



## TOWN OF NORTH HAMPTON

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1. Aquarion's proposed hydrant fee for North Hampton fire hydrants is inequitable and excessive  
--In 2004, the hydrant fee was \$1,701 per hydrant at a time when Exeter was charging \$40 and Portsmouth was charged \$100.

--In 2012 the North Hampton Hydrant fee is proposed to be \$1757 per hydrant. This is an increase of 23% over existing rates. The bill for North Hampton's 147 hydrants is sent to the Board of Selectmen and is passed along to all North Hampton property owners in their property tax bills.

Approximately half of North Hampton residents are not water customers. Those without water service receive no benefit from this hydrant charge, though they pay for the hydrant expense in their property tax bills. This is unfair to these property owners. The hydrant expense should be allocated to those that receive hydrant service.

2. The proposed water rate increase is simply too large by any measure.  
--homeowners and taxpayers cannot afford to pay this enormous proposed increase.  
--interest rates are very low. The company can borrow money at historically low short term and long term interest rates. This low interest rate environment does not support such a rate increase proposal.  
--The proposed rate increase is far above the rate of inflation and far greater than wage growth and cost of living increases that retirees receive.

3. Rate Structure—A Two Tier Rate Structure Should be Considered to Encourage Conservation and Require Larger Water Users to Pay Higher Rates.

--There exists little incentive no to use more water under existing rates.

--The new meters that allow for monthly meter reading and billing should be supported by a two tier rate that charges a higher price for large water users. This will encourage conservation and shift more of the cost to the larger water users.

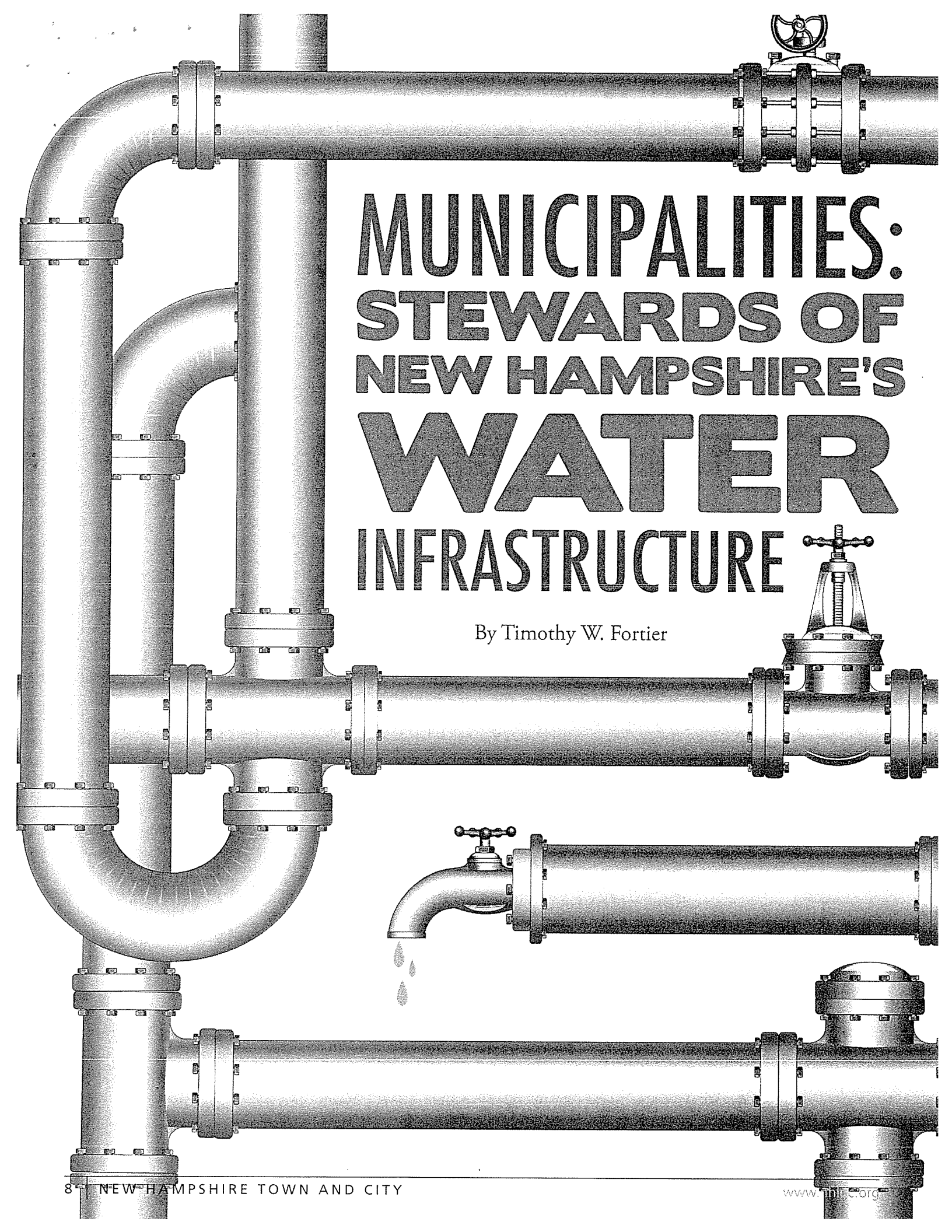


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# MUNICIPALITIES: STEWARDS OF NEW HAMPSHIRE'S WATER INFRASTRUCTURE

By Timothy W. Fortier

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*While much of the water infrastructure is “out of sight,” it can’t be “out of mind,” as New Hampshire’s environment and economy depend too much on it.*

New Hampshire residents are dependent on an array of infrastructure that moves, stores and treats water. To make this happen, cities and towns own and operate a lot of water infrastructure in New Hampshire. These municipal systems provide public drinking water, centralized wastewater, storm water and dam infrastructure.

Since October 2011, *New Hampshire Town and City* magazine has published four articles focused specifically on municipal water systems. The purpose is to highlight the importance these water assets provide for the protection of public health and safety, the environment, and in supporting economic growth and development in all of our 234 municipalities.

New Hampshire’s municipal infrastructure is largely underground and invisible to the public, and it rarely captures public attention unless it impacts the daily lives of citizens. We pour tap water into our glass and drink reassured that it is safe to drink. We flush our toilets and the waste simply vanishes. When it rains, contaminants are washed off rooftops, parking lots, and streets and this runoff is channeled through a series of catch basins, drains and underground pipes to places unknown. New Hampshire municipalities own a significant number of dams that provide recreational lakes, fire ponds, flood control and water supply storage. Yet the public pays very little attention to these basic water systems, that is, until a pipe bursts, the toilet clogs, the streets flood, or more tragically, a dam fails.

Adding to this problem of being out of sight and out of mind is the historic underpricing by municipalities for water and wastewater services. These rates should reflect the full cost of providing these services, including infrastructure renewal; however, this has not happened. The United States has one of the lowest water and wastewater rates in the world, and New Hampshire has rates that are far lower than what one would pay for cable TV or Internet services on a monthly basis. These services are routinely priced well below the full cost of sustainable operations. Graph 1 illustrates clearly how monthly sewer and water costs for New Hampshire households are priced well below the typical monthly costs for utility and telephone services.

Unquestionably, the public derives great benefits from municipal water infrastructure systems, including public health (*Clean drinking water and waste removal protect us from disease.*), public safety (*fire protection*), the environment (*healthy*

*rivers, lakes, streams, ponds, wetlands and coastal resources*), and our state and local economies (*recreation and tourism strongly linked to environment and water quality*). Recognizing the significant public benefits to a strong economy and healthy environment, a long-term sustainable funding solution for New Hampshire’s municipal water infrastructure is an absolute necessity.

## **Overview of New Hampshire’s Municipal Water Infrastructure**

### **Public drinking water**

There are 122 municipal public drinking water systems serving approximately 755,611 residents, or about 56 percent, of the state’s population. The remaining residents, 44 percent, rely on privately drilled or dug wells. According to the New Hampshire Department of Environmental Services (DES), about 39 percent of the state’s population is served by surface water (lakes and rivers) and 38 percent by groundwater. Another 23 percent are served by systems using both surface and groundwater sources.

### **Wastewater**

Approximately 35 percent of the 234 cities and towns in New Hampshire provide centralized wastewater treatment services at the secondary, advanced, or no discharge treatment level. There are 73 municipal wastewater treatment facilities in New Hampshire. Nearly 65 percent of homes in New Hampshire’s cities and towns rely on individual septic systems for their waste disposal.

### **Stormwater**

New Hampshire has 45 municipalities that are partially or fully regulated under EPA’s Small Municipal Separate Storm Sewer System or “MS4” permit. Under current MS4 permit conditions, municipalities are required to control stormwater pollutants to the “maximum extent practicable.” There are no federal loan funds designated specifically for stormwater infrastructure.

### **Dams**

New Hampshire municipalities own and manage 358 dams that provide recreational lakes, fire ponds, flood control and water supply storage. DES estimates there are about 30 municipal dams in need of significant repair at a cost of about \$30 million. There are not federal or state grant or loan funds designated specifically for municipal dam maintenance and rehabilitation.

## How New Hampshire's Municipal Infrastructure Was Built

Much of the state's environmental infrastructure was built with state and federal assistance. For example, wastewater treatment facilities built in the 1970s and 1980s typically were funded with a 75 percent federal subsidy, 20 percent state support and 5 percent local dollars. Most of these grant programs, however, were designed to be "one shot deals" with the understanding that the local recipient would build replacement costs into their rate structure so the utility could operate sustainably without future subsidies. This unfortunately did not happen. Few municipalities built replacement or renewal costs into their rates to create a sinking fund for the ultimate replacement of these water systems.

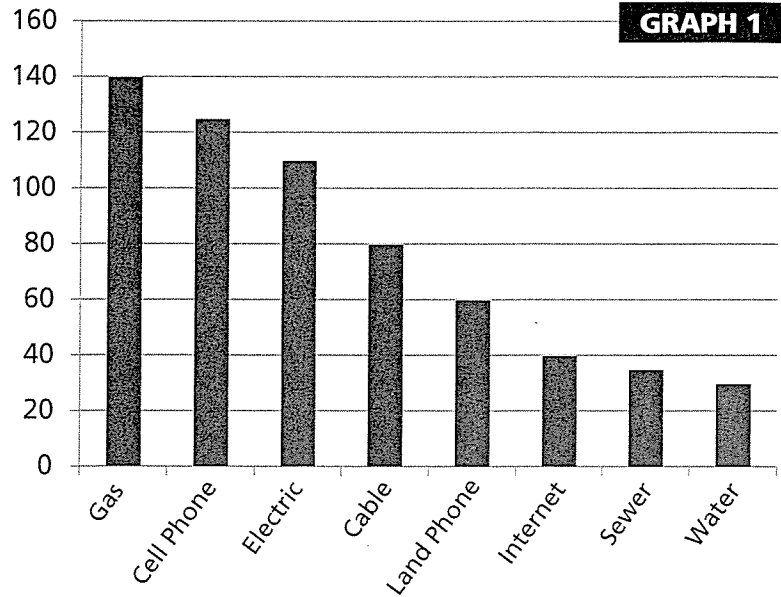
The story is largely the same for each municipality: the initial investment to construct the infrastructure was made long ago, and today there is less and less federal and state support to maintain and improve much of this infrastructure.

## Challenges and Barriers to Maintaining Quality of Municipal Infrastructure

Municipalities face many challenges in maintaining the quality of these basic water infrastructure systems. Whatever infrastructure a municipality owns, the challenges are generally the same: (1) aging infrastructure systems that have not been consistently maintained due to funding shortfalls; (2) a continually evolving regulatory environment and escalating cost of environmental compliance; and (3) declining state and federal support that municipalities have historically depended upon to finance these capital improvements.

## Typical Monthly Utility and Service Costs for Households in New Hampshire

Environmental Protection Agency - New England, 2010



### Aging Infrastructure

Much of New Hampshire's water infrastructure has been built over the past century. The life expectancy of this infrastructure varies considerably depending on the nature of the asset. Some assets like pipes and dams have a typical life expectancy of about 100 years while other assets like pumps and electrical gear might have only a 20-year life expectancy. A large portion of New Hampshire's water infrastructure assets are near or beyond the end of their design life expectancy. These infrastructure systems have been underfunded in the past which has resulted in significant depreciation of asset value, and the current level of investment is not sufficient to maintain the long-term reliability and sustainability of these water systems.

### Escalating Costs of Environmental Compliance

Increasingly stringent environmental controls and the high cost to meet them create many challenges for public environmental systems of all sizes, but

the burden falls disproportionately on smaller municipal systems. As a result, the cost-per-customer expenses, such as sampling and analysis, hit smaller public systems harder than those public systems that serve a larger customer base. To accentuate this issue, more than 75 percent of municipal public water systems in New Hampshire serve a population of 5,000 residents or fewer.

A good example of escalating costs associated with environmental compliance is found in EPA's issuance of draft National Pollution Discharge Elimination Systems (NPDES) permits to several seacoast municipalities requiring a nitrogen limit of 3 milligrams per liter into Great Bay. One estimate puts the cost of upgrading seventeen seacoast municipal wastewater facilities at about \$300 million to meet the EPA nitrogen limit. Moreover, it is likely that many municipal wastewater treatment facilities will have to address these nitrogen limits, and phosphorus limits too,

within the next five to 10 years when they renew their discharge permits.

### **Declining Federal and State Support**

While much of the existing infrastructure was built with significant assistance from state and federal grant programs, moving forward it is expected that there will not be nearly as much grant money as there has been in the past. The federal government has record levels of debt and deficits and is in no position to fund new grant programs. Similarly, New Hampshire is facing fiscal challenges of its own and is not likely to be funding a substantial grant program in the near future.

The majority of the infrastructure investment challenge is going to fall on the shoulders of the municipalities at a time when municipalities are also facing significant fiscal challenges of their own. And the concept of raising local water and sewer rates in this current economic environment is particularly challenging. This context will force municipalities to explore all avenues to optimize stewardship of their water assets.

Graph 2 shows state general fund support for municipal wastewater, drinking water and landfill closure State Aid Grants (SAG) to municipalities from 1980 to 2013. As you will note, funding support in 2013 for all three SAG programs is well below the funding support made available for just one program (wastewater) in 1980.

The Legislature has not funded the SAG program since October 2008, and there is growing frustration among cities and towns regarding this unfunded statutory obligation to municipalities. As a result, there is currently a backlog of 124 municipal projects totaling nearly \$55 million in outstanding grants requests. Most of these municipal projects were sold to

local taxpayers based on the expectation of state assistance, and the state has a financial and statutory obligation to fully fund these eligible public infrastructure projects.

### **Recommendations for Municipal Action**

There is no one-size-fits-all approach to solving this water infrastructure dilemma, however, there are certain environmentally sustainable measures that municipalities may wish to consider.

#### **Sound Asset Management**

Sustainability of these water infrastructure systems requires that you have a sound understanding of your municipal assets. Although it takes time to perform comprehensive asset assessments and to develop a prioritized asset management strategy, every municipality should have an inventory of its assets, understand the condition of all its assets, and develop a comprehensive risk-based asset management plan and a viable financial plan.

#### **Conservation**

Water conservation is any beneficial reduction in water loss, waste or use. The public is in a unique position to help municipalities reduce the resources required to provide these water services. When municipal services are charged at less than the full cost, users base decisions and behavior on erroneous economic information. By charging a higher unit price as consumption rises, conservation is encouraged.

#### **Sustainability**

Sustainability is the long-term maintenance of responsibility, which has environmental, economic and social dimensions, and encompasses the concept of stewardship, the responsible management of resource use.

In other words, sustainability requires operating in a fashion that does not place undue burden on future gen-

erations and stakeholders. Given the importance of clean water and the economic benefits to our state, municipal leaders know that if we do not take care of our water resources, we will undermine the economic underpinnings of our cities, towns and state.

#### **Public Education**

Taxpayers and ratepayers need to be educated as to the importance of full cost pricing to support sustainable operations. Users need to know how they can help reduce the cost of service. Very few see a cause and effect relationship between property taxes and use of services. When usage of municipal services is disconnected from the cost recovery system, there is less incentive for the public to conserve and to think green. When prices are too low, we tend to consume too much. Economic tools are among the most powerful ways to communicate the value of a service and impact consumer behavior.

Together as partners, the state and municipalities should develop a comprehensive campaign to educate customers and the general public about the value of water. In addition, private utilities need to educate their customers about the true cost of safe and adequate water.

#### **Full Cost of Service Rate Setting**

Water rates should reflect the full cost of service, including infrastructure renewal. The United States has one of the lowest water and wastewater rates in the world, and New Hampshire has rates that are far lower than what one would pay for cable TV or Internet services on a monthly basis (See Graph 1). Municipalities should set rates that cover operational and maintenance costs, and the anticipated long-term capital needs of the system. There is no need for municipalities to apologize to rate payers for pricing the service at its true cost.

## WATER *from page 11*

The public is best served when the true cost of providing the infrastructure services is reflected in the rates they pay. Over the past 50 years, rates have been generally lower than the true cost of the service because system depreciation has not generally been built into the rates. This historic undercharging for these services has resulted in shifting past system depreciation costs to today and future generations. Sustainability requires funding system depreciation to avoid just “kicking the can down the road” and placing a bigger burden on future generations.

### Affordability Gap

The U.S. Environmental Protection Agency (EPA) believes that three percent of the municipality’s median household income (MHI) is an appropriate affordability threshold for combined water and wastewater rates. In 2010, New Hampshire’s MHI was \$60,917. Using an affordability threshold of 1.5 percent each for water and wastewater service, this would equate to charges of \$914 per year each for water and wastewater, for a total of \$1,828 per year. Many New Hampshire residents are paying far less than the full value for these water services today. There are many instances, however, where municipalities have responsibly invested in their local systems, and as a result, are at or near their local affordability threshold. The N.H. Department of Environmental Services estimates the average water user charge in 2010 was \$503 and the average wastewater user charge was \$575.36, for a total of \$1,078.36, far short of the three percent, or \$1,828 affordability threshold determined by the EPA.

In most New Hampshire municipalities, water and wastewater rates are below EPA established affordability thresholds, and as such, these cities and towns already have the existing

capability to generate more revenues to address a major portion of their infrastructure investment needs. That said, there is a huge public education job ahead to educate the public and policymakers about the value of these assets and the importance of increasing rates and investing more.

### Regulatory Predictability

Local governments are increasingly concerned over increased regulations and unfunded mandates, including the cumulative impacts of multiple regulatory requirements being imposed on them. New Hampshire’s experience in EPA’s stormwater management compliance, for instance, has resulted in extremely expensive requirements imposed upon municipalities to eliminate stormwater without any federal assistance, and arguably, without much resulting environmental benefits.

State and federal agencies have a responsibility to develop and communicate a long-term vision of the regulatory

requirements facing municipalities. It is important for federal agencies to evaluate a municipality’s financial capacity in these difficult fiscal times and establish appropriate compliance schedules allowing for the sequencing of critical projects within the financial capability of the municipality.

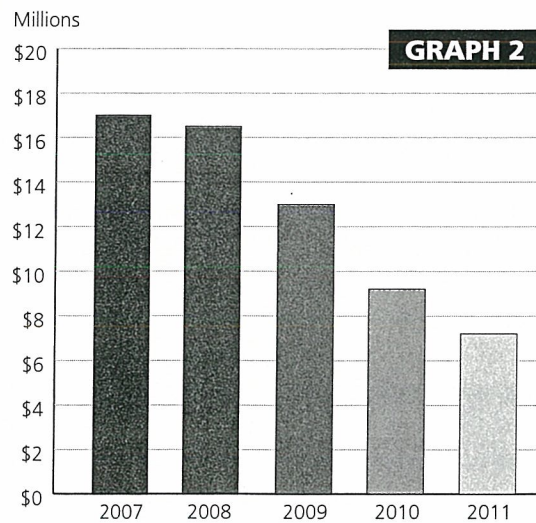
### Political Resolve

Municipal officials and political leaders are the ultimate stewards of these important municipal assets, and their leadership is critically important to establishing a sustainable path forward. Regarding current and future municipal infrastructure needs, we must focus on a long-term sustainable solution. These infrastructure challenges were not created overnight, and they won’t be resolved overnight. It will take a disciplined long-term view by state and local government to work out of the hole we are in.

### Regionalization

Water infrastructure sustainability re-

**State Aid to Municipalities:  
Environmental Grants  
2007-2011**



Grants include: flood control, landfill closure, public water systems, pollution control, and water supply land protection

Source: NHLBAO Schedule of State Aid to Cities, Towns and School Districts



quires an understanding of regional and watershed-wide issues; oftentimes, however, local politics gets in the way of regional solutions. Municipalities should consider the viability of regional solutions in meeting their future environmental and water infrastructure responsibilities to generate greater synergies, economies of scale, and cost savings for all local taxpayers. The towns of Stratham and Exeter, for instance, are currently evaluating the costs and benefits of a collaborative, inter-municipal approach to meet the future water and wastewater needs of the two towns. Don't let town boundaries get in the way of finding the most cost-effective solution to your water infrastructure needs.

### **Affordable Loan Programs**

So what support do municipalities need? Grant programs would be nice, but these are not likely to be forthcoming under current economic conditions. Affordable loan programs would be nice too, especially if municipalities begin to invest at the rate needed to restore infrastructure reliability. If this happens, municipalities will need access to more loan programs than are currently available. Ideally, these loan programs should offer low rates and extended note terms. Some loan programs are limited to 20 year notes. Given the life expectancy of these assets, 30-year and 40-year notes would allow more work to get accomplished in a more affordable fashion and be free from bureaucratic "red tape" that drives up project costs.

### **Beneficiary/User Pays**

The general public is the true beneficiary of the state's environmental and water infrastructure. Municipalities should better evaluate who the beneficiaries of its infrastructure systems are and assess whether there are beneficiaries beyond the current users that should contribute to the cost of the service provided. For example, a town with a water and wastewater system

servicing a densely developed downtown area results in more tax revenues which benefits the entire town, not just the water and sewer users. Or let's look at it another way: We, as property owners and renters, contribute a share of our property taxes or rent for the benefit of public education, regardless of whether or not we have school-aged children. Similarly, don't we all benefit from clean water and a clean environment?

### **Level of Service and Public Engagement**

Municipalities need to initiate a dialogue with their customers regarding the level of service they want versus the cost they are willing to pay. It is important to educate the public about the tradeoffs with the level of service and the consequence of funding one municipal service at the expense of another. The public needs to be engaged as to whether they want, or can afford, a certain level of service, say for example, A+, or do they prefer a reduced level of service at a lower cost, say B-minus? When a community has more infrastructure costs to maintain system reliability or to fully comply with state or federal regulations than the municipality can afford or is willing to spend, how do we engage the public as it relates to gaining consensus on where to reduce the level or quality of service, or as it relates to the need to increase rates?

### **Stronger State and Local Government Partnership**

New Hampshire state government has a long tradition of delivering essential public services through a close partnership with local governments. This partnership, however, is in jeopardy as the state continues to downshift to local governments the primary responsibility to pay for these public services. For example, in recent years this partnership has struggled with growing concerns resulting from the suspension of the environmental State Aid Grant program (SAG).

## **Conclusion**

Water is a public good that demands state investment. State government needs to recommit to the partnership with municipalities that led to the significant improvements to our nation's water quality over the past decades.

We do not have a precise handle on the infrastructure investment needed throughout the state, only rough estimates. The rough estimate of \$2.2 billion indicates that a significant capital expenditure will be required over the next 20 years to get New Hampshire municipalities on a sustainable path forward.

Many cities and towns will have infrastructure investment needs that exceed their near-term financial capability and will need strategies to work out of the situation over an extended period of time. New Hampshire's growth, prosperity, and quality of life over the past century were made possible by major investments in our water infrastructure. Without this investment, we risk reversing decades of progress in public health, environmental protection, economic development and quality of life.

In closing, local governments remain committed to meeting the water infrastructure needs and water quality standards in our cities and towns. We hope the federal and state governments remain committed to being full partners in this important relationship with us.

### **Special Acknowledgement**

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