Very important to have states at the table.

Mayor Dixson welcomed new members as well. He started by saying that it is important to hear from everyone - small and large, rural and urban.

Mayor Dixson: For those new to the Workgroup, this Workgroup works on water issues for the Local Government Advisory Committee (LGAC). We cannot advise the Administrator directly. Therefore, all of the actions taken by this Workgroup are presented and approved by the Full Committee.

In the past, we have worked on issues of stormwater, green infrastructure, the Lead and Copper Rule, and we worked very extensively with the Clean Water Rule. This was an extensive effort to gain input from elected officials across the country on the Clean Water Rule and provide EPA with our recommendations to improve the Rule.

The issues we typically work on are requests by the EPA Administrator or Assistant Administrator in the Office of Water. But we also discuss issues as a Workgroup and raise issues of concern to EPA. So we have a really good balance of issues.

As the Workgroup takes on new charges - the Drinking Water Charge being among those of a larger scale like the Clean Water Rule and the Gulf Deepwater Horizon spill Charge - we expand our membership to take into account new and different perspectives. Those on the LGAC and other experts have the knowledge and the backgrounds we need to fully review and complete our charge.

TIME Review of the Charge

Chairwoman Hann: For the benefit of new members and those just coming into the discussion, the LGAC was charged by the Administrator on July 28-29th to give input to EPA on the development of a National Drinking Water Action Plan.

In the attachment, the Charge is provided with an outline of the issues. Also for the new Members, the way the Charge works is that the LGAC will prepare a letter transmitting our findings and recommendations. This will likely take the format of a Report. We decided at the face-to-face meeting that we wanted to seek others' input so we have opened our Workgroup meetings to the public to seek those perspectives on the Charge.

TIME EPA Updates
Jack Bowles
State and Local Government Director, EPA's Office of Intergovernmental Relations;
Eric Burneson
EPA's Office of Groundwater and Drinking Water

Jack Bowles, who filled in for Mark Rupp, thanked the intergovernmental associations for being on the call. He also welcomed new members to the LGAC Workgroup. He stated that the Charge from the Administrator is a very important one. He also thanked Eric Burneson for 'working hand in glove with the LGAC,' and acknowledged that this is a major issue for the Administrator. He said that the agency is casting the net wide to get input from stakeholder groups to address critical drinking water issues across the country. He said he is excited to hear what the LGAC comes up with in terms of recommendations.

Eric Burneson thanked the workgroup, and said that he was so pleased to see so many involved on this issue, with such wide and diverse geographic representation. He stated that the agency is looking for suggestions on improving implementation of the Safe Drinking Water Act and improving upon its relationship with state and local partners. Addressing environmental justice and environmental equity is a big part of the issue to ensure clean and safe drinking water, regardless of the community's income level. He said that addressing specific contaminants such as lead in drinking water, and looking at ways to improve the Lead and Copper Rule is also important. Its ability to be implemented at the local level is crucial. Addressing emerging contaminants is another very important issue. He also noted that he is available to help if there are any technical issues with the Charge.

TIME Review of LGAC Drinking Water Charge Issues

Chairwoman Hann commented on the robust dialogue with intergovernmental organizations about how we could work better at all levels of government to ensure clean and safe drinking water for all Americans.

Chairwoman Hann: The discussion is centered on how to improve coordination and foster collaborative approaches at all levels of government. We are delighted that Kristin Hildreth and Jim Taft have joined us today to give their perspectives on the Charge.

Kristin Hildreth (National Association of State Legislators (NCSL)) spoke about the mission of NCSL. She stated that state legislators are busy educating Congress about state concerns. She also said that the Natural Resources Committee adopted a water policy on Thursday which changed and added language to address lead contamination. She said that they are looking at what Senator Cardin is putting forward on the SRF, which is an issue to include on water policy. She said that she was also here to listen in on the discussion raised by members.

Jim Taft (Association of State Drinking Water Administrators) stated that he represents the 50 state drinking water administrators and the Navajo Nation. He went through the Charge:

1) Advancing the SDWA
   The SDWA is the bones of protecting drinking water. It is sound. The key is about making it work in partnership with state and local partners. It not just focused on the facility, but also on protecting water at the source to take the pressure off the treatment plant. It also involves the human resources. The SRF fund is part of the support for the people who do the work on the ground.
2) Data Transparency
   Obviously, if data had been more forthcoming, the Flint issue would have been caught sooner. Exchange of information makes this work better.
3) Environmental Justice
   EJ is really a key issue. Sharing best practices and leveraging funds from other agencies like HUD, USDA, and others is important. It will also ensure that all sources for funding are brought to bear. The Water Finance Center has a purpose to be a clearing house for best practices and information. There are currently about 160,000 water systems.
4) The Lead and Copper Rule
   There are a couple of aspects to this. We need to make the current rule as effective as possible. We are still looking at 3 to 4 years before the new rule is implemented. There is a lot that can be done now on high-priority lead sites, getting that lead out. Working with the real estate community on getting lead service lines out of distribution could be one avenue. Making comments on the rule as it is developed will be important.
5) Unregulated Contaminants
   There are 90+ contaminants, and the agency's candidate list for unregulated contaminants is a sound approach to addressing them. The current practice of putting out health advisories is good. But we also think it could be more nimble. We do not have enough information on health effects, and things could move faster. But we do think health advisories are a good way to bridge the gap until the public health information catches up.

Thank you to the Workgroup for sharing your perspectives with us. As the Workgroup and the LGAC move forward in developing a response, I may call on you all for further development of these issues.

TIME Environmental Justice Discussion

Chairwoman Hann: The Water Workgroup has the lead for the LGAC but certainly there are key issues where the SCAS and the EJ Workgroup will need to be engaged and helping to shape the findings and recommendations.

Hector Gonzalez: For EJ communities and tribal communities, we are concerned about how are we going to test in residential areas. We want to look at best practices that communities are already using. When there is a health advisory, we want to look at what tools they are using. We want to look at the simplest means of communication, like what was done in New York City for fish advisories. They put up a big sign of a fish with a line through it. You want to get a simple way to get information out. For lead and copper, for example, before changing the plumbing, what are ways to minimize exposure, such as flushing the system? We need to provide the guidance in telling people not use the water in baby formula. We want to make sure EJ communities get the message. As for the Science Advisory Board - we hope they are working on emerging contaminants and fluorinated organic compounds. What are the health impacts? We need more information on public health risks. EPA has done a great job partnering with other federal agencies such as NIH, CDC, HS, BIA and others. We need to look at cumulative impacts in decision-making. We want to make sure the science is integrating other factors, like social determinants and whether a person has access to health insurance and healthcare. In tribal communities and low income and rural systems, there is often not access to potable water. How do we address that and make sure there are water sources? The EJ Workgroup wants to work at these kinds of issues.

SCAS Discussion

Mayor Johnny DuPree: These small community issues are overriding problems across the nation. When you are looking at a $384 billion estimate of water infrastructure with only a fraction of that coming from federal sources, there is a problem. In Hattiesburg, we raised water rates by 54%. People are not able to afford the rates.

SRF is the only thing we can rely on. There comes a saturation point. In large cities, the costs can be spread to those who can pay. We want to have clean water. How do we get there without causing financial problems in our communities?

Commissioner Robert Cope: Unfunded mandates are an issue for small communities in the west. Mandates are expensive, and some do not guarantee it is going to clean up our water. If we have clean water and no one can afford it, how have we helped communities?

Workgroup Discussion of Issues

Scott Bouchie: Training for operators is an issue. There are provisions in the Brownfield grants program for job training. This could be a means to train operators, and work with communities to employ people.

Goodmann: I concur with unfunded mandates. There are about 150 unfunded mandates and the burden falls on those who can least afford it. In Dubuque, Iowa, we meet the requirements at the macro level. There is a greater urgency to address nutrient pollution, other contaminants and pharmaceuticals. I look forward to working with everyone on exploring solutions.

Bobzien: The idea of equitable solutions across systems is important. We have a multi-jurisdiction public water provider. It cobbles together many smaller systems. Everyone wants their own water system. As systems merge, there is better service and all sorts of opportunities for integration of grants.

Panto: If you have pristine water but no one can afford it, this is a huge public issue.
It is on us who live there to do the lobbying to Congress and the White House to do something about it. We need better job in assistance and revenue sharing. Maybe environmental revenue sharing? Regionalization of services could definitely help. We have a very expensive system that serves 8 municipalities. We have 4 systems and 2 private systems and it reduces costs for rate payers, but we still have the highest rates. How do we find a balance?

Sloan: There is no new money coming out of Congress. The Charge should reflect that.

We need to include interagency collaboration in this. The Corps isn't concerned about this, though they have WRDA. They regulate things and state partners have to plan and fund. Affordability and different rural water districts are helpful in looking at these issues. How we communicate with our communities on the cost of water - such as its comparison to milk or cable costs - is one way to address the cost issue. There is a difference in cost and value.

Chang: In Flint, there is an issue when there is a violation of timely notification to residents and a lack of guidance. Local governments need to make sure residents are aware. We have an issue with the fact that the information was not available. Residents in Flint did not know what was going on. Maybe it is an issue too that it was not in a language everyone understands. In Detroit, there were thousands of shutoffs. There needs to be some sort of guidance outlining procedures for protecting public health. When they do not have water, this is a public health concern. We need guidance at the local level when considering change in water source, like in Flint. We changed from the Detroit River to the Flint River as the water source, but what are the considerations and check-offs that states and locals can use?

Baily Lewis: What most are facing in our city of Corpus Christie, Texas, is there are increased costs. We have about 100 '*colonias*' in our city who do not have access to potable water. Most wells cannot be used. It would be helpful to collaborate and take ideas from each other. I am pleased to be a part of this Workgroup and the EJ Workgroup.

Padgett: In my county of Ouray, there are about 4600 people. Two-thirds live in cities. The county is rural and mountainous. Many areas are on private wells. Regionalization is important. No one size fits all. When there is disruption in service, public health departments are critical. State public health agencies are so far away in our county and we are not able to get them resources. Users are being provided with boiling water advisories, but there is a lack of resources for state oversight. There are a lot of water utilities for-profit that deliver water for up to 1000 people. There are no requirements on them. Profit is the game and they often operate monopolies. Municipal systems are held to standards, but not for-profit operations.

Wrap-Up/Next Steps

Kautz: In closing, I want to thank everyone. We have a lot of great information.

Dixson: I want to thank everyone for your time in joining the call today, and for the work you are doing. This is a very important issue for the LGAC and for communities everywhere. We are a team!

In your attachments is a summary of some of what the LGAC discussed at the July meeting and the Forum that was held with Intergovernmental Panel.

Hann: The LGAC has worked on drinking water issues, and more extensively on the Lead and Copper Rule. The LGAC sent forward extensive comments on the Lead and Copper Rule, which the agency listened to and incorporated in their considerations.

We have a lot of work to do in a short turnaround time - by the end of the month - to prepare our recommendations to the Administrator. We have started by putting together a summary of the main issues discussed so that we can begin working on findings and recommendations.

The LGAC put out a letter in April 2014 on the Lead and Copper Rule. However, it might be an issue to add to the Report because of implementation issues, oversight and the Flint issue. Also, you may want to check in with the Workgroup on hydraulic fracturing. We intend to place it in the category of 'Protecting Water at the Source.'

As we are doing that, we will also seek input from other local, state and tribal officials, as well as members of the public. So these next Workgroup meetings will be open meetings and they will be advertised in the Federal Register. The next meetings are scheduled for **September 7th, 4:30-5:30 EDT and September 21st, 4:30-5:30 EDT.**

We will have our regularly scheduled meeting on October 5th, 4:30-5:30 EDT and that will likely not be a public meeting, but a working meeting to approve what we send to the LGAC.

Hann: In terms of next steps, the SCAS and EJ Workgroup will also be contributing to this effort. They will also be meeting to discuss and add to these issues.

We will meet with the LGAC Executive Committee next week on **August 25th** to go over the status of our progress so far, and discuss among the leadership of the LGAC. For the next meeting, we anticipate having a draft report and transmittal letter to review in the near future. The issue paper summarizes what will go into the report. We will take what we heard today and fold that into the development of these broad categories of issues.

There will certainly be exchanges of emails, and if you have any recommendations you would like included in the Draft Report, please send them to Fran Eargle as well as everyone on the Workgroup.

Please help to spread the word about these meetings. Feel free to circulate the call-in number and ask your colleagues to contribute. We really appreciate receiving any written comments by email.

I will remind everyone on the Workgroup that this Workgroup prepares recommendations to the Full Committee to consider, and that the LGAC will make the final recommendations to the Administrator.

We are also working closely with the SCAS, the standing subcommittee of the LGAC to get input on small communities. We will also be working with the EJ Workgroup to get their input on EJ. We are also considering using Adobe Connect for our meetings as a way to fully engage Members of the Workgroup and the public who would like to present.

4:00 p.m. **MEETING ADJOURNED**
Susan Hann, Chairwoman

Protecting America's Waters Workgroup

Wednesday, September 7, 2016
4:30 PM- 5:30 PM ET
Call-in: 1-(866)-299-3188, Code: 202-564-3115#

LGAC
Mayor Elizabeth Kautz, Workgroup Vice-Chair
Mayor Bob Dixson, Chair of LGAC
Representative Tom Sloan
Mayor Johnny DuPree
Commissioner Carolyn Peterson
Representative Stephanie Chang
Council Member Brad Pierce
Commissioner Cynthia Koehler
Council Member David Bobzien
Chairman Shawn Yanity
Jeff Tiberi

EPA
Mark Rupp, OCIR
Jack Bowles, OCIR
Demond Matthews, OCIR
Fran Eargle, OCIR
Martha Zeymo, OCIR
Katie Pastor, OCIR

PUBLIC
Judy Sheahan (U.S. Conference of Mayors)
Steve Via (American Water Works Association)
Roy Heald (Colorado Springs Water Security and Sanitation District)
Amena Saiyid (BNA Bloomberg)

4:30-4:35 p.m. **Call to Order and Opening Remarks**
Mayor Elizabeth Kautz, Vice- Chairwoman

Mayor Elizabeth Kautz began a round of introductions and called the meeting to order.

Kautz: The purpose of today's meeting is to hear from our state, local and tribal government colleagues and gain from their experience on our charge by the EPA on the development of a National Drinking Water Action Plan.

The Workgroup will use what we hear today and our other public meeting to include in our Report and recommendations. This is an open and public meeting and we welcome those who are joining the call today to help inform our findings and recommendations to the EPA.

On July 27-29th at our meeting in Washington, DC, the Administrator, the Acting Deputy Administrator, and Director of EPA's Office of Groundwater and Drinking Water Peter Grevatt met with us to give us give us a very important charge.

They have asked us, on the Local Government Advisory Committee, to give our recommendations on key issues in developing a National Drinking Water Plan. As the Workgroup that reviews these issues for the Committee, the Protecting America's Waters Workgroup is taking this charge very seriously and with a lot of forethought.

I believe that all my colleagues on the LGAC as well as all of those who have joined this discussion will agree that clean and safe drinking water is essential to our communities. We work hard at the local level each and every day to make sure that our citizens have this basic necessity. And yet, we know that many communities in our country are struggling to provide just the basics, or to have water at all. We also struggle with the burden of costs in trying to keep up with new challenges of providing clean and safe water, whether it is a flood, new contaminants, supply, or outdated and aging infrastructure that leaves main pipes of delivery broken and needing repair. These are challenges we deal with at the local level, and we must pay the costs as well.

This is no time for 'business as usual' approaches. Our work here is about seeking new and innovative ways to adapt our drinking water systems to meet any challenge.

I am pleased that the Administrator has taken on this issue to come up with a National Plan to ensure that we do not have tragedies like what happened in Flint, Michigan (lead contamination), Charleston, West Virginia (chemical spill) or Toledo, Ohio (toxic algal bloom) - happen in our community or any other community.

I will remind everyone that what we are doing is very important. We appreciate that the Administrator, along with the Office of Water, wanted to get our input ahead so that we can have input from those on the frontlines addressing these challenges.

Mayor Bob Dixson welcomed everyone to the call. He thanked Mayor Kautz for her leadership on the Water Workgroup, as well as Sue Hann.

As Mayor Kautz said, having clean and safe water is an important issue for all of us. We are here today because we represent those in our community and we speak for them. At the local level, everyday we make decisions that affect everyone in our community - their livelihoods, health and the environment.

For those of you joining a LGAC meeting for the first time, we are a committee appointed by the EPA Administrator of elected and appointed officials of state, local and tribal governments. Currently, we have 39 Members serving on the Committee. We come from different communities all over the U.S.: small, large, urban and rural. We are bipartisan and politics do not enter into our discussion. We work on solutions to address challenges. Each of you brings an important perspective that we need to hear.

In terms of the LGAC's work and process - once the Workgroup concludes their work, they will present it to the 39 LGAC Members to review and take action on. We will do that in an open and public meeting as well.

I would also like to acknowledge EPA for seeking the advice of this Committee on this important issue. Administrator Gina McCarthy does listen to our advice.

There is hardly a more important issue than what we are talking about today - clean and safe drinking water. I would also like to thank Judy Sheahan from the U.S. Conference of Mayors, who has joined us today. We appreciate the good work you are doing to represent mayors and for sharing with us today what your organization is doing and thinking about.

Kautz: On July 28th, the Administrator delivered the charge to the LGAC in Washington, DC. We have since met twice, on August 11th and August 19th. At these meetings, we have further refined the scope of our work. Eric Burneson, of EPA's Office of Groundwater and Drinking Water, helped walk us through the charge and highlight the areas where the LGAC's input was needed.

We were also joined by two representatives of national intergovernmental organizations: Kristin Hildreth, National Conference of State Legislators, and Jim Taft, Association of State Drinking Water Administrators. They shared with us the perspectives of their members mainly from a state perspective, which was very helpful.

We also welcomed new members of the Workgroup which has expanded the many perspectives we need to cover with this Charge.

Today, on our agenda, we have Mark Rupp, Deputy Associate Administrator Intergovernmental Relations; Peter Grevatt, Director, Office of Groundwater and Drinking Water and we also have Judy Sheahan, joining us from the U.S. Conference of Mayors.

We are also pleased that several have registered also to address the Workgroup. I will call on you at the time on the agenda for public comments.

4:35-4:40 Welcome Remarks
Mark Rupp
Deputy Associate Administrator, EPA's Office of Intergovernmental Relations

Rupp welcomed everyone and thanked everyone for joining the meeting. He passed along the Administrator's appreciation of their work, and her appreciation that this is a public meeting.
As EPA was developing the CWA, the LGAC was charged to give input on the proposed rule. The LGAC met with officials across the country, met in four EPA Regions and developed recommendations in seven months. The findings and recommendations were incredibly valuable to the agency.

Like the CWA, drinking water is another daunting challenge, and the LGAC is tasked once again to work on a National Drinking Water plan in an incredibly short turnaround of less than 60 days. It makes sense, since you are the ones at the local level and you are in control of long-term planning and engaging your citizenry. You know your water, and clean and safe drinking water has to be accessible to all your citizens.

We look forward to hearing your ideas that you will bring forward. Your recommendations will have say in the discourse. It is a multilevel issue and it will take all levels of government working together. Anything we can do has to be implemented at the local level. Anyone that picks up a newspaper sees the headlines, and drinking water issues are there. Flint has brought attention to issues of equity and lead and copper, following the hearing for PFOC, PFOA and other emerging contaminants. We need to be able to better address them.

Carolyn Peterson: Emerging contaminants are an issue and a danger. Those dangers were not previously known, such as what happened in New York. Some of these issues that are coming forward that would have made a difference seems important. It could form a case study of what can be done better.

Peter Grevatt: The experience with PFOAs could be a case study for sharing information to be most helpful, and what could be done differently.

4:40-4:45 **Drinking Water Charge**
Peter Grevatt
Director, EPA's Office of Groundwater and Drinking Water

Grevatt: Thanks Mayor Dixson and Mayor Kautz, and all the members of the Workgroup. The Administrator tasked us with the National Drinking Water Action Plan. LGAC Members, putting forward your recommendations will provide us with great input to the plan. You take action every day in your communities on clean and safe drinking water. You are focused on the most significant issues. In the last year, many can relate to what has occurred in Flint.

We are seeking input on four broad areas:

1) Advancing Next Generation Safe Drinking Water Act Implementation: This essentially addresses oversight of states and drinking waters systems. What can help states work better with local governments on providing safe drinking water in terms of implementation?

2) Addressing Environmental Justice and Equity in Infrastructure Funding: We want to identify ways we can work together to ensure that drinking water infrastructure challenges are met especially in low-income, environmental justice communities and small communities where there are even greater challenges.

3) Strengthening Protections against Lead in Drinking Water: We are focused on improvements to the Lead and Copper Rule. We are likely to propose changes in 2017, but it will be some time before a final rule is on the books. What are the best changes, how can we make them, and what can we do in the interim?

4) Emerging and Unregulated Contaminant Strategies: Heard input from communities and states that there need to be improvements in place. We heard that better communication is needed. What tools are needed at the local level.

We appreciate perspectives from local government because it is really you at the local level that make the decisions and implement regulation. It is an 'aggressive schedule' to finalize by the end of the year and we want to make sure that we get it right. The LGAC is a key step for us in crafting it appropriately to chart the future for the national drinking water program.

Kautz thanked Peter for trusting the LGAC to give EPA recommendations. She also thanked his staff that is available to the LGAC, especially Eric Burneson, who has given the Workgroup ongoing briefings on drinking water issues in real time. She said the LGAC appreciates all of the work EPA is doing to ensure communities have clean and safe drinking water.

Mayor Kautz introduced Judy Sheahan with the U.S. Conference of Mayors (USCM) and acknowledged her work with the USCM's Mayors' Water Council. She said the Council has done quite a lot to advance the issues the LGAC is talking about, especially safe drinking water.

4:45-4:55 Intergovernmental Organization Input
Judy Sheahan
U.S. Conference of Mayors

Judy Sheahan thanked Mayor Kautz and Mayor Dixson. She expressed her appreciation for being invited to speak. Mayors hear a lot from EPA about including safe drinking water in our agendas. The truth is that mayors care very much about safe drinking water as a priority for our citizens. The issue is that, often, the constituent resources are not always there. It is really a pocketbook issue. We have been working with EPA since 2009 to do something that is called "integrative planning" for cities that are facing stormwater issues. EPA recognized that, and asked us to come up with a plan for CSO and stormwater management. Mayors have advocated to include SDWA requirements in this plan. We want to include safe drinking water as a part of an overall comprehensive plan. In the past, we have heard from EPA that including drinking water issues in this plan would be "too unwieldly" because safe drinking water would win priority every time. The fact is, we want that, as mayors concerned about our citizenry. We need to spend money on the most important issues such as this one.

In 2013, we brought this up with the Administrator and she, surprisingly, agreed with us. She seemed interested in incorporating integrative planning with all environmental issues. We liked that but nothing came of it subsequently.

Our ask to EPA is for local governments that want to participate to be able to develop a comprehensive plan (integrative planning) to address all water issues, combining sewer, stormwater and drinking water plans. This is the best approach for public health and environmental benefits.

The risk management rule is something we are opposed to. It comes under the CAA. Local governments are very concerned about this existing requirement. The proposed rule is redundant and duplicative. NLC and NACo are also opposed, acknowledging that it is expensive to implement. Local governments found out about it late in the process – there was an EPA briefing on May 4 but comments were due two weeks later, which was a very quick turnaround. We'd like to ask: how much is really riding on this

particular rule? Our ask of EPA is to withdraw the rule, do an impact analysis of the rule, and work with those who know best about what should be in it to rework it.

4:55-5:20 Public Comment Period

Kautz announced the public comment time. She called on those five individuals registered to speak. The LGAC finds it greatly beneficial to hear from as many perspectives as possible. We consider what issues you have raised within our findings and recommendations.

Steve Via, from the American Water Works Association, thanked Mayor Kautz and Mayor Dixson. He identified two items of interest to our members: that the National Drinking Water Action Plan is an excellent idea; and that it should provide actionable opportunities.
One issue that should be raised in the National Drinking Water Action Plan is source water protection. The plan should have a call to action to protect sources of water. We want to build upon a document prepared by the Source Water Collaborative, and emphasize the importance of data sharing. We should ensure that data sets are updated and current enough to the point that they can bring new information forward, and be useful and protective at the local level.

There are two points that I wanted to bring up in particular:

(1) A support preparations loan guaranteed WIFIA to increase funding areas, provided by EPA under the Water Finance Act.

(2) Utilizing resources developed by the water sector to improve systems by covering asset management, wastewater research foundations through their websites, tools and utilities to look at pipe replacement and avoiding rate hikes. This helps local communities think through their rate base leverage.

There is currently a list of emerging and unregulated contaminants. We would like to refine this list by shortening it to focus on those contaminants that are most significant for risk reduction. We would like to apply the recommendations of the National Academy of Sciences to prioritize these contaminants. We would also like earlier engagement of relevant stakeholders from the very beginning. We would like to continue our collaboration with USDA regarding source water concerns. EPA should work with other agencies such as the Department of Education and the Department of Health and Human Services to get help addressing lead sources in schools and dealing with many other water quality issues. I will forward the written copies of this comment material.

Kautz introduced the next commentator, Roy Heald, from the Security Water and Sanitation Districts in Colorado Springs.

Roy Heald: Today, I'd like to comment on Health Advisories for PFOCs, and address the possibility of an emerging contaminants case study. Information on Health Advisories is difficult to obtain. Colorado Springs has a population of 19,000 and we have 13 public health employees here at the Security Water and Sanitation District. Our history with PFOCs started in 2014. At this time, we got word that we were supposed to begin testing for PFOCs and PFOAs along with other potential contaminants. Through some 2016 press coverage in the New York Times, we became aware of the existence of a Health Advisory that we were not informed of, and that we had reached exceedance levels and were not supposed to cross sample. We were not aware that we were exceeding, but we shut down 7 of our 25 wells out of caution. We heard, through the grapevine, that EPA headquarters would be issuing another Health Advisory in March, but March came and went. In April, a major southern delivery system went online for us. We

thought we were meeting the current Health Advisory. We had no direct contact from EPA about specific levels, but we heard that a new Health Advisory would be emerging that had limits at 70 ppt. Sure enough, in late May, EPA Region 8 issued a new Health Advisory which necessitated the closure of 9 more of our wells to meet that standard. The Council met and decided to do blending to meet the standard.

There was no direct communication from EPA during all of this, and the State also added another standard for a new contaminant. This was shocking to us because it meant that, between these standards, we only had two wells that met the expectations. The community is in distrust and some believe their drinking water is "poisoned." People are asking why they have to pay both for bottled water and their water bills. Lawsuits have been threatened with no regard for affordability. We have a less than five million dollar budget, and the Health Advisory is costing us, on the average, about $30 per customer. We had to use funds for the Health Advisory that we would have been spending on capital improvements.

The good news is that within a few weeks, we will be completely free of these contaminants in all of our water. But we need better communication from EPA headquarters. I don't read the Federal Register regularly – I wouldn't have even known about this call unless someone hadn't told me – so we really just need more direct communication from headquarters.

Kautz called on any others from the public to speak. She thanked the speakers and acknowledged the great help it is to the LGAC to receive comments.

5:20-5:28 Workgroup Discussion of the Charge

Kautz: In your meeting materials, you have an issue paper that was developed based on what we have heard so far and the many perspectives we have all brought forward. This issue paper is a work in progress, and we continue to add to these issues and refine them as we discuss them and gain clarity.

What the Workgroup has done has been to put together the many issues we have heard about and researched. The issue paper we are discussing forms the key and substantive issues which are expanded upon in the Report. The Report also puts forward recommendations for EPA to consider in formulating a National Drinking Water Plan.

We do not have time today to do this. But we want to use the next Workgroup meetings to start pulling all of this information together in a report that we are beginning to outline now.

We are also relying on the SCAS, EJ Workgroup and other LGAC workgroups to give feedback on the issues and the Report. We look forward to your written comments.

5:28-5:30 Wrap-Up/Next Steps
Mayor Elizabeth Kautz, Vice-Chairwoman

Kautz: The next Workgroup meeting will be on **September 21st, same time, same call-in number**.

If you are listening in and did not have the opportunity to speak, consider registering to make comments on our next call. We are also anticipating input from the SCAS, EJ and really all of the Workgroups and

everyone on the LGAC to contribute to the Report. We hope that those meetings will be on the schedule very soon.

We hope to have a Workgroup meeting on **September 28th** to go over the Draft Report and transmittal letter. But we will get word out to you on a time and call in number for that.

If the LGAC has a quorum, it looks like that may be on **October 7th, 11:30-12:30** to present our Report and recommendations for LGAC action. I believe the SCAS will meet immediately ahead of the LGAC, but we will wait on confirmation from Chairman Dixson and our DFO Fran Eargle to confirm that.

5:30 p.m. **MEETING ADJOURNED**
Mayor Elizabeth Kautz, Vice-Chairwoman

Protecting America's Waters Workgroup

Wednesday, September 21, 2016
4:30 PM- 5:30 PM ET
Call-in: 1-(866)-299-3188, Code: 202-564-3115#

LGAC
Chairwoman Sue Hann
Mayor Elizabeth Kautz, Workgroup Vice-Chair
Commissioner Robert Cope
Kevin Shafer
Teri Goodmann
Scott Bouchie
Commissioner Victoria Reinhardt
Commissioner Carolyn Peterson
Jeff Tiberi
Mayor Steve Williams
Council Member Brad Pierce
Representative Stephanie Chang

EPA
Eric Burneson, Office of Water
Mark Rupp, OCIR
Fran Eargle, OCIR
Martha Zeymo, OCIR
Katie Pastor, OCIR

PUBLIC
Alan Roberson (Corona Environmental)
Sarah Wright (Association of Public Health Laboratories)
Amanda Palleschi (Inside EPA)
Representative Phil Phelps (Michigan)
Allen McEntyre (Southeast RCAP)

Albert Velasquez

4:30-4:35 p.m. Call to Order and Opening Remarks
Susan Hann, Chairwoman
Mayor Elizabeth Kautz, Vice-Chair

Chairwoman Susan Hann welcomed everyone, provided an overview of the meeting agenda, and introduced the use of Adobe Connect to display a Powerpoint Presentation.

Katie Pastor did a brief tutorial of Adobe Connect resources and teleconference features.

Chairwoman Hann: This is the last of the public meetings we are having on the charge. The LGAC had a face-to-face meeting in Washington DC in late July, in which we discussed the charge with EPA staff. The workgroup will review these issues and then provide our recommendations to the LGAC for forwarding to EPA. Our goal is universally accepted – making sure our citizens have access to clean, safe drinking water. So we are moving forward with our recommendations now. Mayor Kautz chaired our first public meeting on September 7.

Mayor Elizabeth Kautz: Thank you everyone. All of us know our drinking water is important to our communities, which is why we're here. Thank you to our Administrator for doing a good thing in turning to us, the members of the LGAC, to give her advice in moving forward to improve the nation's drinking water, because we are all in this together. We need to make sure we have good information as we move on.

On September 7, we had a great discussion about our charge with EPA's Mark Rupp and Peter Grevatt. Then we heard from Judy Sheahan, the U.S. Conferences of Mayors, who gave us great perspectives on integrated planning on not only clean water considerations, but also Safe Drinking Water Act requirements. That just makes sense to many of us. We have incorporated that into our issues under this consideration. We also heard from Steve Via, American Water Works Association, who also made a point to agree with the comments of Judy Sheahan. Steve Via also asked the committee to consider source water protection, training, and resources. We then heard from Roy Heald, from the Colorado Springs Water Authority. He spoke to us about the importance of communicating information more effectively to local governments concerning health advisories. He also spoke to the collaboration needed between levels of government. We also heard the need to reestablish trust with local citizens regarding drinking water. This is a big issue. I also heard that Heald was interviewed by NPR last Friday on this issue, so we are delighted he spoke to us first.

Hann thanked Mayor Bob Dixson, the LGAC Chairman. She also thanked Fran Eargle, Mark Rupp, Jack Bowles and the staff at EPA. She introduced Mark Rupp.

4:35-4:40 Welcome Remarks
Mark Rupp
Deputy Associate Administrator, EPA's Office of Intergovernmental Relations

Mark Rupp: First, I want to thank Chairwoman Hann and Vice-chair Mayor Kautz for your incredible leadership on this very important charge. Thank you for this opportunity to visit with you today.

I don't know if he will able to join, but I want to thank our LGAC member Stephanie Chang from Michigan for putting a call out to her colleagues in the state legislature including Representative Phil Phelps, whose district includes a part of the city of Flint, to participate. A number of residents of Flint were in DC last week, and I had the tremendous opportunity to meet with them and hear more directly about what they're enduring. I want to thank him and his constituents because I think they did an enormous job of educating members of Congress. It was just on the heels of their visit to the Hill when we saw the Senate pass a Water Resources Development Act that includes a number of items for Flint that we will get to.

Nothing is more critical at this moment in time than ensuring that people across the country have access to clean drinking water. So thank you all, from all levels of government, for working together.

I would like to give you an update on developments and provisions in the WRDA that we are following and that may have an interest in your work. So this may take a few extra minutes but I think it is important.

As a preface, I should note that this is now a Senate-passed bill, and certainly the House will need to act. So nothing that I say is set in stone until a final bill has been passed by Congress and has been signed by the President. But there are some highlights I want folks to be aware of.

Some Flint-related provisions in the bill were included. Included were items like: water for drinking water infrastructure and emergency situations not unlike Flint. Specifically, Congress would make available $100 million in drinking water SRF grants for Flint.

There are also some loan forgiveness provisions to lift the cap on the drinking water SRF, for additional subsidies related to fiscal year 2016 in the event that a state of emergency declaration has been issued. There'd be a new requirement on notifications related to finding exceedance of the lead action level – the notification date would be lowered to 15 days. If there's potential for serious health effects, notice would also be required to the CDC as well as the appropriate state and county health agencies.

In the bill, there are some other new grant and funding programs, some specifically for small and disadvantaged communities which I know are of concern here in the LGAC and specifically the SCAS. Here, Congress would authorize $230 million for the fiscal year 2017, and $300 million for each fiscal year 2015-2021. Now, there's always the distinction between the authorization of funds and then what's actually appropriated. So we need to be aware that sometimes Congress will authorize a considerable sum but is only able to appropriate a certain amount. And so for small and disadvantaged communities, while authorizing $230 million, Congress would actually provide an immediate direct spending of $20 million for that program.

Congress would have a program implemented to look at replacing lead lines – and there would be $20 million provided for that testing. There would be a program related to lead testing in schools and in childcare facilities – for these, there is an authorized sum of money but no direct spending provided in this particular act.

I love that Congress did this, because it fits right in the context of LGAC in our day-to-day lives. We are hitting sort of a crisis moment in federal government where we have a lot of retiring civil servants. Need to ensure we're getting young people involved in public service workforce. So the Water bill would

create new water infrastructure workforce program that EPA would manage, to get good water utility workers into the workforce.

There would be the authorization of grants to nonprofit organizations to help small water and wastewater systems with technical assistance, and it would specifically reauthorize our technical assistance to small systems through the fiscal year 2021.

There would be the creation of a Water Infrastructure Investment Trust Fund within the U.S. Department of the Treasury that would be funded by a 3-cent per item voluntary label placed on products. So the sense is that those companies that wanted to put some sort of label on their product that talks about investing in water infrastructure would do so, and those resources would go into the treasury to go toward clean drinking water and SRF programs.

There is a provision in the WRDA that looks to integrated planning. Folks will recall – particularly Mayor Kautz – that EPA, the Conference of Mayors, the League of Cities, and the Association of Counties did an incredible amount of work together, related to these things. One is the affordability of water – understanding that it's often a cost-prohibited motion for governments to provide clean safe drinking water to citizens. It's something that they want to do but price is a concern. The other piece is related to Integrated planning – the notion of EPA regions working together with the state and local communities to decide – in respect to enforcement – what are the highest priorities we need to focus on, and how can we do that in an integrated way. So here, Congress more or less codified that work we've been doing together around integrated planning and affordability.

The LGAC Members have been keenly aware of the Water Infrastructure Finance and Innovation Act, which we've had Jim Gebhardt from EPA join to talk with you all on several occasions about. That WIFIA program, modeled after a similar transportation program in the Department of Transportation, was authorized in Water Bill of 2014. It's a shell program EPA has been working hard on, to ensure that whatever Congress appropriated would be quickly brought out onto the ground. So a nice thing about this bill is that WIFIA is no longer seen as a pilot, and Congress will appropriate $70 million in funding, with the idea that we can make those resources work. So these are all good things.

Given the fact that our council member Pierce from Colorado is on the phone – there are a few provisions related to the Gold King Mine, which the LGAC has weighed in on. Just a few things there – it would expend eligibility for claims to be filed from October 2015 to September 2016. It would also require EPA to develop a long-term water quality monitoring program in coordination with effective states, tribes, and local governments.

So on that note, I'll wrap it up. Everyone, when you received this charge from the Administrator, you took seven months to travel around the regions and are putting together a report related to our action plan in no more than 60 days. I know you're busy – and this couldn't be a more important issue to you and us here in the Office of Water. You all provide such an incredible point of reflection – water really comes to a boiling point at times, with you all. I'm looking forward to hearing from Kevin Schafer about the innovative things that are going on in Milwaukee. You guys are really doing some cutting edge stuff that all of us could learn from.

4:40-4:45 **Drinking Water Charge**
Eric Burneson
EPA's Office of Water, Office of Groundwater and Drinking Water

Eric Burneson: Thank you for the opportunity and the intensity with which you are evaluating this topic – it's very valuable. We are undertaking the development of the National Drinking Water Action Plan. We are nearing the end of the input process where we have sought input from a variety of stakeholders on four key areas where we see opportunities to improve. So we want to figure out ways to increase our communication and ability to work together to improve public awareness and accountability.

So, the four key areas:

1) **Implementation of the Safe Drinking Water Act (SDWA) -** We want to figure out ways to increase our communication and ability to work together to improve public awareness and our accountability for ensuring America's drinking water is the safest in the world.
2) **Environmental Justice and Equity in Infrastructure Funding** - Looking for ways we can work with governments to make sure the challenges we face consider the impacts on EJ communities and small systems. We often think of disadvantaged communities as small communities. Our colleagues from Michigan will acknowledge that even larger cities can have challenges with decaying infrastructure. Being in a larger city doesn't necessarily put them at an advantage in that respect.
3) **Lead and Copper Rule** - There are challenges we still face in terms of making sure everyone is protected from the potential adverse effects of lead and copper in water. We are seeking ways to strengthen the existing rule, but we also want to engage with stakeholders to revise it, to improve public health protection.
4) **Emerging and Unregulated Contaminants** - We are interested in ways we can work together to try to address the challenges these contaminants pose – and how we can target resources for them and prioritize them.

Chairwoman Hann thanked Burneson for the recap and introduced LGAC Member Kevin Shafer.

4:45-4:55 **Case Study: Milwaukee, Wisconsin**
LGAC Member Kevin Shafer
Executive Director, Metropolitan Milwaukee Sewerage District

Kevin Shafer: Mark, thank you for the nice comments on Milwaukee. We are trying to do sustainable, innovative things here certainly. The MMSD – the Metropolitan Milwaukee Sewerage District - is just that, we are just a wastewater utility, not a drinking water utility. It's important to understand that it's all connected in the hydrological cycle. We need to think like a watershed – in our case, the greater Milwaukee watershed. Everyone is upstream or downstream from someone else, so we always need to consider that when we're treating wastewater that ultimately becomes someone else's drinking water down the road.

MMSD itself is a special district in the state of Wisconsin. We sit on Lake Michigan; we have 411 square mile area; we have 1.1 million people. We do flood management, stormwater management, and wastewater treatment. We have a deep tunnel system and 2 water reclamation facilities. Our two water reclamation facilities are Jones Island and South Shore. The tan area in this diagram is a combined sewer area, but the rest of our service areas are separate sewer areas, so we deal with both types of infrastructure on wastewater side.

When it comes to this integrated approach where one water becomes someone else's water, the wastewater that comes out from our facilities goes out to Lake Michigan, but then we have drinking water utilities pulling that same water back in to be treated and used for drinking, so we're a very sustainable district.

In terms of the deep tunnel itself – the first phase was completed in 1993, then the second in 2006. It has 521 million gallons of water storage. It's 300 feet below ground. So the system captures heavy stormwater that fills up the regional sewer system, it is stored 300 feet underground, and we pump that up and treat it to meet requirements. Since it has come online in 1993, we have captured and cleaned 98.3% of the water that has come to us. This includes combined sewer and separate sewer flow, so we get both stormwater and wastewater. When you read about an overflow in Milwaukee, you're looking at 1.7%. I don't know of a combined sewer system that has a higher percentage of capture than what we have here in Milwaukee. We are very fortunate.

In 2010, my commission approved a vision for the year 2035. In the next 25 years, we said we would have zero overflow in both the combined and separate sewer systems. We will have zero homes in the hundred-year floodplain, and we will have green infrastructure to capture that first half-inch of rainfall. That's the integrated watershed portion of our vision.

We also have a climate adaptation portion for our vision for the future. We will have 100% renewable energy by 2035, with 80% of that being self-produced.

Some of the integrated watershed management – we have had the Greenseams program since 2002. Within this, we are purchasing land, putting conservation easements on this land, and turning it over to land trusts and communities. They are not allowed to put impervious cover on that surface, so they become large natural areas great for the habitat, great for absorbing water and reducing downstream flooding.

We also have a green infrastructure program where, right now, we have 21.5 million gallons of water captured every time it rains. So each time, we're capturing water in green roofs, rain barrels, rain gardens, porous pavement…and keeping that out of the center of sewage systems. And you can see, it's just a great way to get neighborhoods involved in understanding how water flows, how they're a part of the hydrological cycle, and invested in improving the environment.

In terms of green roofs – we get up to 512,000 gallons per storm just in green roofs here. The one shown here is on our city library downtown.

We have had a rain barrel program since 2002. Within that, we've sold over 22,000 barrels – that's over a million gallons of storage per storm just in these barrels, which are placed on the downspouts on people's homes. And that's a great educational tool – it's one way we are teaching kids about improving the environment.

We are also partnered with a great partner – the U.S. Army Corps of Engineers. We used some Great Lakes Restoration Initiative funding to remove concrete liners here placed on our rivers in the sixties. So the concrete you see in this photo has been removed. Just yesterday, the Army Corps awarded us our next contract, moving up into the tributaries of the watershed to remove that concrete. So we're actively working with the federal government to try to bring back the infiltration of water into the

groundwater to reduce the high flows we see from impervious channels, trying to reconnect that hydrological cycle.

Here's a creek that we daylighted – there used to be a warehouse and a parking lot here. We ripped this culvert out and naturalized this creek one year ago.

We really look at our reclamation facilities as resource recovery facilities as well. This is a picture of the Jones Island plant – a phenomenal piece of infrastructure that allows us to produce sustainable fertilizer, treat water, and capture energy

The fertilizer that I'm talking about is Milorganite - Milwaukee Organic Nitrogen – which we've been producing since 1926. So for 90 years, we've been producing a biosolid fertilizer that we then sell. We sell about $8 million per year of Milorganite, which returns those nutrients back to the soil, which can then be used to grow plants in the future. We also capture landfill gas off of landfills here in the region. We pipe it 19 miles to the Jones Island plant, where we burn that landfill gas, instead of natural gas, to produce energy – off of which we run the plant. We also take the waste heat off of those turbines to drive the fertilizer production as well.

At South Shore, we capture digester gas off the wastewater treatment process. We burn that digester gas in generators to produce electricity as well. We also have solar in two of our facilities – Jones Island plant and our headquarters building.

Back to that integrated water management. We are trying to get back to managing that drop of water where it falls so that it doesn't induce pollution downstream and can recharge the groundwater, ultimately protecting Lake Michigan, in our case.

I just wanted to briefly talk about the "one water approach." We are making beer out of the effluent from our wastewater plant. The pictures are from when we had a smack down with Portland, Oregon, who is also doing this. There are four utilities in the country that are also making beer out of their cleaned wastewater, just driving home that fact that what we treat in a wastewater plant can and usually does becomes someone else's drinking water. We're actually doing it again next week.

Water and wastewater utilities across the country are huge economic engines for their cities and their regions. The local chamber of commerce looked at MMSD's impact on the Milwaukee region. Annually, about $218 million of economic output is generated out of MMSD. That's around 1400 jobs supported with wages around $57 million. So we employ a lot of people with good-paying jobs. We can be the engine that can help solve some social problems in the region by integrating what we do - water and wastewater infrastructure - with some other issues being pushed forward in the community.

Hann: That's a great example of your utility doing some really innovative things and having a great economic impact on your area, and the environment. That was a really interesting presentation, especially the part about the beer! That's the trigger that will make that work, right?

Shafer: That's right – there you go.

Chairwoman Hann thanked Shafer and opened the discussion up for public comments.

4:55-5:20 Public Comment Period

Alan Roberson (Corona Environmental): My background is in green water policy here in DC for 25 years. I've worked with Eric Burneson off and on for many years, and he said one thing here that I'd love to emphasize, one of four recommendations I have that I'd like to go over. These four recommendations came out of a paper that I wrote with a colleague that was published in the Journal of American Water Works Association in March of this year. The article took a look back on the 20 years of the Safe Drinking Water Act after these last amendments. This year's twentieth anniversary provides an opportunity to look at the law and ask questions: How is the law working? How effective are the regulations? Are we focusing on the right things?

So there are really four recommendations, and one of them aligns exactly with what Eric said earlier – a better system for prioritizing contaminants. I'll just run through the four:

1) A better system for prioritizing contaminants. EPA has a large agenda, and right now I think the contaminant candidate list is too big, not as targeted as well as it can be. So we're really struggling to meet all these mandates in the Safe Drinking Water Act on how to improve and how to make decisions on revising existing regulations.
2) Increasing compliance with existing regulations. EPA has 19 regulations addressing 91 contaminants, and the compliance rate is about 92%. I think we can actually get more risk reduction by increasing compliance with existing regulations rather than chasing smaller and smaller risks.
3) Retire some regulations that just don't need to be on the books any longer. It's part of EPA's mandated process to review all existing regulations every six years. So the opportunity is there. I think EPA needs to investigate that opportunity.
4) Implement a consistent and streamlined process to access SRF money. It's an onerous process, from my personal experience working with a very small system in Virginia. I can't point to any real factor that would be the one thing that should change. The states and the federal government have to be stewards of the money. They have a fiscal responsibility to make sure the systems can pay back the loans. Collectively, working with the state drinking water administrators, there are ways to streamline the process. I think we can make these amendments work more effectively, and optimize the limitations.

If you want more information, you can look at the article in the March issue of the Journal of the American Water Works Association. Thank you.

Chairwoman Hann thanked Roberson and acknowledged that his points were generally consistent with the LGAC's recent findings. Roberson agreed. She then introduced Representative Phil Phelps from Michigan to discuss the Flint crisis.

Representative Phil Phelps (Michigan): I just appreciate this opportunity. Thank you so much. I like the direction this is going. I represent the city of Flint, Michigan, and everyone is pretty well-informed about what challenges we were facing there. I think most people – and certainly everyone in the city of Flint right now - agrees about lowering the action levels for the Lead and Copper Rule. Also maybe a reduction in the time the municipality has to notify the residents when in violation.

Testing procedures need an overhaul to inform units of local government or states that have primacy. I would like to see the elimination of free flushing, because that's kind of what got us into the mess we were in. How do we control states that have primacy? Or the Departments of Environmental Quality

that have primacy? After everything we've been through, I'd like to see the consideration of either restricting, suspending or removing primacy for the Michigan Department of Environmental Quality. I think there were many failures in that area there – even with the permitting process of the Safe Drinking Water Act. Early on, I was told things by the DEQ – for example, that because we had an emergency manager in the city of Flint, we didn't have to follow the Act when switching over to the Flint River as a water source rather than using Lake Huron. I have no idea how that law could trump the Safe Water Drinking Act.

So I would really appreciate some kind of conversation or consideration to see if primacy should be at least temporarily removed from the state of Michigan when it comes to clean drinking water.

My last point is about currently unregulated contaminants. Lead is an issue we've been talking about for a while now, and before lead, it was TTHMs. But the unregulated contaminants in the water are a very big concern. There was a local private university that was doing a study and started finding some very interesting things that we are no longer allowed to know because the president of that university shut that research down. The president of that university was also on the governor's transitional board that controls the city of Flint. But they were finding some pretty negative things that were also in the Flint River. There was very little done in the form of testing to see how clean the water was before treatment. I could talk quite a bit longer, but I'm just thankful I had the opportunity to present these issues and perspective. Even the consideration of a few of these issues would make a lot of people have more faith in the federal government, and have more comfort in their daily lives, knowing these issues are at least being addressed.

5:20-5:28 Workgroup Discussion of the Charge

Chairwoman Hann thanked Representative Phelps for sharing his perspective. She opened the discussion up for workgroup comments.

Commissioner Robert Cope: We had a SCAS meeting the other day with some really good points brought up. We will comment on that before the meeting on October 7. Just wanted to let folks know we got a pretty good start the other day, and we're working on it.

Hann: We'd like to schedule another Water Workgroup meeting for next Wednesday at 4:30 ET. And then we'll finalize the document at our next regularly scheduled meeting on October 5. I'm working with the EPA staff to get a draft report ready to be sent out to everyone, and we'll continue working on that until October 7.

5:30 p.m. MEETING ADJOURNED
Ms. Susan Hann, Chairwoman