



TESTIMONY OF
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EXECUTIVE DIRECTOR
ALABAMA RURAL WATER ASSOCIATION
AND ON BEHALF OF THE
NATIONAL RURAL WATER ASSOCIATION
BEFORE THE
U.S. SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
SUBCOMMITTEE ON WATER AND WILDLIFE
LOCAL GOVERNMENTS PERSPECTIVE ON WATER INFRASTRUCTURE
FEBRUARY 28, 2012

Thank you Chairman Cardin, Ranking Member Sessions and members of the Subcommittee for the opportunity to testify here today. I am Kathy Horne, Executive Director, of the Alabama Rural Water Association, representing 550 public water systems serving 3.7 million people in Alabama. I am also proud to represent the National Rural Water Association, which has over 28,000 small and rural community members.

There is a state rural water association in every state representing small and rural communities' water and wastewater supplies. Ninety percent of the community water systems in Alabama are members of Alabama Rural Water. In the nation, **most all community water systems are small**: 94% or 47,495 of the 51,651 community water systems serve a population less than 10,000 people. And small communities have to comply with all the federal regulations, just like the largest cities.

I have worked with drinking water and wastewater systems in Alabama for over 30 years, providing technical, managerial and financial assistance. **We are proud partners with the key governmental agencies** in our state including the USDA, our state's regulatory agency, the emergency management agency, the Alabama Department of Economic Development and other groups.

I am very familiar with the challenges facing our small towns and rural community water systems, and the funding needs for water and wastewater infrastructure facing the industry.

Alabama Rural Water has been in service since 1977. **Our purpose is to assist and work with drinking water and wastewater systems**, providing free localized training and technical assistance to enable water utilities to provide safe water and quality wastewater, stay in compliance, and fulfill the operator certification requirements of the state regulatory agencies and the EPA. Also, we provide on-site local technical assistance including leak detection

surveys, smoke testing, valve locating, water rate studies and assistance with the financial and management capabilities of the utility.

The expansion of small water supplies is one of the great public health and sanitation advances in the nation. Before the expansion of rural water supplies, many rural families relied on hauled water, questionable quality well water, or untreated sources of drinking water. Many of the rural and small town water systems in Alabama were constructed in 1950's and 60's, because larger municipalities found it cost prohibitive to extend their lines into the sparsely populated rural areas. This grand improvement in rural public health, economic development, and environmental protection was made available by USDA's low-interest loan and grant funding. **Three principles in the USDA program should serve as the foundation for every other federal water funding program:** (1) limiting funding to communities who can't finance water infrastructure without subsidies, (2) targeting funding to communities with the greatest economic and environmental challenges, and (3) providing a portion of grant funding, which is necessary to assist the communities most in need.

Due to their limited economies of scale and lack of technical resources small communities often struggle to operate their utilities and comply with complex technical and regulatory requirements. The EPA continues to increase mandates through the Safe Drinking Water Act and the Clean Water Act creating more and more expense and increases in water rates. The demographics of water supplies in Alabama are typical of the other states, where the vast majority of water supplies serve a population of less than 10,000 users – which is the equivalent to 3,333 customers. While most of these small communities are operated and managed responsibly, very little net revenue is realized beyond the routine operational and maintenance costs. This makes it more challenging for small systems to meet financial reserves, replacement funds and system improvement funds – and simultaneously properly maintain the operation. With limited financial and technical resources – and hundreds of miles of water lines buried in the ground – it can be a challenge to plan ahead. Major upgrades and replacements can be overlooked and sometimes forgotten until a crisis forces the situation like a continuous leak, low pressure or other poor service related issues. Because water lines are hidden, they can sometimes be looked at as, *“out of sight and out of mind.”* This same concept applies to wastewater infrastructure and can also extend to the visible water utility assets such as pumps, tanks, etc. It is easy to adopt the concept of, *“if it's not broken, don't fix it!”* even though these assets should be replaced before the life expectancy expires and cripples the operation. Encouraging local responsibility for professional operations and long-term sustainability is our main objective at Alabama Rural Water. We train and assist more local operators, managers, and officials than any other effort, regulation, or program. **Local responsibility is the most important element for safe water and a sustainable utility.**

I would like to highlight two areas of concern for community water supplies and urge the Subcommittee to consider assisting in some solutions in future federal funding and policy.

First is the problem of unaccounted or lost water and, second, is the lack of training resources for the governing members or board members of community water supplies. Both of these challenges demonstrate the critical need for increased funding to help in upgrading and expanding existing water system infrastructure.

In Alabama, 15% water loss is considered normal. Water can be lost from fire fighting, routine line flushing to maintain sanitary conditions, and routine line breaks. Last year, Alabama Rural Water conducted 23 leak surveys (free of charge) for small water systems. The water loss for these utilities before the leak survey averaged 37% loss. Yes, **it is common for communities to lose over a third of the water they treat** before it reaches the tap. A chart providing total gallons of unaccounted water detected, as well as the estimated savings to each system, is included in my full testimony.

On a national perspective, studies have estimated that 20-25% of the treated water flowing within the distribution system is lost through leakage. High rates of lost water can be caused by faulty meters that do not register properly, and through old/deteriorating water pipes, which must be addressed at some point. Water lines were not intended to last forever and in many cases the life expectancy has long passed with upgrades yet to be made. Water loss wastes energy and expenses associated with treating and pumping the water. Energy bills are the highest expense for water utilities and correlate to a tremendous energy demand nationwide.

For example, last October, we conducted a water survey in the Centreville Water and Sewer Board in Bibb County. Centreville serves 1,945 customers. The survey resulted in the detection of a 6-inch main line that had blown apart at the coupling and was leaking 100 gallons per minute. Using their cost factor of \$1.50 per 1000 gallons of water treated, the utility, upon repair, saved approximately \$6,480.00 monthly in service fees. Photos of this leak and other similar detected leaks are included in my written testimony. If leaks the magnitude of Centreville's go undetected for long periods, they will drain the system financially. Water infrastructure, including service lines must be maintained or replaced to meet the ongoing service needs of the utility, and its customers.

As you know, recent EPA studies have estimated an investment-funding gap of more than \$500 billion (over the next 2 decades) is needed for upgrades and repairs to public water and wastewater systems. But capital investment for such projects is extremely difficult to secure as states and local governments are challenged with large budget deficits, debt obligations and revenue shortfalls. This is resulting in much needed water and wastewater projects being placed on the "back burner," with the hope next year will be better.

My second priority concern is the **lack of training resources for the governing board members of water supplies**. In most all of the approximately 50,000 small community water systems, volunteer governing board members, city councils, selectmen, etc. volunteer their time to make decisions on behalf of the citizens in their community regarding one of the most critical resources available to society; safe drinking water and sanitation. Many small community water supplies are lacking in essential site-specific resources like system maps, standard operating plans, routine preventative maintenance plans, long range plans, etc. – all of which are essential to identifying infrastructure conditions. This represents a lack of understanding regarding the management responsibilities necessary to form strong sound governance decisions regarding the utility's infrastructure needs.

In addition to funding for tangible water infrastructure projects, please consider strengthening the capacity of local governments and providing additional resources in the investment of water and wastewater utility management. By directing more funding to the training of local governing officials, this would assist these decision-makers in their critical role of managing, maintaining and properly overseeing the nation's drinking water and wastewater operations – and ensure the most effective use of state and federal dollars invested in infrastructure projects. Better informed board members would result in better prepared decision-makers capable of properly planning and preparing the utility to meet the ongoing challenges that water and wastewater utilities face.

Safe and dependable drinking water supplies and sanitation are necessary for economic development in small and rural communities as well as meeting the future needs of residential and commercial growth.

The three primary funding sources for water infrastructure include: the USDA Loan and Grant Program (limited to communities with less than 10,000 persons), the State Revolving Loan funds (no population restriction) and HUD's CDBG grants (for low-income areas). You may be surprised to know that in recent years, the SRF program in Alabama supported only one large municipality, with nothing left to support smaller water system infrastructure requests. In many cases, this funding is approved for large municipal operations because there are no population or size restrictions. However, all of these sources have experienced drastic reductions in their most recent budgets.

USDA and SRF funding is not sufficient to cover the growing infrastructure needs of water systems, and certainly not sufficient to address overdue improvement projects throughout the nation. All communities are expected to continue full service for the citizens, industry, economic growth and comply with all federal regulatory requirements. However, federal, state and local water budgets are shrinking and more reductions are in sight.

Investing in the future of water infrastructure not only improves the quality of life for American citizens, but also provides for future economic recovery, growth and stability. As we invest in water infrastructure, we create jobs and boost the economy, and we provide a natural resource that one can't live without.

In closing, I respectfully urge Congress to consider the unique needs and concerns facing our rural and small town water systems and incorporate these as priorities in future federal water funding programs and policies. We urge you to **include additional local government training resources and the three needs-based principles (in the USDA funding program)** in any reauthorization of the state revolving loan funds or new water infrastructure legislation. This would ensure more informed management decisions in protecting and maintaining federal investments of water and wastewater infrastructure projects – and ensures that the most needy communities are prioritized in federal funding initiatives.

Thank you all for your service and for this opportunity. Attached to my written testimony is a one-page summary of the National Rural Water Associations' priorities in any new water infrastructure legislation.



**COMMENTS OF THE
NATIONAL RURAL WATER ASSOCIATION
(SUBMITTED FOR THE RECORD TO THE)
SENATE SUBCOMMITTEE ON WATER AND WILDLIFE
LOCAL GOVERNMENTS PERSPECTIVE ON WATER INFRASTRUCTURE
FEBRUARY 28, 2012
HOUSE SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
INNOVATIVE WATER INFRASTRUCTURE FINANCE HEARING
FEBRUARY 28, 2012**

Small and rural communities often have a difficult time, due to their limited customer base, when it comes to providing safe water and compliance with federal standards. This is compounded by the fact that small and rural communities often have lower median household incomes and higher water rates compared to larger communities. As a result the cost of compliance is often dramatically higher per household. The vast majority of U.S. water supplies are small, 94% or 47,495 of the 51,651 community water systems serve a population less than 10,000 people. There are approximately 16,255 water regulated public sewer systems in the U.S.; 13,057 sewer systems are considered small – serving less than 10,000 persons. EPA asserts, “*Because small communities tend to be economically disadvantaged, under-served and resource-poor, they face significant barriers to building and maintaining effective wastewater treatment services.*”

Federal Water Funding Priorities and Targeting

Any new or reauthorized federal water infrastructure initiatives should retain the key elements that ensure targeting of funding to the most needy communities including: a minimum set-aside for small systems, disadvantaged community subsidies, requirements to prioritize funding to address the most serious risk to human health; to ensure compliance; and assist systems most in need on a per household basis. The 1996 Drinking Water State Revolving Fund grants states considerable discretion in the operation of their revolving loan funds with regard to providing principal forgiveness, in defining disadvantaged communities, and in targeting funds to the most needy communities. Three principles in the USDA water funding program should serve as the foundation for every other federal water funding program: (1) limiting funding to communities who can't finance water infrastructure without subsidies, (2) targeting funding to communities with the greatest economic and environmental challenges, and (3) providing a portion of grant funding, which is necessary to assist the communities most in need.

Technical Assistance

Rural and small communities want to ensure quality drinking water and wastewater. After all, local water supplies are operated by people who are locally elected and whose families drink the water every day. However, they need common-sense technical assistance in a form they can understand. On-site technical assistance allows small communities to have access to technical resources needed to operate and maintain water infrastructure, comply with standards in the most economical way, and obtain assistance in applying for state revolving loan funds. Often the assistance saves thousands of dollars for the community and keeps the systems in long-term compliance with EPA rules. Please consider a provision similar to H.R. 1427 to ensure the most beneficial assistance is provided.

Public-Private Partnerships

NRWA has not opposed water supply privatization in principle. However, corporate water (profit generating companies or companies paying profits to shareholders/investors) should not be eligible for federal taxpayer subsidies. Private companies argue that they have to comply with the same regulations. However, the distinction in mission between public and private is the core principal that should be considered. Public water utilities were and are created to provide for public welfare (the reason why public water continues to expand to underserved and non-profitable populations).

Consideration of Tax Law Modifications to Allow for Financing

Senate Bill, S. 157 from the 109th Congress allows for small non-profit water supplies to have access to tax-exempt financing with the additional benefit of a federal guarantee. With minimal cost to the Treasury, this bill would allow for additional subsidized funding to be available to small and rural water supplies that are in need. The funding is only available to a limited group of small communities that have no chance of obtaining commercial funding, are economically disadvantaged, and have documented environmental or public health needs.

Alabama Rural Water Association

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Quality
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Our Commitment  Our Profession

Alabama Rural Water Association

Leak Detection Program 2011

Date	System	%Loss Before Survey	Gallons Pumped/Purchased Per Month	Gallons Located Per Year	Annual Savings Water	Annual Savings Electric	TBTU (E-6)
10/12/2010	Franklin Water	68%	610,000	7,884,000	\$13,481.64	\$709.56	34.59
11/16/2010	Uriah Water	24%	7,261,000	13,140,000	\$78,840.00	\$1,182.60	57.66
12/2/2010	Cleburne County	25%	48,740,912	23,652,000	\$61,495.20	\$2,128.68	103.78
1/6/2011	Allgood	15%	2,554,170	10,512,000	\$17,625.60	\$946.08	46.12
1/11/2011	Perry Co.	68%	11,694,100	36,792,000	\$181,440.00	\$3,311.28	161.44
2/7/2011	Brookside	37%	9,075,783	28,908,000	\$86,124.00	\$2,601.72	126.84
2/8/2011	Wilton	54%	19,311,000	52,560,000	\$64,800.00	\$4,730.40	230.62
2/9/2011	Phil Campbell	37%	23,134,000	21,024,000	\$34,008.00	\$1,892.16	92.25
2/16/2011	Carrollton	29%	4,616,520	10,512,000	\$16,584.00	\$946.08	46.12
3/29/2011	Centreville	52%	24,350,000	13,140,000	\$16,200.00	\$1,182.60	57.66
4/28/2011	Lowndes	53%	11,747,000	13,140,000	\$16,200.00	\$1,182.60	57.66
5/25/2011	Russell	35%	54,248,500	13,140,000	\$14,256.00	\$1,182.60	57.66
6/9/2011	Talladega	48%	119,973,000	1,051,200,000	\$2,571,264.00	\$94,608.00	4612.49
8/9/2011	Park City	46%	2,712,570	15,768,000	\$55,188.00	\$1,419.12	69.19
8/23/2011	Dallas County	17%	21,639,000	13,140,000	\$24,309.00	\$1,182.60	57.66
8/12/2011	Cullman County	36%	151,992,000	15,768,000	\$23,809.68	\$1,419.12	69.19
7/19/2011	East Alabama	30%	23,272,000	10,512,000	\$16,188.48	\$946.08	46.12
8/25/2011	Bellwood Water	20%	500,000	10,512,000	\$15,768.00	\$946.08	46.12
8/18/2011	Roanoke	8%	25,342,000	5,256,000	\$11,037.60	\$473.04	23.06
8/16/2011	Russell County	35%	54,248,500	10,512,000	\$11,563.20	\$946.08	46.12
8/19/2011	Webb Water	22%	4,970,700	15,768,000	\$51,246.00	\$1,419.12	69.19
7/11/2011	Uriah Water	41%	10,006,900	52,560,000	\$315,360.00	\$4,730.40	230.62
9/29/2011	Lowndes County	41%	9,689,200	26,280,000	\$32,850.00	\$2,365.20	115.31
TOTALS			641,078,855	1,463,796,000	\$3,716,156.76	\$131,741.64	0.0006423

TBTU (E-6) = Total British Thermal Units



Emergency Leak Assistance Centreville Water & Sewer Board



This leak was located on County Road 51 in Centreville, Alabama, which is located in Bibb, County. The Centreville Water & Sewer Board serves 1,945 metered customers. The leak was found on October 9, 2011. This leak was approximately 100 gallons per minute from a 6 inch main that had blown apart at the coupling. Using a cost factor of \$1.50 per 1000 gallons, the result of repairing this leak saved the Centreville Water & Sewer Board approximately \$6,480.00 monthly in service fees.



This leak was located in Centreville, Alabama, which is in Bibb, County. The Centreville Water & Sewer Board serves 1,945 customers. The leak was found on October 10, 2011 on County Road 58 down the street from City Hall. This leak was approximately 15 gallons per minute from a service line connected to a 6 inch main. Using a cost factor of \$1.50 per 1000 gallons, the result of repairing this leak saved the Centreville Water & Sewer Board approximately \$972.00 monthly in service fees.



This leak was located on County Road 54 in Bibb, County. The leak was approximately 25 gallons per minute from a split in the bottom of a 6" PVC pipe. Upon using a cost factor of \$1.25 per 1000 gallons, the result of repairing this leak saved the Centreville Water Works approximately \$1,350.00 monthly in service fees.

URIAH WATER SYSTEM LEAK SURVEY JUNE 14 – JUNE 16, 2011



A leak survey was conducted in the Town of Uriah, AL. Uriah is located in Clarke County and serves 1130 customers. Three leaks were found. In picture "A", the system operator is shown observing a meter that is not registering a leak heard on the customer's side of the service



In photo "B", the operator is seen overlooking a creek crossing that is disguising a six inch (6") water main leak. This leak generates a loss of 2,592,000 gallons per month which results in lost revenue of \$10,808.64 monthly

URIAH WATER SYSTEM LEAK SURVEY JUNE 14 – JUNE 16, 2011



Photo "C" shows a three inch (3") water main leak located at Iris Peavy Road in Uriah Alabama

The three (3) leaks detected are estimated to total one hundred gallons per minute (100gpm) of combined water loss. Based on a system provided figure of four dollars and seventeen cents per thousand gallons (\$4.17/1000gal) production cost, the system can expect a monthly savings of eighteen thousand six hundred fourteen dollars and eighty eight cents (\$18,614.88) once repairs have been made.



Bellwood Leak Survey, August 16, 2011



The picture above illustrates a ¾" service line leaking 20 gallons/minute on Hwy 85 in Bellwood, AL. Bellwood Water & FPA, located in Geneva County, Alabama, serves 150 customers. This leak had been leaking for approximately two (2) months totaling approximately 1,728,000 gallons of water. This calculates to an approximate loss of \$2500.00.



It was also noted that the water lubrication supply line (pictured above) did not have a meter counting the gallons of water from the system that are returned to the well for lubrication. Installation of a meter here will help the system maintain accurate water loss records. While at the pump site, it was observed that the pump was cycling on and off quite frequently. A common reason for this to occur in a hydro-pneumatic tank situation is when the tank contains too much air and becomes "air-locked". When Bellwood Water & FPA installs a meter on the water line for pump lubrication, and correctly adjusts the amount of water in the hydro-pneumatic tank, the system should realize a savings of approximately \$2000.00 per month.

Lowndes County Water Authority



This leak was located in Lowndes County, Alabama. It was found on County Road 9 on 4-28-11. This leak was leaking approximately 25 gallons per minute out of a service line that was broken at the water main. Upon using a cost factor of \$1.25 per 1000 gallons, the result of repairing this leak saved the Lowndes County Water Authority approximately \$1,350.00 monthly in service fees.



This leak was located on Matthew Lane in Lowndes County, Alabama. It was found on September 29, 2011. It was leaking approximately 50 gallons per minute from a 3 inch flush hydrant that had blown out from the bottom. Using a cost factor of \$1.25 per 1000 gallons, the result of repairing this leak saved the Lowndes County Water Authority approximately \$2,700.00 monthly in service fees.

Talladega Leak Emergency



This leak was located in Talladega, Alabama. It was found on 6-9-11 at the intersection of Bemiston Street and East Parkway Street. This leak was approximately 2000 gallons per minute from a 10 inch fire main belonging to MasterBrand Cabinets Inc. This leak was a tremendous loss to the City of Talladega completely emptying a tank and causing them to implement a boil water notice to all their customers. The Alabama Emergency Management was on-site as well as the Alabama Department of Environmental Management. This affected some major facilities such as their hospital which had to move patients to the first floor and cancel all surgeries until the boil water notice was lifted. Nursing homes and the School for the Blind were also affected. Using a cost factor of \$2.48 per 1000 gallons, the result of repairing this leak saved the Talladega Water & Sewer Board approximately \$214,272.00 for the 6 days this leak was running in service fees.

Brookside Water Works Leak Survey



This leak was found on Brakett Loop in Brookside, Alabama which is located in Jefferson County. It was found to be leaking 55 gallons per minute from a 2 ½ inch cast iron main. The savings to the Brookside Water Works upon repair will be \$7,177.00 monthly by using \$2.26 per 100 cubic feet cost.

Wilton Water Works Leak Survey



This leak was found on County Road 54 in Shelby, County Alabama. The water belongs to the Wilton Water Works in Wilton, Alabama. It was a 6 inch main that had a split at the bottom of the pipe. Using a cost factor of 1.25 per 1000 gallons, the Wilton Water Works saved approximately \$5,400.00 monthly.

Perry County Water Authority Leak Survey



This leak was found on 1-11-11 on County Road 47 in Perry County, Alabama. The cause of the leak was a 6 inch main which had a hole in the side of it leaking approximately 70 gallons per minute. The pipe belongs to The Perry County Water Authority. Using a cost factor of \$5.00 per 1,000 gallons, upon repair, the Perry County Water Authority will realize a monthly savings of \$15,120.00 in service costs.



Altoona Water & Sewer Inflow and Infiltration



Altoona Water & Sewer Board is located in Etowah County, Alabama and serves 225 sewer customers. The sewer collection system has been experiencing infiltration during rain events. The unnecessary flow causes increases in pump station run time and added treatment cost at the lagoon. On April 24, 2011 Alabama Rural Water Associations Wastewater Technician performed a collection system smoke test. The test identified 23 leaks in the collection system. Once the problems are identified, repairs can be scheduled and once completed, will save the system \$25,000 in power consumption and treatment costs. Above is an example of what was identified as a main line leak.



Town of Woodville Smoke Test



The Town of Woodville is located in Jackson County, Alabama and serves 90 sewer customers. The Town has been experiencing infiltration problems which cause unnecessary treatment costs to the town. Minor rain events are causing increases in flow to the small treatment plant and even though the town has made some improvements, some problems still exist. On January 27, 2011 Alabama Rural Water Association's Wastewater Technician performed a collection system smoke test. This test was a follow up to previous testing. The test identified eight leaks which was much lower than the previous test showed. The test did reveal an area of groundwater intrusion at or near the High School. The test revealed a steady flow of clean water in that section of the line. A suggestion was made to exactly where the water was entering. Once the problems are identified, repairs can be made thus saving the town \$5,000 annually in power consumption and treatment costs. Above is an example of a leak identified as a broken clean out cap.

