



***PRIVATIZING NORTH CAROLINA'S  
WATER,  
UNDERMINING JUSTICE***

**By Katie Hicks, Hope Taylor, Siying Zhang  
Clean Water for North Carolina  
29 ½ Page Avenue  
Asheville, NC 28801  
(828) 251-1291  
[www.cwfnc.org](http://www.cwfnc.org)**

**Mary Grant, Contributing Author  
Food and Water Watch  
1616 P. Street, NW, Suite 300  
Washington, DC 20036**

---

*Research, community investigations and preparation of this report generously supported by the  
Park Foundation and the Duke University Stanback Internship Program*

# Table of Contents

<b>Executive Summary.....</b>	<b>3</b>
<b>Chapter 1. The Background and Context of Privatization.....</b>	<b>5</b>
Water as a Human Right.....	5
Types of Privatization.....	6
Water Pricing: Rates and Fee Structures .....	7
Global Background.....	8
U.S. Background.....	10
North Carolina Background.....	12
Water Rate Regulation in North Carolina .....	16
Regulation of For-Profit Corporate Water Utilities.....	16
Regulation of Water Rates for Multifamily Residences.....	18
<b>Chapter 2. The Consequences of Privatization: Obstacles to Water Democracy.....</b>	<b>21</b>
Water Prices and Affordability.....	21
Customer Service.....	23
Lack of Transparency .....	25
Failure of NCUC to Protect Consumers.....	26
Community Case Studies – Privatization in Action .....	29
<i>Connecting Small Systems to Municipal Supplies: A Different Future for NC?</i> .....	39
<b>Chapter 3. Challenging the Myths that Drive Privatization .....</b>	<b>40</b>
<i>Myth 1:</i> Privately-operated systems are more economically efficient and decrease costs to customers.....	40
<i>Myth 2:</i> Private companies bring technical expertise and improve services.....	43
<i>Myth 3:</i> Privatization brings in private sector capital and transfers risk to the private sector.....	45
Community Experiences: Challenging the Myths of Privatization .....	46
Countering the Myths: Strong Advocacy by Aqua NC Customers Brings Hope for Reining in Rate Increases .....	47
<b>Recommendations to the North Carolina Legislature and the North Carolina Utilities Commission .....</b>	<b>48</b>
<b>Bibliography.....</b>	<b>51</b>

# PRIVATIZING NC'S WATER, UNDERMINING JUSTICE

## Executive Summary

### ***Background***

Access to clean water and sanitation has been declared a human right by the United Nations, yet water resources are increasingly being transferred to private ownership. In North Carolina, where privatization mostly affects small, rural water systems, this practice has had a number of impacts on vulnerable neighborhoods and households.

Large corporations are displacing many “mom-and-pop” water companies as the owners and operators of small NC systems, often initially set up by owners to serve a mobile home park or new housing development. The North Carolina Utilities Commission and its Public Staff (established to advocate to the Commission for the “using and consuming public”) encourage private acquisition of “troubled” systems, assuming that companies can invest in and repair failing infrastructure better than municipalities. They set rates to ensure companies receive a certain rate of return on investment, and increasingly approve single-tariff pricing or “rate consolidation,” in which almost all customers of a company statewide pay the same rates. Mechanisms are lacking to monitor how the funds from rate increases are distributed in system improvements, sometimes forcing low-volume (often low-income) users to subsidize improvements for higher-volume users.

Current policies also allow landlords of multifamily residences (such as mobile home parks) to readily acquire a “Certificate” (see Chapter 1 for more detail) to resell water or wastewater services obtained from municipal sources at increased cost, but these agreements lack requirements to ensure that residents are not overcharged for water and wastewater, and do not assure water quality and affordability in these neighborhoods.

### ***Consequences for NC communities***

**1. *Affordability of water and wastewater*** can be a significant challenge for low-income residents. Though water rates are rising worldwide for both private and publicly owned systems, privately-owned utilities’ rates are higher on average than those of publicly-owned utilities for the same sized system. The cost of water and sewer for people with the lowest income levels approaches or exceeds the U.S. Environmental Protection Agency’s threshold for affordability of water and sewer, while those in higher income brackets spend a much smaller proportion of their income for those services. Rate structures that encourage conservation (after leak detection and repair), and that do not disproportionately burden low-volume users, should be more widely used in NC, but most private companies in NC use single-block or flat rate structures.

**2. *Customer service and water quality*** concerns arise with some private companies, but customers have limited ability to hold companies accountable for responding quickly and effectively. *Water service and water quality* are often already poor in “troubled” systems that are in need of infrastructure improvements or chronically out of compliance with the Safe Drinking Water Act standards, so when private companies purchase and operate these systems and are slow to respond to concerns, residents may suffer from unsanitary conditions. *Unclear billing* and failure to provide accessible payment options have led to water cutoffs for many customers. *Notifications* of rate increases and water quality alerts do not reach all customers due to insufficient notification efforts, poor timing, or language barriers.

**3. *Transparency*** is lower for private companies than for municipal systems. Companies may limit disclosure of operating information to protect access to operating strategies and to reduce costs associated with customer notification and interaction. Without full disclosure of information on operations, customers can’t act to protect their interests.

**4. *The regulatory failure to protect consumers’ interests*** has been evident in the decisions and recommendations of the NC Utilities Commission and Public Staff. Allowing substantial and

widespread rate increases with inadequate justification, as well as limited enforcement of record-keeping requirements may indicate the Commission’s lack of independence from utility interests, and Public Staff’s lack of advocacy for customers. During early 2010, for example, Public Staff recommended rates that were only slightly reduced from water utilities’ proposed increased rates.

### **Examples**

- *Northgate community, Fuquay Varina:* For years, residents of Northgate neighborhood were not notified of TCE contamination in their community well. Since Aqua NC took over their system, they’ve responded slowly to prevent TCE contamination, and offered residents little support for hookup to nearby municipal water supply.
- *Carolina Trace, Sanford:* Residents have protested Utilities, Inc. rate increases due to persistent problems with line breaks and boil advisories, but felt the Utilities Commission and the Public Staff did not listen to their concerns.
- *Wildcat Creek neighborhood, Chapel Hill:* Chronic water contamination led to extended boil-only advisories in a neighborhood receiving water from Aqua NC. Residents complain that the company fails to notify them about health hazards and upcoming rate increases.

### **Challenging the myths of privatization**

**Myth 1: Privatization increases economic efficiency and cost-savings for municipalities and customers.** The purported economic efficiency of private companies is based on the principle of free market competition, but water utilities are intrinsically monopolies in their service areas. To minimize costs, private companies may forego maintenance, system improvements and water conservation programs, or significantly reduce staff. In many cases, individual household bills increase after privatization of a system. If privatization truly creates cost-savings, it benefits the company, not customers.

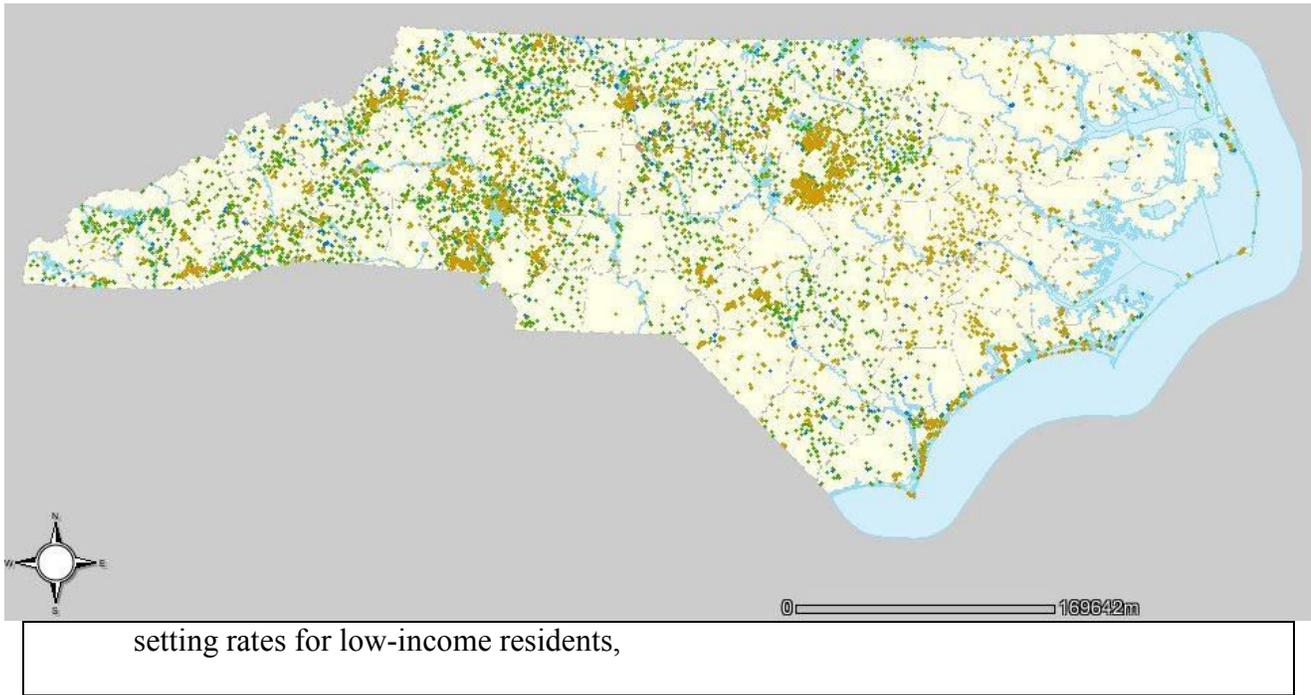
**Myth 2: Privatization improves service and brings increased technical expertise.** In fact, communities whose water systems are transferred to private hands often lose expertise in the form of staff layoffs, and have decreased opportunities for public involvement in decision-making. Due to proprietary operating information, large private companies are less likely than municipal or small private systems to share expertise with neighboring systems.

**Myth 3: Privatization injects more capital to finance needed infrastructure improvements and transfers risk to the private sector.** The capital invested by private utilities in system improvements is actually lower than for publicly owned ones for systems of similar size. Most private companies do not take on financial risk without support from governments through loans or profit guarantees.

### **Recommendations**

Clean Water for NC has identified specific changes that are needed in order for state laws and Utilities Commission policies to be truly protective of North Carolinians’ rights to safe and affordable water. These include:

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Rates that don’t disadvantage low-volume users, low-income neighborhoods</li><li>• Prohibit new water franchises when systems can connect to public system, encourage connection to existing public systems, following Alabama model</li><li>• Affordability considerations when</li></ul> | <ul style="list-style-type: none"><li>• Clear billing and requirements for customer notification,</li><li>• Enhanced funding for publicly owned water system improvements,</li><li>• Use of a price index to determine reasonableness of rates,</li><li>• Enhanced opportunities for public participation in decision-making.</li></ul> |
|--|---|



**Figure 1. Map of publicly and privately owned water systems in North Carolina. (Gold dots are year-round water systems, while green and blue dots are lesser used or seasonal water systems).<sup>1</sup>**

## Chapter 1. The Background and Context of Privatization

### Water as a Human Right

The United Nations (UN) has formally recognized that access to safe water and sanitation is a human right.<sup>2</sup> Clean water is a fundamental need for human life, and yet many people are experiencing disease, reduced economic, educational and cultural development, or even death in its absence. The UN estimates that roughly one in six people do not have access to safe water and two out of five people lack access to adequate sanitation services. Historical public opinion internationally supports the UN principle that water must be treated as a human right, rather than an economic commodity that the world's low-wealth communities cannot afford.<sup>3</sup>

Privatization, however, treats water as a commodity to be sold for profit, and the potential profits are so great that *Fortune* magazine has referred to the water market as the next "oil industry."<sup>4</sup> Privatization proponents, among which are the powerful World Bank and International Monetary Fund, as well as many utility regulators in North Carolina and throughout the U.S., argue that private companies are better equipped than many governments to meet the growing challenge of providing drinking water to the world. The logic behind these claims is that private corporations often have greater capitalization than many of the cities, towns and neighborhoods in which they

<sup>1</sup> North Carolina Division of Environmental Health, "Source Water Assessment Program – Interactive Map," *Public Water Supply*, May 12, 2011, [http://swap.deh.enr.state.nc.us/Swap\\_app/viewer.htm](http://swap.deh.enr.state.nc.us/Swap_app/viewer.htm).

<sup>2</sup> United Nations, "General Assembly declares access to clean water and sanitation is a human right," *UN News Center*, July 28, 2010, <http://www.un.org/apps/news/story.asp?NewsID=35456&Cr=SANITATION &Cr1=>.

<sup>3</sup> Committee on Economic, Social and Cultural Rights, "General Comment No. 15: The Right to Water (Arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights)" (presentation, Geneva, November 26 2002).

<sup>4</sup> Shawn Tully, "Water, Water Everywhere Today Companies Like France's Suez Are Rushing to Privatize Water, Already a \$400 Billion Global Business. They Are Betting That H2O Will Be to the 21st Century What Oil Was to the 20th," *Fortune Magazine*, May 15, 2000.

operate. Due to this apparent access to capital, private water corporations often win favorable contracts with cities or developments strapped for funds for system repairs, even at the expense of public oversight and affordability. However, because private companies function on a profit and loss model, they have, in most cases, little financial incentive to provide water to poor or dispersed rural communities,<sup>5</sup> unless subsidized. Privatization has been growing worldwide, but most water systems remain publicly owned and managed—as of 2010, private corporations run only 12% of the world’s water services.<sup>6</sup>

In North Carolina, as in much of the world, water privatization can be an environmental justice concern, as vulnerable populations are disproportionately affected by costs and access. Low income users are most deeply affected by increased water rates, yet receive fewer infrastructure improvements. This disparity of power plays out in numerous areas in North Carolina where small subdivisions, multifamily residence developments or towns have water systems operated by large corporations; these small and rural communities have limited ability to maintain public oversight over large private companies that are remotely located and have far more financial and political power.<sup>7</sup> Increasingly, privatization is also impacting “manufactured home parks” (or “mobile home parks”) (MHPs), and new developments within or close to municipal boundaries, where local owners obtain a water utility franchise or certificate to resell water. This allows them to profit from resale of metered water and sewer services, often purchased at bulk rates from a nearby publicly owned water/wastewater utility, at the expense of economically vulnerable residents.

This report will explore the background and consequences of privatization in North Carolina, analyzing its impacts on environmental, health and economic justice.

## Types of Privatization

Our examination of privatization will focus on for-profit water corporations and their structures. Non-profit entities have different concerns and modes of operation than corporations which function on a for-profit model. North Carolina does have a few non-profit private water corporations, such as Davidson Water, Inc.<sup>8</sup>

The privatization of water resources generally falls into two broad categories: full privatization (also called the “British” model), and public-private partnerships (also called the “French” model). These two categories can take a variety of complex forms.

In *full privatization*, the private water company owns *and* operates the water system assets, and there are sometimes forms of public oversight in terms of water quality and rate-setting. The company may either purchase all the equity of a government-owned system (called a “divestiture”) or carry out all the stages of new system construction (“Greenfield Projects”): construction, ownership, and operation. This is not common for large systems in the United States, tending to occur in smaller systems in individual developments, especially in rural areas. More commonly in large water/sewer systems, the company only carries out some of these stages, sharing responsibilities with a public entity and often leasing the system for a period; in this case, the project falls under the category of a public-private partnership.

---

<sup>5</sup> T. Ngwane, "Anti-Privatization Forum in Johannesburg, an Interview with BBC News Correspondent Mike Wooldridge," *BBC News*, 2004.

<sup>6</sup> Pinsent Masons, 2010.

<sup>7</sup> Emanuele Loboia and David Hall, "Problems with Private Water Concessions: A Review of Experience" (presentation, Third World Centre for Water Management/Inter-American Development Bank Workshop on “PPPs in the Water Sector”, Mexico City, September 25-26, 2002).

<sup>8</sup> Davidson Water Inc, “Through the Years”, *Davidson Water website*, January 21, 2011, <http://www.davidsonwater.com/history/history.asp>.

In *public-private partnerships*, local governments grant contracts to private companies to manage and operate their water supplies, while the public entities maintain ownership of the assets. Of the various forms that public-private partnerships take, by far the most common form in large U.S. cities is the *management contract*: the municipality hires a private company to manage and operate its water system in exchange for a service charge.

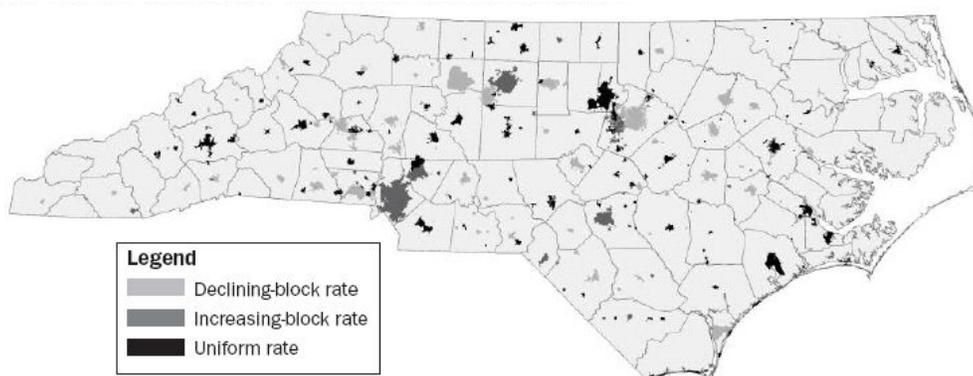
In North Carolina, full privatization, and specifically ownership of small private systems either created at or near the time of construction of a development, with possible later purchase of the system by a larger corporation, is the most common form of privatization.

## Water Pricing: Rates and Fee Structures

Public utilities employ four basic rate structures: flat charges, single-block rate, increasing-block rate, and decreasing-block rate. Flat charges are not determined by the volume used, but are a fee charged to all customers regardless of usage. This rate structure is clearly disadvantageous for the lowest volume users, often low income households.

The other structures use rates based on “blocks,” which are a set of usage levels (example: the first block = 0-3000 gallons, second block = 3000-6000 gallons, etc.). The single-block rate charges the same price per volume of water usage, regardless of usage level. With an increasing-block rate, customers pay an increasingly higher price for water used in each consecutive usage block. This is generally considered a “conservation” rate structure. However, for older developments with leaking service pipes and older fixtures, low-income residents who actually use small volumes of water may fall into higher usage blocks and end up paying higher rates for water. A decreasing-block rate structure has the opposite pattern, and encourages wasteful water usage. This structure is found in some water systems that over-built water infrastructure based on heavily water-consuming industries, such as textiles, which have since closed down, resulting in excess capacity and substantial public debt for loans to build a larger system to serve those industries.

In addition to the volumetric charge, most rate structures include either a set base charge or a standard fee for minimum usage. In NC, privately owned water systems which do not provide water “in rent” usually have a single-block rate and a base charge, with each household having its own meter. Fixed fees, which are charged each billing period but include water use up to a certain volume (often 6,000 gallons) are often used in NC’s smallest municipal systems.



Source: Compiled by UNC Environmental Finance Center using database of local government rate structures prepared as part of biannual North Carolina League of Municipalities Rate Survey (2002).

Note: The shading shows the political boundaries of municipalities with the particular type of charge. In some cases the service area would extend beyond the political boundaries, so the shading does not represent the service area.

**Figure 2: NC Publicly-owned Community Water System Rate Structures (2002)<sup>9</sup>**

<sup>9</sup> Jeff Hughes, "The Painful Art of Setting Water and Sewer Rates," *Popular Government* Vol. 70, No. 3 (2005), p. 4-14.

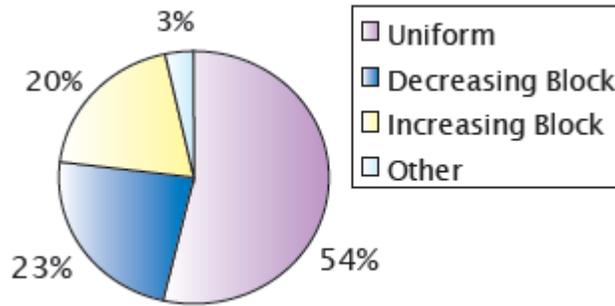


Figure 3: Water Utility Rate Structures in North Carolina as of February 2006<sup>10</sup>

## Global Background

Worldwide, only 10% of water is used by households; irrigation and industry consume the vast majority. Industrial and commercial pollution threatens surface water, forcing people to increasingly tap groundwater aquifers: 25% of the world's population relies on groundwater. In NC, over 50% of the population depends on groundwater sources. Extensive areas of the world are expecting to experience overall water scarcity by 2025 (See Figure 4).<sup>11</sup>

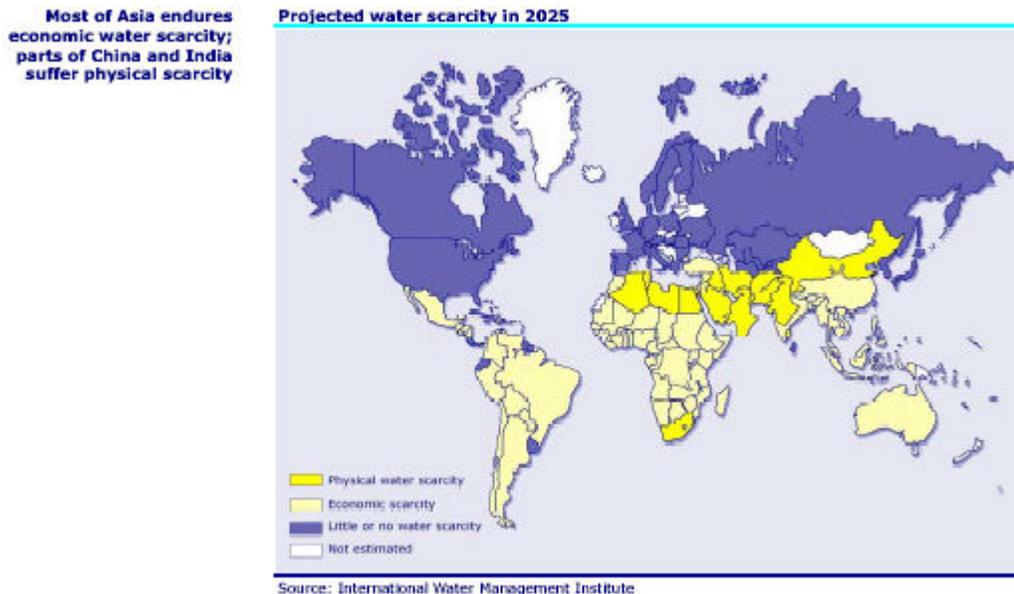


Figure 4: Projected water scarcity in 2025<sup>12</sup>

Despite these threats of water scarcity, governments often subsidize water for wealthier residents, who are more likely to have access to municipal water. Race- and income-based discrimination in water distribution is observed around the world. One stark example is in post-

<sup>10</sup> Environmental Finance Center, "Financial and Spatial Analysis of Residential Water and Wastewater Rates and Rate Setting Practices," 2006, Retrieved August 12, 2010 from [www.efc.unc.edu/publications/pdfs/PPres2.pdf](http://www.efc.unc.edu/publications/pdfs/PPres2.pdf).

<sup>11</sup> Maude Barlow and Tony Clarke, *Blue Gold: The Fight to Stop the Corporate Theft of the World's Water*, (New York: The New Press, 2002).

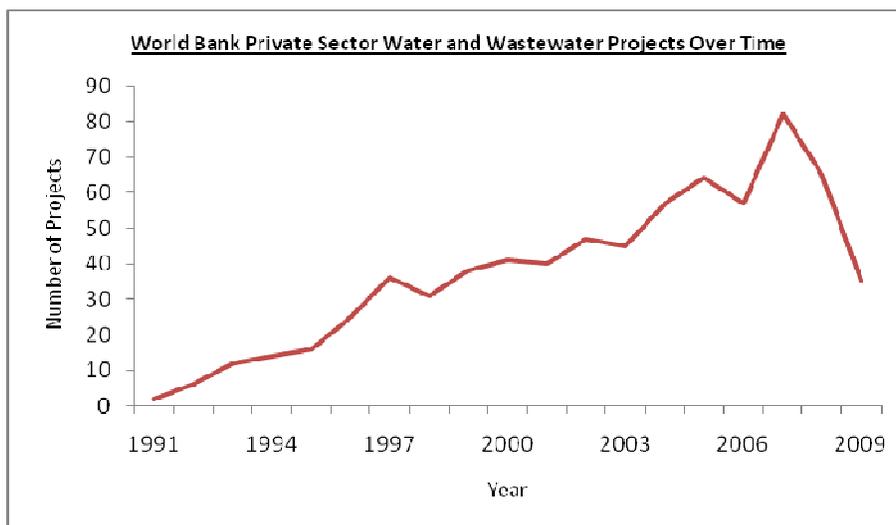
<sup>12</sup> Jason Morrison, Peter Gleick, James Newcomb, and Todd Harrington, "Remaining Drops: Freshwater Resources: A Global Issue," Pacific Institute, January 2006, [http://www.pacinst.org/reports/remaining\\_drops/CLSA\\_U\\_remaining\\_drops.pdf](http://www.pacinst.org/reports/remaining_drops/CLSA_U_remaining_drops.pdf).

apartheid South Africa, where half the water supplied to households goes to white households, who comprise only 10% of the population.<sup>13,14</sup>

Privatization of water systems grew rapidly worldwide in the 1990s, increasing six-fold from 1990 to 2003.<sup>15</sup> The top two major transnational water corporations are France's Suez Environnement and Veolia Environnement (formerly named Vivendi).<sup>16</sup> The top two conglomerates (Suez and Veolia) own about 70% of the world water market.<sup>17</sup>

As in NC, infrastructure is a driving factor in this trend around the globe, forcing governments lacking in funds to accept loans from international organizations, which often require privatization of utilities. These large financial contributors typically fund privatization as part of free trade agreements, while loans from the World Bank and International Monetary Fund have been instrumental in driving water supply privatization. This top-down movement toward privatization comes in spite of polls around the world indicating that people strongly oppose privatized water.<sup>18</sup>

Although governments have granted corporations the privilege to control their water, the people of many countries have fought back and regained control of their water supplies. From Bolivia to Ghana, Argentina to Indonesia, and Malaysia to South Africa, people have resisted private control of their water that prevents access to safe, clean, affordable water, even causing a sharp decrease in World Bank-sponsored privatization after 2007 (Figure 5).



**Figure 5: World Bank Private Sector New Projects in low- and mid-income countries over time<sup>19</sup>**

In low and middle-income countries, the World Bank has funded thousands of water privatization projects. However, public outcry has reversed this trend in some cases; of 383 World Bank projects begun in 2005, 41 projects were cancelled, representing 37% of total investment. In 1999, more than 50% of the projects were in Latin America, but in 2005, more than 60% were in

<sup>13</sup> Ibid. page 68.

<sup>14</sup> Central Intelligence Agency, "World Factbook: South Africa," *CIA Website*, 2011, <https://www.cia.gov/cia/publications/factbook/geos/sf.html>.

<sup>15</sup> Bill Marsden, "Cholera and the Age of the Water Barons," *The Center for Public Integrity: The Water Barons*, February 3, 2003, <http://projects.publicintegrity.org/water/report.aspx?aid=44>.

<sup>16</sup> Pinsent Masons, 2010.

<sup>17</sup> David Hall, "Water and DG Competition", *European Public Services Union*, May 2003, <http://www.epsu.org/IMG/pdf/PSIRUonECcompwater2002final.pdf>.

<sup>18</sup> Sunita Kikeri and Aishetu Fatima Kolo, "Privatization: Trends and Recent Developments," World Bank, November 1, 2005, [http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2005/11/08/000016406\\_20051108153425/Rendered/PDF/wps3765.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2005/11/08/000016406_20051108153425/Rendered/PDF/wps3765.pdf).

<sup>19</sup> The World Bank Group, "Sector Data Snapshots: 2009," August 11, 2010, <http://ppi.worldbank.org>.

East Asia and the Pacific region.<sup>20</sup> As of 2008, investment in private projects was growing significantly in Europe, Central Asia and South Asia, with Latin America continuing to decline. Not surprisingly, public resistance has forced this decrease in projects in Latin America, with an overwhelming 70% of Latin Americans surveyed supporting publicly owned systems.

In 2009 the World Bank reported overall declines in water and sewer private activity in low and middle income countries for the second consecutive year (Figure 4). The World Bank attributes the steep decline in 2009 to “fiscal stimulus packages that reduced the need for local governments to tap private sector financing,” adding that foreign sponsors are decreasing their investment in infrastructure projects in low-income countries to “focus on their core markets.”<sup>21</sup> Meanwhile, large multinational corporations are increasingly looking to U.S. markets as profitable to own or operate.<sup>22</sup>

## U.S. Background

An estimated 90% of people in the U. S. receive water from a public water system (PWS), defined by the Safe Drinking Water Act as any entity furnishing water to 15 or more connections or 25 or more regular customers.<sup>23</sup> A public water system may be privately or publicly owned. Many early public water systems in the U. S. were privately owned and operated. By the end of the 19<sup>th</sup> century, towns and cities began reclaiming water systems from private companies because of poor

---

*Access to safe water and sanitation is disproportionately lacking for low-income and minority populations, mainly in dense urban or very rural areas.*

---

service, water quality and inequitable distribution of water.<sup>24</sup> According to a report by the Rural Community Assistance Partnership (RCAP), waterborne diseases such as typhoid, cholera, and hepatitis A frequently affected people across the U. S. until the water systems were expanded under public control and public health began to steadily improve.<sup>25</sup>

The RCAP report details the characteristics of U.S. residents who still do not have indoor plumbing, indicating that access to safe water and sanitation is disproportionately lacking for low-income and minority populations, mainly in dense urban or very rural areas. Households below the poverty line were four times more likely to lack complete indoor plumbing as of 2004. The white population has the highest percentage of people with access to complete indoor plumbing, whereas Native Americans have the greatest percentage lacking it (Table 1). Of the people identifying as some other race (SOR), 95% are of Central American, South American, or Caribbean origin.

---

<sup>20</sup> Ibid.

<sup>21</sup> Ada Karina Izaguirre and Edouard Perard, “Private activity in water and sewerage declines for second consecutive year,” World Bank, 2010, <http://ppi.worldbank.org/features/June2010/PPI-Water-note-2009.pdf>.

<sup>22</sup> Craig Anthony Arnold, “Water Privatization Trends in the United States: Human Rights, National Security, and Public Stewardship,” William & Mary Environmental Law and Policy Review, Vol. 33 (2009), p. 785.

<sup>23</sup> *Safe Drinking Water Act Amendments of 1996*, Public Law 104-182, U.S. Statutes at Large 110 (1996), Stat. 1613.

<sup>24</sup> Robert Glennon, “Water Scarcity, Marketing, and Privatization,” Texas Law Review 83, no. 7 (2005).

<sup>25</sup> Rahul Vaswani and Steven Gasteyer, “Analyzing the Availability of Water and Sanitation Services in the United States,” Rural Community Assistance Partnership, 2004, <http://www.rcap.org/stilllivingwithoutbasics>.

Race/ Ethnic Category	Occupied Housing Units Lacking Complete Plumbing Facilities							
	Total	%	Total Rural	% Rural	Rural – Farm	% Rural – Farm	Total Urban	% Urban
White	389,415	0.47	158,653	0.79	11,449	1.09	230,762	0.36
Black	131,382	1.10	30,724	2.66	1,109	3.64	100,658	0.93
AIAN	33,781	4.41	27,256	9.62	253	4.36	6,525	1.35
Asian	27,780	0.89	644	0.82	53	1.81	27,136	0.89
NHOPI	1,383	1.40	338	3.88	4	1.61	1,045	1.16
SOR	62,687	1.63	5,090	2.18	213	2.87	57,597	1.60
Hispanic	134,723	1.47	12,256	2.16	451	2.55	122,467	1.42

**Table 1: Total and Percentage of Rural and Urban Occupied Housing Units Lacking Complete Plumbing Facilities, by Race or Ethnic Category (2000).**<sup>26</sup> Note: AIAN=American Indian/Alaska Native, NHOPI=Native Hawaiian/Pacific Islander, SOR=Some other race (self-identified).

The recent wave of corporate water privatization washed over the U. S. later than many places in world. Private water corporation involvement began to take hold in the U.S. in the late 1990s: from 1997 to 2002, private contracts to operate U. S. publicly-owned systems tripled, and in 1999, U.S. water system acquisitions by private corporations totaled more than \$15 billion.<sup>27,28</sup> In 2011, an astounding 69% of public water systems (and 47% of community water systems, which serve year-round populations) are privately owned, but because of the relative size of the systems, these privately-owned systems only supply water to 15% of public water system customers<sup>29</sup>. The number of private systems has remained relatively flat since EPA’s 2006 Community Water System survey, when 49% of community water systems were privately owned (Figure 6). Full privatization is much more common throughout the U.S. than public-private partnerships.<sup>30</sup>



**Figure 6: U. S. CWS Ownership in 2006 by Number of Systems and Amount of Water Delivered**<sup>31</sup>

Public opinion in the U. S. does not favor privatization, with 31-45% more people against the general concept of privatization than approving.<sup>32</sup> However, the public is facing a battle for the

<sup>26</sup> Ibid.

<sup>27</sup> Gary Wolff and Eric Hallstein, “Beyond Privatization: Restructuring Water Systems to Improve Performance,” *The Pacific Institute*, 2005.

<sup>28</sup> Maude Barlow and Tony Clarke, “Who Owns Water?,” *The Nation*, September 2, 2002, <http://www.ratical.org/co-globalize/whoOwnsWater.html>.

<sup>29</sup> US EPA Office of Groundwater and Drinking Water, “FY2009 Inventory Data,” US Environmental Protection Agency, accessed March 2011, <http://water.epa.gov/scitech/datait/databases/drink/pivottables.cfm>.

<sup>30</sup> Ibid.

<sup>31</sup> US EPA, “2006 Community Water System Survey: Volume 1,” *U.S. Environmental Protection Agency*, 2011. <http://water.epa.gov/aboutow/ogwdw/cwssvr.cfm>.

allegiance and accountability of public officials as powerful water companies lobby and make campaign contributions to key public figures, or form relationships with developers before construction begins.

The need for infrastructure improvements is one major reason municipalities across the country are motivated to lease or sell public water systems (PWS) to private entities. Many publicly-owned systems do not have the capital to finance needed repairs, and elected officials often lack the political will to raise rates to cover ongoing costs. Although the private sector appears to offer an appealing alternative for cash-strapped governments, local governments actually have a record of spending more on capital improvements on average than private water corporations serving systems of equivalent size (see Chapter 3). Despite this investment disparity between publicly and privately-owned systems and growing infrastructure needs, in the years just after 2000, the US experienced the rapid growth of ownership by corporate water entities. Nationwide, several noteworthy instances of privatization have occurred in large cities, and several of these large systems have since experienced failures, with cancellation of water contracts after public opposition, including Atlanta, Georgia and New Orleans, Louisiana.

The major water corporations in the U.S. are United Water (a subsidiary of French Suez), Veolia Water North America (a subsidiary of French Veolia), American Water and Aqua America.<sup>33,34,35</sup> American Water is the largest water corporation in the U.S.<sup>36</sup> Aqua America, the second largest publicly traded U.S.-based water corporation, has grown rapidly in recent years, with 3 million customers in 12 states.<sup>37</sup> Aqua North Carolina, a subsidiary of Aqua America, is the largest private company operating in NC.<sup>38</sup>

## North Carolina Background

More than two and a half million of North Carolina's nine million residents rely on individual private wells, but the other two-thirds of state residents depend on public water systems of all sizes, defined as any system serving 15 or more connections or 25 or more regular customers.<sup>39,40</sup> NC's historically plentiful water supplies are starting to be stressed due to resource management decisions. High groundwater-consuming commercial and industrial users have been known to use so much water that they leave neighboring wells dry. In the coastal plains, key aquifers have been dropping by over 10 feet per year, so the state has established Capacity Use Areas to regulate water withdrawals, with a target reduction by large groundwater users of 75% over a twenty year period.<sup>41</sup> New policies for permitting large wells in the eastern part of the state also act to slow the depletion of aquifers by groundwater users.

NC's long history of inequitable economic and infrastructure development, which contributed to selective distribution of toxic industries and wastes in low income communities and

---

<sup>32</sup> Food and Water Watch, "Faulty Pipes: Why Public Funding--Not Privatization--Is the Answer for U. S. Water Systems," 2006, <http://www.foodandwaterwatch.org/reports/faulty-pipes/>.

<sup>33</sup> Water for All Campaign, "Reclaiming Public Assets. From Private to Public Ownership of Waterworks," Public Citizen, September 2002, <http://www.wateractivist.org>.

<sup>34</sup> American Water Corporation, "About American Water," 2011, <http://www.amwater.com/About-Us/>.

<sup>35</sup> Barlow and Clarke, "Who Owns Water?"

<sup>36</sup> American Water Corporation, "About American Water."

<sup>37</sup> Food and Water Watch, "Faulty Pipes."

<sup>38</sup> North Carolina Utilities Commission, "Joint Proposed Order Granting Partial Rate Increase and Requiring Customer Notice," Docket W-218 Sub 274, *NCUC*, March 13, 2009, <http://ncuc.commerce.state.nc.us/>.

<sup>39</sup> North Carolina Ground Water Association, 2010, <http://www.ncgwa.org/>.

<sup>40</sup> NC Public Water Supply Section, "About the Public Water Supply Section," 2011, [http://www.deh.enr.state.nc.us/pws/about\\_pws.htm](http://www.deh.enr.state.nc.us/pws/about_pws.htm).

<sup>41</sup> Edward Martin, "Drying up (North Carolina Is Running Short of Water)," *Business North Carolina* 26, no. 10 (2001).

communities of color, lead to the birth of the Environmental Justice movement here in the early 1980s. Such injustices are still evident in uneven access to plumbing, clean water and sanitation. In many NC cities, public water and sewer lines have passed around low income and African-American neighborhoods to supply wealthier, mostly white suburbs. A case in eastern NC clearly exemplifies how implicit private ownership of water supplies can harm low-wealth communities and communities of color. In Aurora, NC, Phosphate Company of Saskatchewan (also known as PCS Phosphate) has a permit to pump 78 million gallons of groundwater each day in order to remove water from phosphate mining beds. A company called Eagle Water Co. LLC formed in 2000 to purchase the water in the phosphate mines – which would otherwise be released into a nearby estuary – and pump this water to Eastern NC towns and industries.<sup>42</sup> As of 2010, the removal of up to 58 million gallons per day (MGD) for use in the Raleigh area is still under consideration.<sup>43</sup> The residents of Aurora will be the losers in this privatization as water is extracted from under them. Aurora is a rural community of just over 500 people, half of whom are people of color, where median household income is only about 60 percent of the 2000 U. S. median of \$41,994.

North Carolina has a policy of viewing water as a public trust, but still allowing certain users greater access to this right than others.<sup>44</sup> "The water fight has already begun, I can tell you that," said Charlie Albertson of Duplin County, former Chairman of the NC Senate Agriculture, Environment and Natural Resources Committee. "It's going to be the next big challenge this state faces." By 2015, an estimated 25% of NC municipal systems are predicted to face the limits of their supplies.<sup>45</sup>

In contrast to a pattern of mostly medium and large public water systems serving municipalities in many states, the vast majority of NC's are small. NC has more PWSs than any other southern state and twice the national average for a state.<sup>46</sup> In 2009, 93% of the state's 7,087 systems were considered "very small," and many of these were privately owned (Figure 7).

---

*In 2009, 93% of North Carolina's public water systems were considered "very small," and many of these were privately owned.*

---

Water quality can be a special concern for very small systems. As of 2009, 67% of people served by very small systems (serving 500 or less customers) experienced water quality violations, compared to only 41.5% of customers served by all other size categories. Although publicly and privately owned systems of similar size do not differ considerably in health-based violations, 89% of North Carolina's water systems fit into the "very small" category, and many are privately-owned.<sup>47</sup>

---

<sup>42</sup> US Water News Online Editor, "Groundwater Depletion Reduction on Tap," 2000, <http://www.uswaternews.com/archives/arconserv/tgrodep7.html>.

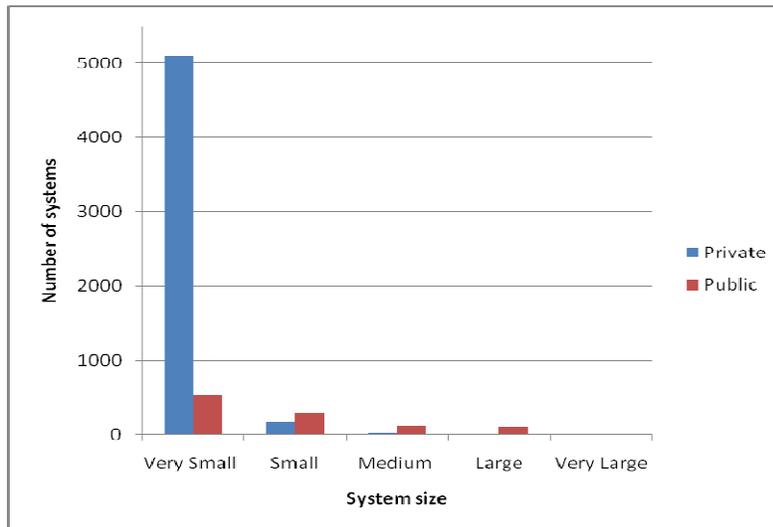
<sup>43</sup> Eric Lappala, "Summary Preliminary Engineering Report: Water Supply Source and Transmission System: Eagle Water Alternative for the City of Raleigh (Prepared for Eagle Water Company, LLC)," June 9, 2010, <http://eagle-ater.com/Summary%20Feasibility%20Report%20Eagle%20Water%20Transmission%20System%20to%20Falls%20Lake%20Updated%20060910.pdf>.

<sup>44</sup> Michelle Crouch, Bruce Henderson, and Peter Smolowitz "Who Gets the Water? - the Carolinas Face New Limits as Growth Outpaces Supply," *Charlotte Observer* (Charlotte, NC), 2002.

<sup>45</sup> Ibid.

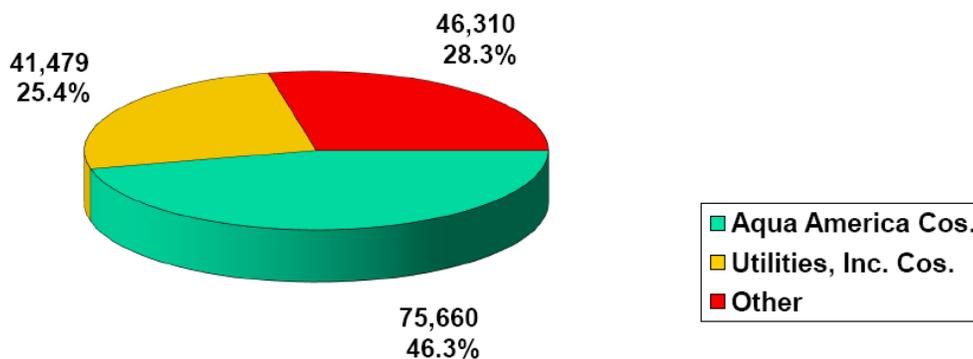
<sup>46</sup> Catherine Clabby and Pat Stith, "State Failing to Ensure Suppliers Test Your Water," *Raleigh News & Observer* (Raleigh, NC), 2006.

<sup>47</sup> U.S. EPA Office of Groundwater and Drinking Water, "FY2009 Inventory Data."



**Figure 7: NC Water System Ownership by Size (2009)<sup>48</sup>. Population served: Very small: 25-500; Small: 501-3,300; Medium: 3,301-10,000; Large: 10,001-100,000; Very Large: >100,000. Note: There are fewer than 1 dozen “Very Large” systems in the state of NC.**

The privately-owned PWSs in NC are predominantly locally-owned by small water companies or MHP owners, but these characteristics are rapidly changing as large corporations, particularly Aqua America, purchase these smaller systems. During the first half of 2006, Aqua’s NC subsidiaries closed deals on 40 systems; at the time of this report’s publication, the company owned a total of 796 NC systems.<sup>49,50</sup> Utilities, Inc., which owns PWSs in seventeen different states providing water to 300,000 customers, is the second-largest private company with holdings in NC. Utilities, Inc. is small in comparison to Veolia, United Water, American Water, and Aqua America. Aqua America subsidiaries, including Aqua North Carolina, serve a combined 71,000 NC customers (households), or 46% of all NC private for profit utility customers (Figure 8).



**Figure 8: Distribution of the 163,449 traditional (not resale) customers served by top NC Water Companies (as of 12/31/2009)<sup>51</sup>**

<sup>48</sup> US EPA Office of Groundwater and Drinking Water, “FY2009 Inventory Data.”

<sup>49</sup> Mike Myers (Aqua North Carolina), phone conversation with author, August 4, 2006.

<sup>50</sup> Aqua America, “North Carolina home page,” *Aqua America*, <https://www.aquaamerica.com/NorthCarolina/Pages/Home.aspx>.

<sup>51</sup> North Carolina Utilities Commission, “North Carolina’s Public Utility Infrastructure & Regulatory Climate,” *NCUC Overview*, <http://www.ncuc.commerce.state.nc.us/overview/Overview.pdf>.

A major driving force of this change in ownership from small, local companies to large corporations is the perceived need for private capital for infrastructure improvements and extensions. Ken Rudder, the director of the water and sewer division of Public Staff, which was created to advise the Utilities Commission on behalf of consumers, said that he would like to see a progression from “mom and pop developer utilities” to “private professional utilities” such as Aqua NC, even encouraging acquisition of some municipal systems if possible. These more “professional” large corporations are seen as having the management experience and capital needed for infrastructure improvements.<sup>52</sup>

Alabama’s water regulators took a very different approach to improving water systems and regulation in the 1990s. The state’s Department of Environmental Management (DEM) realized the greater proportional costs for small water systems and the inefficiency of regulating numerous small, independent water systems (at that time, more than 1300).<sup>53</sup> Rather than turning to privatization, the DEM encouraged smaller systems to hook up to nearby larger municipal systems. Combined with a commitment to secure funding from federal and state sources for water line extensions, this strategy was successful in cutting the total number of systems by more than half and eliminating many of the systems which had struggled to comply with standards.<sup>54</sup> The DEM now has a general principle of approving no new subdivisions unless they can hook up to an existing system, thus preventing very small systems from popping up.

A significant factor in the success of Alabama’s restructuring of water systems was the time frame: the state had already consolidated many of its small systems before privatization began to accelerate in the U.S. Private companies like Aqua America tend to strongly resist requests to surrender their service areas to municipal ownership. In Aqua America’s 2011 Annual Report, the company states, “our primary strategy continues to be to acquire additional water and wastewater

---

*There is still time for North Carolina to capture the consumer and regulatory benefits of promoting consolidation of hundreds of independent systems under public ownership.*

---

systems, to maintain our existing systems where there is a business or a strategic benefit, and to actively oppose unilateral efforts by municipal governments to acquire any of our operations.”<sup>55</sup> However, there have been several recent cases in which Utilities Inc., the 2<sup>nd</sup> largest private water company operating in NC, has sold systems back into public ownership.<sup>56</sup> Although privatization of systems is already widespread in NC, state agencies should now strongly re-consider their approach to small systems. There is still time to capture the consumer and regulatory

benefits of promoting consolidation of hundreds of independent systems under public ownership following Alabama’s model, and preventing formation of more small systems that will be more expensive to operate per household served. Policies and incentives can also facilitate publicly owned utility connections to purchase small systems in their boundaries or near their existing lines.

---

<sup>52</sup> Kenneth Rudder (Public Staff) phone conversation with author M.G., July 27, 2006.

<sup>53</sup> U.S. EPA, “Compendium of Full-Cost Pricing Issue Papers: Covering the Basics (preliminary draft),” prepared for Peter Shanaghan, EPA, May 20, 2009.

<sup>54</sup> Ibid.

<sup>55</sup> Aqua America, *Form 10K*, ANNUAL REPORT PURSUANT TO SECTION 13 or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 for the fiscal year ended December 31, 2010, <http://ir.aquaamerica.com/secfiling.cfm?filingID=950123-11-18861>.

<sup>56</sup> North Carolina Utilities Commission, “Application for Transfer to Currituck County,” Docket W-354, Sub 332, *NCUC*, March 8, 2011, <http://ncuc.commerce.state.nc.us/>.

## Water Rate Regulation in North Carolina

The North Carolina Utilities Commission (NCUC) regulates the rates for all for-profit privately-owned water and wastewater public water supplies. It does not regulate water included “in-rent” or provided by homeowners’ associations. Many multi-family home settings, such as apartments and manufactured home parks, have monthly water charges included in their rent; the unique situation of multi-family residences is discussed further in the next section.

A utility proposes rate structures and rates to the NCUC, typically a base charge and a volumetric charge based on a single-block rate structure. The NCUC generally approves these rates as recommended by its Public Staff, intended to be advocates for the water consumer. A base charge for zero usage is set to recover fixed costs, such as infrastructure improvements. Variable costs are recovered through the volumetric charge or “usage rate.” These costs include personnel salaries and power for pumping.

For water utilities, profit can come from one of two models: “*operating ratio*” or “*rate-base return on investment*.” Utilities are allowed rates based on the higher of the two calculations.<sup>57</sup> The NCUC and Public Staff examine the financial situation and costs of the water utility to set rates including a specified rate of return. For example, in Aqua NC’s 2008 rate case, Public Staff found that “the appropriate overall rate of return on rate base is 8.09%.”<sup>58</sup> When deciding rate cases, the Commission’s Public Staff, charged with representing “the using and consuming public” does not consider the financial situation of the people who pay those rates. They are not, as one Public Staff engineer put it, “a social service agency.”<sup>59</sup> Meanwhile, Aqua America experienced a 28% increase in their stock value in 2010, with net income representing 17.1% of their operating revenues.<sup>60</sup> Customers have requested that the definition of allowable rate of return be broadened to include affordability for a service as basic to life as water.

A “rate case,” or request for rate adjustment by a utility, follows normal legal proceedings. The company submits its revenue requirements, and any public opinion resulting from very limited public notice is sent to the NCUC Public Staff. Aqua NC’s General Manager for North Carolina and Virginia, Mike Myers, refers to the Commission’s Public Staff as analogous to the Consumer Advocate in other states. If there is any dispute, NCUC holds a hearing to decide the case.<sup>61</sup>

## Regulation of For-Profit Corporate Water Utilities

As mentioned above, the Utilities Commission and the Public Staff have policies in place to promote acquisitions of systems by large private companies such as Aqua NC. In 2004, when Aqua America acquired Heater Utilities in North Carolina, the Public Staff set up an Acquisition Incentive Account for the company. This account, equivalent to \$6 million, allows Aqua NC to collect additional incentive profits on the purchase of any “troubled” (chronically noncompliant) systems in the form of a higher rate base for customers; these profits are not included in the Public Staff’s rate recovery calculations. Customers of these systems then pay Aqua NC’s rates in exchange for the expectation that Aqua NC will make improvements to their system. However, Ken Rudder told CWFNC that infrastructure problems in a low-income subdivision with lower-cost housing

---

<sup>57</sup> Ibid.

<sup>58</sup> North Carolina Utilities Commission, “Public Staff’s Joint Proposed Order Granting Partial Rate Increase and Requiring Public Notice,” Docket W-218, Sub 274, *NCUC*, March 13, 2009, <http://ncuc.commerce.state.nc.us/>.

<sup>59</sup> Public Staff Engineer (Anon.), phone conversation with author M.G., July 2006.

<sup>60</sup> Aqua America, “2010 Annual Report to Shareholders,” *Aqua America – Investor Relations*, <http://ir.aquaamerica.com/>.

<sup>61</sup> Myers, 2006.

would be fixed when and if the system fails, implying that these systems would not be prioritized for improvements, even after customers begin paying higher bills.<sup>62</sup>

Aqua NC's metered water customers are all currently charged using a single-block rate structure.<sup>63</sup> In October 2008, Public Staff recommended that Aqua NC "investigate and report to the Public Staff the impact of rate design to promote water conservation, including an inclining [increasing] block rate structure."<sup>64</sup> The company contracted with the University of North Carolina at Chapel Hill's Environmental Finance Center (EFC) to analyze the feasibility of an increasing block structure. The resulting report, released in November 2009, found that "Increasing block rate structures for water can be designed to encourage conservation while maintaining a degree of revenue neutrality and stability for Aqua...it is also possible to lower bills for the low using customers at the same time while maintaining revenue neutrality."<sup>65</sup>

A switch to an increasing block rate structure could help to equalize the financial burden of Aqua NC customers and promote water conservation. However, the current rate structures, with fixed fees or large base charges and a single volumetric rate, essentially force low-volume users (many of whom are lower income) to subsidize high-volume users. When a typical consumer only uses five to six thousand gallons a month, a household that consumes over twenty thousand gallons a month pays the same rate per volume, despite the increased infrastructure costs associated with well development and the distribution system for these high-volume users. The State requires that utilities provide enough water for one-half gallon of water per minute per connection, but Aqua NC has a policy of providing one gallon of water per connection. For high-volume user homes (usually in high wealth developments), Aqua NC says they must ensure that customers have two gallons per minute per connection—four times the state requirement.

An increasingly common practice among large privately-owned utilities is "single tariff" pricing, also known as "consolidated rates." This is the practice of charging the same unified rate across different water systems owned by the same water company. These systems are very seldom geographically contiguous. North Carolina is one of only 8 states where the state Utilities Commission generally accepts this practice. Aqua NC employs single tariff pricing, allowing them to take on what state water officials call "troubled water systems" and spread the costs among all their customers.

Consolidated pricing is said by industry and some regulators to provide some of the benefits of economies of scale by spreading the costs of infrastructure improvements across multiple systems and reducing "rate shock" to customers in systems where operational costs are higher. One of the touted benefits of consolidation is that it can distribute the costs of small, rural systems that need infrastructure improvements. This is the reason offered by the NCUC for incentivizing Aqua NC's takeover of small water systems with poor water quality compliance records, and in need of infrastructure improvements. An example is Cedar Woods, a small development in the western NC piedmont whose public well was found to have natural arsenic contamination, requiring a specialized treatment system, thus increasing operating costs. Larger water companies view consolidation and single-tariff pricing as a way to simplify billing and thus ease acquisition of other systems. However, this results in a moderation of rate increases for some users at the expense of increased rates for others who are not receiving any benefits such as improved maintenance, repairs

---

<sup>62</sup> Kenneth Rudder (Public Staff) phone conversation with author, June 22, 2010.

<sup>63</sup> North Carolina Utilities Commission, "Order Scheduling Hearings and Requiring Customer Notice," Docket W-218, Sub 319, *NCUC*, March 1, 2011, <http://ncuc.commerce.state.nc.us/>.

<sup>64</sup> North Carolina Utilities Commission, "Order Granting Partial Rate Increase and Requiring Customer Notice," Docket W-218, Sub 274, *NCUC*, October 2008, <http://ncuc.commerce.state.nc.us/>.

<sup>65</sup> Shadi Eskaf and Jeff Hughes, "Report on the Impact of Switching to an Increasing Block Rate Structure for Water and/or Uniform Volumetric Rates for Wastewater Customers of Aqua North Carolina, Inc.," *UNC Environmental Finance Center*, 2009, <http://www.efc.unc.edu/projects/AquaNC.htm>.

to infrastructure or treatment. As the EPA emphasizes, “Importantly, single-tariff pricing is a *pricing* strategy, not a *costing* strategy.” Thus, it does not serve to “lower costs.”<sup>66</sup>

---

*Consolidated pricing, if unchecked, can allow a company to improve systems that service people with more political voice at the expense of systems serving marginalized communities.*

---

A problem with this pricing strategy is that it can conflict with “price of service” principles, as rates are not related to the service or the need for infrastructure improvements in a particular water system. The EPA noted this and other potential problems: “single-tariff pricing can provide some water utilities with incentives to over-invest in individual systems, disincentives for cost control, and a competitive advantage in the course of acquisition.” Importantly, consolidated pricing, if unchecked, can allow a company to improve systems that service people with more political voice at the expense of systems serving marginalized communities:

“Another potentially important equity concern is whether consolidated rates result in subsidies from low-income customers in the low-cost area to higher-income customers in a high-cost area.”<sup>67</sup>

This is a reasonable concern, as most affordable housing developments are pre-existing and thus do not have the initial system construction costs required for wealthier new subdivisions, which generally seek higher volume use. Systems designed to serve large volume users with landscaping, water using appliances and swimming pools have both higher construction costs and higher maintenance expenses to provide or high usage. By contrast, most low-wealth communities live in older housing, likely to have older infrastructure in need of repair, but such problems may not be addressed in the absence of public oversight of how funding is allocated. Although rural low-income households tend to use less water, as EPA notes, NCUC generally recommends higher base charges relative to volumetric charges for the systems it regulates, further shifting overall costs onto lower-volume users. It is critical that consolidated pricing be regulated to ensure wealthier communities are not reaping benefits at the expense of lower-income communities paying high rates with few improvements.

## **Regulation of Water Rates for Multifamily Residences**

In the US, 60 million people live in multifamily residences.<sup>68</sup> Multifamily residences include apartment complexes and manufactured home parks (MHPs). In North Carolina, 17% of occupied homes are manufactured homes.<sup>69</sup> Water and wastewater rate regulation in MHPs is of particular concern in NC due to the quantity of MHP neighborhoods in the state, the tendency of residents to fall into lower income brackets, and several mechanisms allowing property owners to profit from water sales at the expense of these economically vulnerable residents.

Historically, many multifamily residences, including apartment complexes and MHPs, have included water charges in rent payments. The NC General Statutes prohibit the regulation of rent, and thus water prices included in that rent, except in cases of affordable housing options that use federal or state money. However, multifamily residences can also fall under the regulation of the NCUC if the owner/manager chooses to charge separately for water by applying for a “certificate”

---

<sup>66</sup> Janice A. Beecher, "Consolidated Water Rates: Summary" in *Consolidated Water Rates: Issues and Practices in Single-Tariff Pricing*, (Washington, D.C.: U.S. Environmental Protection Agency and the National Association of Regulatory Utility Commissioners, 1999).

<sup>67</sup> Ibid.

<sup>68</sup> Vaswani and Gasteyer, 2004.

<sup>69</sup> NC Housing Coalition. “Housing Facts and Statistics in NC,” *NC Housing Coalition website*, 2010, [http://www.nchousing.org/research\\_publications/facts\\_stats/index\\_html](http://www.nchousing.org/research_publications/facts_stats/index_html).

from the NCUC. Charging separately involves a process called “sub-metering,” or metering individual residences in a multifamily development that purchases water from another water system and has its overall water usage measured through a master-meter.

In the last few decades, the owners of apartment complexes or MHPs have increasingly begun to “sub-meter” their properties, nominally for water conservation. An EPA report found that sub-metering is correlated with lower water usage among multifamily residents; apparently the usage cost creates an economic incentive for households to conserve.<sup>70</sup> In 2004, state legislation passed that facilitates sub-metering by allowing the Utilities Commission to “adopt procedures that allow a lessor to charge for the costs of providing water and sewer service to persons who occupy the same contiguous premises.”<sup>71</sup>

There are currently two ways that property owners of multifamily residences may sub-meter residents and charge them separately for water. The simplest is to obtain a “Certificate of Authority” to operate as a Water Reseller.<sup>72</sup> The Certificate of Authority allows the property owner to make up costs of providing water and charge an administrative fee set by the Utilities Commission. This status is only available to multifamily residences, not to corporate for-profit water utilities.<sup>73</sup> The Certificate of Authority is advantageous to property owners because it is simple to obtain (requiring only a two-page application) and allows recovery of costs without the added responsibilities of being regulated as a for-profit utility.

The second option is known as a “Certificate of Public Convenience and Necessity,” or franchise agreement. When property owners seek a franchise agreement, their properties’ water systems are subject to full regulation by the Commission as a Water Utility (the same franchise agreement is required for larger corporate water companies wishing to begin service in a new area). The application is much more extensive, but franchise holders may recover all costs of the utility and set a rate of return, or profit. The last ten years have seen an increase in the number of both Certificates of Authority (resale certificates) and Certificates of Public Convenience and Necessity (franchises). Many owners of MHPs do not get a Certificate of Public Convenience and Necessity because of the added responsibilities and extensive application process; however, the MHPs that do have franchise agreements represent individual businesses and property owners allowed to profit at the expense of their generally low-income tenants’ water affordability.

Despite EPA’s findings about sub-metering encouraging water conservation, in many cases this transition actually decreases the affordability of water for multifamily property residents – even those who use low volumes of water. These residents, who are some of the most economically vulnerable members of our state’s population, are faced with paying to cover the additional costs of billing and management for a service that a larger, municipal utility could provide. Even if MHP owners don’t get the certificate that allows them to profit, administrative costs can still have an economic impact on residents.

Furthermore, when landlords change from in-rent water costs to sub-metered water costs, EPA has found that property owners rarely reduce the rent to compensate for the cost of the water service.<sup>74</sup> Their report recommends conducting a water audit and repairing leaks before the initiation of the new billing system (without specifying who should make these investments). Unfortunately, this is not common practice for private water systems transitioning to sub-metering, nor is it enforced by most municipal or county governments as part of maintaining ‘fit premises.’<sup>75</sup>

---

<sup>70</sup> Peter W. Mayer et al., “National Multiple Family Sub Metering and Allocation Billing Program Study,” *National Multi Housing Council*, 2011, <http://www.nmhc.org/Content/ServeContent.cfm?ContentItemID=3242>.

<sup>71</sup> North Carolina Utilities Commission, “Resale of Water/Wastewater,” 2011, <http://www.ncuc.net/industries/water/resaleofwater.htm>.

<sup>72</sup> Certificate of Convenience and Necessity, *NC General Statutes*, 2011, §62-110 (g).

<sup>73</sup> *Ibid.*

<sup>74</sup> *Ibid.*

<sup>75</sup> Landlord and Tenant, *NC General Statutes*, 2010, §42-42.

Although state law requires “fit premises” for renters, the law is unclear about the responsibility of rental property owners to maintain lines. According to GS 42-40, “premises means a dwelling unit, including mobile homes or mobile home spaces, and the structure of which it is a part and facilities and appurtenances therein and grounds, areas, and facilities normally held out for the use of residential tenants.”<sup>76</sup> The General Statutes intend to protect renters from assuming housing repair costs that they cannot recover. However, the lack of clarity, coupled with the limited resources of some MHP owners, results in landlords pushing the costs of repairs which would reduce water use onto their residents.

Indeed, once sub-metering has been implemented, system owners who rent houses or apartments to other residents have an incentive not to replace old plumbing, fixtures, and water-inefficient appliances with newer, more efficient ones. Because the owners profit from the increased water sales caused by wasteful older fixtures, upgrades will be costly to them both in terms of the costs of installation and the reduced profit as residents individually obtain the water savings.

Cheryl Gant, formerly of the Wake County Affordable Housing Coalition, spent a lot of time working with low-wealth NC communities concerning housing issues. “Mobile home leases are not that clear,” says Gant. Only if there is a maintenance contact on-site are residents likely to receive any repair services, according to Gant, who said that water bills of \$100 or \$200 a month aren't unusual in older trailer parks, where residents have no washing machines, dishwashers or lawns to water. She’s seen more bill complaints from multifamily residences with privately-owned water systems than from areas where low income residents are directly served by a public system.

---

*Sub-metering should only be permitted after property owners have been held accountable for replacing old fixtures, checking and repairing service lines and reducing rents to compensate for any fixed water charges.*

---

Finally, sub-metering and associated profits have led to increased water cut-offs in many affordable housing developments. Low-income MHP residents on sub-metered systems within municipal boundaries are often charged more than households hooked up to the municipal water utility. Sub-metering for nominal conservation purposes should only be permitted after property owners have been held accountable for replacing

old fixtures, checking and repairing service lines and reducing rents to compensate for any fixed water charges.

---

<sup>76</sup> Landlord and Tenant: Definitions, *NC General Statutes*, 2010, §42-40.

## Chapter 2. The Consequences of Privatization: Obstacles to Water Democracy

The growing water privatization trend in North Carolina<sup>77</sup> has impacted vulnerable NC communities. Through review of NC Utilities Commission water dockets and interviews, we have collected examples of the on-the-ground struggles of neighborhoods with privately owned water suppliers, and observed statewide trends. The problems communities in NC face with water/wastewater privatization tend to fall into four broad categories – water prices and affordability, customer service, the private utilities’ lack of transparency, and the regulatory agency’s failure to protect consumers. This chapter will characterize these problems and illustrate them using case studies of communities around the state.

### Water Prices and Affordability

As water corporations and local private water system owners raise prices, the costs disproportionately affect low wealth communities. Studies have shown that water privatization often reduces access to water for people of low wealth, resulting in decreased quality of life, health risks and even loss of housing, thus harming families and communities.<sup>78</sup>

Across the US, water prices for both publicly and privately-owned systems have increased in recent years and are expected to continue rising to cover infrastructure costs. Between 1998 and 2008, increases in U. S. water and wastewater rates have significantly exceeded the rate of inflation.<sup>79</sup> As costs increase, special attention to the effects on affordability for low-wealth residents becomes even more important, and average customer bills are higher for privately owned for-profit systems in North Carolina than for publicly-owned systems.<sup>80</sup>

The U.S. Environmental Protection Agency has proposed an affordability threshold based on the percent of median household income which goes toward water. Generally, EPA has determined that water is unaffordable when it exceeds 2.5% of median household income (not including wastewater charges),<sup>81</sup> although other policy groups have insisted that combined water and wastewater bills should not exceed 2% of household income.<sup>82</sup> Whatever the standard of affordability, the cost of water takes a higher toll on some residents simply due to their lower incomes, and people of color are likely to spend a higher portion of their income on water and sewer services because of social and housing disadvantages.<sup>83</sup> Although in 2009, the median expenditure by U.S. consumers was 1.1% of their income on water and other public services, expenditures for residents in the lowest income bracket were well over the affordability threshold (Table 2).

---

<sup>77</sup> US EPA Office of Groundwater and Drinking Water, “FY2009 Inventory Data.”

<sup>78</sup> Kate Berry and Eric Mollard, *Social Participation in Water Governance and Management: Critical and Global Perspectives* (London: Sterling, VA, 2010).

<sup>79</sup> Harold Smith, “Water and Wastewater Rate Survey Results and Industry Trends” (presentation, New England Water Works 2009 Annual Conference, September 23, 2009).

<sup>80</sup> North Carolina Utilities Commission. “2009 N.C. UTILITIES COMMISSION REPORT- VOLUME XL,” *NCUC*, 2009, accessed March 2011, <http://www.ncuc.net/statbook/2009Report.pdf>.

<sup>81</sup> US EPA, “Recommendations of the National Drinking Water Advisory Council to U.S. EPA on its National Small Systems Affordability Criteria” *US Environmental Protection Agency*, July 2003, <http://water.epa.gov/infrastructure/drinkingwater/pws/upload/Recommendations-of-the-NDWAC-to-US-EPA-on-Its-NSSA-Criteria.pdf>.

<sup>82</sup> Wolff and Hallstein, 2005.

<sup>83</sup> *Ibid.*

<i>Income Bracket</i>	<i>Average Price (\$)</i>	<i>Average Income (\$)</i>	<i>Black, African American (% of pop)</i>	<i>Latino, Hispanic (% of pop)</i>	<i>Water, etc Cost (% of income)</i>
Lowest 20%	269	9,846	18	13	2.7
2 <sup>nd</sup> lowest 20%	383	27,227	16	15	1.4
Middle 20%	462	46,012	13	13	1.1
2 <sup>nd</sup> highest 20%	553	73,417	11	11	0.7
Highest 20%	739	157,631	7	7	0.4
Median	481	62,857	12	12	1.1

**Table 2: Expenditure for water, sewer and other public services (such as garbage and septic tank cleaning) by Income Bracket, and cost of water as % total income (2009).<sup>84</sup> Note: Compiled from U.S. Census Data (Systems Support Division of the U.S. Census Bureau January 25, 2009)**

In North Carolina, for-profit private corporations are ineligible for revolving fund grants and loans to improve poor water systems, and thus generally have to pay higher interest on loans than publicly-owned water utilities. Privately-owned utilities pass on all of these costs to their customers through high “base charges,” which, as described in Chapter 1, are fixed fees added to each bill in addition to the cost of the volume of water used. This practice is commonly approved by the North Carolina Utilities Commission (NCUC), and can be especially detrimental for low-wealth households. Additionally, privately-owned for-profit systems tend to charge higher rates than publicly-owned and private non-profit systems; in 2009, the median revenue per connection in the U.S. was consistently higher for private than public systems, no matter the size of the system (Figure 9).<sup>85</sup> In North Carolina, the average 2008 monthly bill for 6,000 gallons of water was \$20.72 for municipal systems and \$36.34 for privately owned systems.<sup>86</sup>

<b>Median Revenue per Residential Connection, Excluding Ancillary</b>		
<b>Population Served</b>	<b>Publicly Owned Systems</b>	<b>Privately Owned Systems</b>
<501	\$285	\$342
501-3,300	\$283	\$397
3,301-10,000	\$264	\$423
10,001-100,000	\$265	\$366
>100,000	\$305	\$379

**Figure 9: Median Revenue per Connection for publicly owned vs. privately owned systems<sup>87</sup>**

Rate structures may further contribute to affordability concerns for low-income residents. As mentioned in Chapter 1, most NC private water companies have a base charge combined with a single-block usage rate. Wastewater rate structures vary, but the structure used by Aqua NC, with the largest number of private water and wastewater system holdings in the state, is a flat rate, which

<sup>84</sup> US Department of Labor Bureau of Labor Statistics, “Consumer Expenditure Survey,” Bureau of Labor Statistics, 2009, <http://www.bls.gov/cex/#tables>.

<sup>85</sup> US EPA Office of Groundwater and Drinking Water, “2006 Community Water Systems Survey.”

<sup>86</sup> North Carolina Utilities Commission. “2009 N.C. UTILITIES COMMISSION REPORT- VOLUME XL.”

<sup>87</sup> US EPA Office of Groundwater and Drinking Water, “2006 Community Water Systems Survey,” US Environmental Protection Agency, 2009, <http://water.epa.gov/aboutow/ogwdw/cwssvr.cfm>.

is a high fixed monthly fee with no associated volumetric charge.<sup>88</sup> Nationwide, a flat charge regardless of usage is common, reported by 68% of all water/wastewater utilities, both privately and publicly owned.<sup>89</sup> However, Aqua NC's flat rate of \$63/month is considered exorbitant by most customers, and is much higher than the flat rates charged by the next largest private water company in the state, Utilities Inc. (one of Utilities' subsidiaries is currently requesting an increase to a \$46.48 flat rate, whereas Aqua NC's most recently proposed rate was \$70.22).<sup>90</sup>

The report by the University of North Carolina's Environmental Finance Center found that in all three alternative scenarios, average bills would decrease "for approximately half of the customers."<sup>91</sup> At the same time, with even the most steeply increasing rate block structure and volumetric wastewater structure, Aqua's revenues would stay constant or even increase.<sup>92</sup> One of the conclusions of the report stated, "It is also possible to lower bills for the low using customers at the same time while maintaining revenue neutrality."<sup>93</sup> Despite the conclusions of this report, Aqua NC's 2011 rate case filing requests continuation of the status quo rate structure.

## Customer Service

Customers of privately-owned water utilities often face poor service in several areas of the customer-utility relationship, from bill payment to system repairs to service reliability and notification. There are limited mechanisms through which customers of private companies can participate in the decision-making process, and those mechanisms seldom effectively facilitate participation.<sup>94</sup> Most often, this leaves customers feeling they have no recourse when service is inadequate or water quality is unacceptable.

### Water Service and Water Quality

Water service, pressure, and quality may be problems for customers of both publicly-owned and privately-owned utilities, but the ease of reporting problems and speed of response varies. Private companies whose customer service numbers are unavailable, unreliable or long-distance leave customers vulnerable to poor service or quality for longer periods. Policies that prioritize the company's ease of operation, not the speed with which they address system problems, also cause inconvenience and even health concerns when sanitation is impacted.

As discussed in Chapter 1, private companies in North Carolina are moving to acquire small, "troubled" systems, meaning that issues of water quality and/or aging infrastructure are already present in these systems at the time of purchase. Case studies in this chapter will show how low-income residents served by small systems have suffered from the low priority they've been given by privately-owned utilities in addressing water quality and water service concerns.

### Billing

Water customers should be able to expect a transparent billing procedure, informing them of how charges are calculated, when they must be paid, payment options and who to contact with questions or concerns. The North Carolina Utilities Commission (NCUC) regulations only say that

---

<sup>88</sup> North Carolina Utilities Commission, "Order Granting Partial Rate Increase and Requiring Customer Notice," Docket W-218 Sub 274 (Aqua North Carolina), *NCUC*, April 8, 2009, <http://ncuc.commerce.state.nc.us/>.

<sup>89</sup> Smith, 2009.

<sup>90</sup> North Carolina Utilities Commission, "Amended Application - Revised Proposed Schedule of Rates for Sewer Service," Docket W-778 Sub 88 (CWS Systems/Utilities Inc.), *NCUC*, January 5, 2011, accessed March 2011, <http://ncuc.commerce.state.nc.us/>.

<sup>91</sup> Eskaf and Hughes, 2009.

<sup>92</sup> *Ibid.*

<sup>93</sup> *Ibid.*, p. 12.

<sup>94</sup> Jeff Conant, "For Money or for Life," *Earth Island Journal*, 21, no. 3 (2006): 33-39.

“bills rendered periodically shall show the reading of the water meter at the beginning and end of the time for which bill is rendered, the dates on which the readings were taken, and the amount of water supplied,” and further allow for omission of some of these requirements for utilities wishing to adopt mechanical billing.<sup>95</sup>

The NCUC does not require regulated utilities to provide multiple payment options. Independent ethics groups, however, have recognized fair and transparent billing with adequate payment options as necessary functions of a well-run utility. In 2010, the National Association of State Boards of Accountancy (NASBA) Center for the Public Trust, whose mission is “advancing ethical leadership in business, institutions and organizations,”<sup>96</sup> awarded the municipal water utility in Spartanburg, South Carolina, an ethics award.<sup>97</sup> The award recognized the utility for outstanding policies, including offering multiple payment options to customers.<sup>98</sup> In North Carolina, overly complicated billing procedures reported and lack of payment options for low-income residents have created hardships for many customers of privately-owned utilities.

### Customer Notification

Customer notifications of rate and service changes are often inadequate and lack necessary justification or documentation. In North Carolina, the NCUC only requires a single notification, with notice as little as 3 weeks before public hearings, of proposed rate increases to water customers.<sup>99</sup> Unsurprisingly, companies do not go beyond minimal compliance with State regulations. Many communities report that notifications fail to reach many customers when they are posted in a

---

*Overly complicated billing procedures and lack of payment options...have created hardships for many customers of privately-owned utilities.*

---

public place in the neighborhood, thus falling short in informing residents of changes and facilitating their input. Language is also a frequent barrier to notification for the state’s many Spanish-speaking residents and other non-English speakers. Many private companies only send notifications in English, even if they are aware that many in their customer base cannot read the language.

Additionally, NCUC doesn’t require that the notification give any justifying information in notices of rate changes. The one tool web-savvy residents have to

access more information about the reasoning behind rate increases is the NCUC’s online database of documents, or dockets, filed by utilities when they request rate increases or other changes. These documents must contain general budgets, but companies do not have to explain which projects they will fund with a particular rate increase, nor do they disclose the operational costs involved in each category, such as water system maintenance. The NCUC and Public Staff have limited mechanisms to ensure that for-profit water corporations are responsive to their customers. The utility’s representation to the Commission of what a rate increase is intended to fund does not imply that the public will know or approve of such budget allocations, or be informed of the actual expenditures by the utility.

---

<sup>95</sup> North Carolina Utilities Commission, “Chapter 7, Rule R7-23: Water Companies – Information on Bills,” NCUC Rules and Regulations, <http://www.ncuc.commerce.state.nc.us/ncrules/rulstoc.htm>.

<sup>96</sup> NASBA Center for the Public Trust, NASBA Website, <http://www.centerforpublictrust.org/>.

<sup>97</sup> Sue Schneider, “Spartanburg Water First Utility in Country to Win National Ethics Award from NASBA Center for the Public Trust,” press release, *Spartanburg Water*, May 9, 2010, <http://www.spartanburgwater.com/pdfs/pressrelease/NASBACPTAwardPressRelease2010.pdf>.

<sup>98</sup> Spartanburg Water, “Payment Options,” 2009, <http://spartanburgwater.org/customers/payment-options.php>.

<sup>99</sup> North Carolina Utilities Commission, “Chapter 1, Rule R1-15: Investigation and Suspension Proceedings,” *NCUC Rules and Regulations*, <http://www.ncuc.commerce.state.nc.us/ncrules/rulstoc.htm>.

## Lack of Transparency

“As long as water was coming out of the tap, the public had no right to any information to how it got there.”

-A corporate executive at the 2000 World Water Forum in The Hague.<sup>100</sup>

Many of these poor customer service trends stem from private utilities' intrinsically less direct accountability to their customers. Privately-owned utilities tend to be less transparent than publicly-owned utilities, restricting public access to information and reducing avenues for public input. Private, for-profit companies may have several motives for limiting disclosure, including preventing expenses and operating strategies from being seen by other companies, as well as keeping costs associated with notification and customer interaction low. Private for-profit entities are most responsive to their shareholders if they are publicly traded; in contrast, publicly-owned utilities must generally be responsive to community needs through holding public officials accountable. If the transparency of publicly owned systems is well-used by officials, the Pacific Institute points out, “Experience has shown that water users are often willing to pay for improvements in water and sanitation when the services are reliable and the cost of delivering services is reasonably transparent and understandable to customers”.<sup>101</sup>

When private water corporations fail to respond to community concerns or avoid disclosure of use of customer funds, consumers are less able to act to protect their interests. A failure to make necessary infrastructure improvements with the money paid by customers, and approved for that purpose by the Utilities Commission, is, at best, a misallocation of funding.

Corruption has been known to reach extremes in some international cases; major conglomerates Suez and Veolia have been convicted of bribing officials in France to receive water concessions, and Veolia has also been found guilty in Italy and the US.<sup>102</sup> In recent years, Veolia has earned a reputation for making it "clear that their business model is based on maximizing profits, not long-term investment," according to Joby Gelbspan of Corporate Accountability International.<sup>103</sup> Even the World Bank, whose International Finance Corporation provides financing to Veolia and other private companies, warns of the potential for privatization to increase corruption through limiting disclosure of information and reduced responsiveness to the public<sup>104</sup>.

Although corrupt practices are not unique to the private sector, the public sector does not have the same motivation for owner or shareholder profit. As pointed out by David Hall of the Public Services International Research Unit, “A private sector operator has a constant incentive to maximize the private profit taken from a monopoly—clearly observable in private water concessions—whereas a public sector operator does not”<sup>105</sup>. The public sector, by contrast, has an obligation to act on public concerns and allow community input into their operations, while meeting costs of maintenance and operations, rather than making a profit.<sup>106</sup>

Not only are privately-owned water systems more susceptible to corruption, these operations are not required to provide many avenues for community input. The Pacific Institute has warned

---

<sup>100</sup> Barlow and Clarke, 2002.

<sup>101</sup> Wolff and Hallstein, 2005.

<sup>102</sup> David Hall, “Financing water for the world – an alternative to guaranteed profits”(presentation, 3rd World Water Forum, Kyoto, Japan Public Services International, 2003).

<sup>103</sup> Scott Thrill, “Watch Out: The World Bank Is Quietly Funding a Massive Corporate Water Grab,” *AlterNet*, November 2010, <http://www.alternet.org/story/148700/>.

<sup>104</sup> David Hall, “Water in Public Hands: Public Sector Water Management – a Necessary Option,” Public Services International Research Unit (PSIRU), 2001, p. 10-15, <http://www.world-psi.org/TemplateRedirect.cfm?template=/ContentManagement/ContentDisplay.cfm&ContentID=10168>.

<sup>105</sup> Hall, “Financing water for the world.”

<sup>106</sup> Ibid.

that reduced public participation and monitoring “can lead to ineffective service provision, discriminatory behavior, or violations of water-quality protections.”<sup>107</sup> Public accountability also decreases when system ownership is transferred from a local to an out-of-state corporation, especially if the company does not open local offices for customer access. Aqua NC, with customers in 48 counties,<sup>108</sup> has only five offices in the state, making the company less accessible to customers and less responsive to local needs and priorities.

The United Nations General Assembly outlined the need for public input into the water management process in its Millennium Development Goals: “We further reaffirm the importance of the involvement of relevant stakeholders, particularly women and youth, in the planning and management of water services and, as appropriate, decision-making processes.”<sup>109</sup> Ideally, the public should be a direct party to decision-making on pricing, services and capital developments. With privately-owned water companies, however, consumers must rely on the regulatory agencies’ limited public participation mechanisms to give input in the decision-making process. Not only does this structure create an additional degree of separation, its effectiveness hinges on a responsive regulatory agency and public advocacy staff willing to enact policies based on public needs and not just utilities’ economic interests.

## Failure of NCUC to Protect Consumers

In Chapter 1, we introduced the basic roles and functions of the North Carolina Utilities Commission as a regulatory agency, and the responsibilities of the Public Staff. These agencies should ideally protect consumers against the potentially unfair practices of shareholder-driven corporations described above. To further this purpose, the Public Staff is responsible for advocating for “the using and consuming public” so that the Commission can incorporate public interests into a final, balanced decision.<sup>110</sup> However, high rates and poor service can be traced to failure of both the regulatory agency and Public Staff to fulfill their statutory roles, as well as to the practices of private utilities themselves.

In many cases, the NCUC’s actions simply fulfill the requests of the companies they are meant to regulate. This may be related to the apparent belief of the NCUC and the Public Staff that privatization of water supplies is the best or only way to fund infrastructure improvements in the state, and likely reflects some degree of agency “capture” by private utilities, or failure to maintain independence from them, especially powerful corporations such as Aqua NC. Non-protective policies of the Commission and inadequate advocacy by the Public Staff allow, and even incentivize, the privatization of water supplies at the expense of the public interest.

---

<sup>107</sup> Peter Gleick, Gary Wolff, Elizabeth L. Chalecki, and Rachel Reyes, “The New Economy of Water: The Risks and Benefits of Globalization and Privatization of Fresh Water,” *The Pacific Institute*, 2003, [http://www.pacinst.org/reports/new\\_economy\\_of\\_water/new\\_economy\\_of\\_water.pdf](http://www.pacinst.org/reports/new_economy_of_water/new_economy_of_water.pdf).

<sup>108</sup> Aqua America, “North Carolina Map,” *Aqua America*, <https://www.aquaamerica.com/Documents/NorthCarolina.pdf>.

<sup>109</sup> Conant, 2006.

<sup>110</sup> Office of executive director; public staff, structure, and function, NC General Statutes, 2010, §62-15.

Under North Carolina law, the Public Staff “represents the using and consuming public”<sup>111</sup> and should make recommendations based on public concerns to the Utilities Commission. However, Public Staff has often fallen short of their intended role. In a review of NCUC rate cases from 2006-

### **Record-keeping by Aqua North Carolina: A look at Public Staff’s failure to follow policies**

One of CWFNC’s criticisms of Aqua NC’s “regionalized” or “consolidated” rate system has been that in reality, low-income, low-volume system customers tend to subsidize improvements to newer, wealthier subdivisions. Since all Aqua NC customers across the state pay the same high rates, no matter their income levels, it is important to keep the utility accountable for distributing capital – in the form of improvements to infrastructure or water quality – justly across all its systems. How does the Public Staff, defender of the “using and consuming public,”<sup>1</sup> track these expenditures?

Until 2008, Aqua had no obligation to keep financial records of income and expenses for individual systems. Since that time, rulings by the NCUC clarified that Aqua was responsible for keeping system-specific records, but conversations with the Public Staff indicate a negligent attitude toward enforcing their own Order that Aqua keep closer track of expenses for their specific systems around the state. Indeed, a protective attitude toward the company and ignorance about the situation of its finances dominates the Public Staff, and surprisingly, even the Commission’s financial staff seems to have forgotten its own ruling in correspondence with a customer. See timeline below.

**January 2008** – The Commission ordered Aqua NC to keep records on "system specific plant data, contributions in aid of construction, and direct expense data."<sup>2</sup>

**April 2009** – The Commission reminded Aqua NC that they were not in compliance with the Jan. 2008 request and must "immediately comply."<sup>3</sup>

**August 2010** – In response to a customer complaint letter, a financial analyst on staff at NCUC claimed that “Aqua NC is not required to maintain system-specific operating data in its financial books and records for all its accounts,” justifying this because "to maintain such system-specific operating information would significantly increase accounting and other administrative costs for the regulated utilities, which would ultimately be recovered from ratepayers through their monthly utility rates."<sup>4</sup> This either indicates that the person responding to this letter was not aware of the previous Order, or that they she was dishonest in her response to the customer complaint.

**January 2011** - In a phone conversation, the financial department of Public Staff admitted that they had not even checked whether Aqua NC was complying with their record-keeping requirement, though their "understanding" was that Aqua NC was in compliance with the 2008 order as of late 2010. When asked why they had not checked for compliance, the Public Staff claimed they were just going to “do all that” during Aqua NC’s next rate case.<sup>5</sup>

1. Public Staff of the North Carolina Utilities Commission, *Public Staff website*, 2010, <http://www.pubstaff.commerce.state.nc.us/>.

2. North Carolina Utilities Commission, “Order Granting Partial Rate Increase and Requiring Customer Notice,” Docket W-218 Sub 251, *NCUC*, January 29, 2008, <http://ncuc.commerce.state.nc.us/>.

3. North Carolina Utilities Commission, “Order Granting Partial Rate Increase and Requiring Customer Notice,” Docket W-218 Sub 274 (Aqua North Carolina), *NCUC*, April 8, 2009, <http://ncuc.commerce.state.nc.us/>.

4. North Carolina Utilities Commission, “NCUC’s Letter to Dr. Stanley Coleman,” Docket W-274 Sub 653, *NCUC*, August 17, 2010, <http://ncuc.commerce.state.nc.us/>.

5. Financial Department (Public Staff), phone conversation with author, January 2011.

2010 in which residents voiced concerns over higher rates, CWFNC researchers found that Public Staff rarely recommended a decrease from the rate proposed by the private company. For example, in early 2010, there were eight active water rate cases in which customers expressed concerns about rates to Public Staff. For these cases, Public Staff’s recommended rates only represented an average 4.4% reduction from the utilities’ proposed base rates and an 8.6% reduction from the proposed usage rates, even though the requested changes ranged from a 31-300% increase from current water rates. In two of the eight cases, Public Staff proposed accepting the companies’ requests with no

<sup>111</sup> Ibid.

change. Perhaps most telling, in all of these eight cases the Utilities Commission accepted the rates as proposed by Public Staff without alteration.<sup>112</sup>

Ken Rudder does not feel that his staff's actions are out of line with its intended purpose. "We do a pretty dog-gone good job representing our constituents," he said in a phone interview with a CWFNC researcher. Mr. Rudder acknowledges that Public Staff does not assess water affordability in making rate recommendations to the NCUC, and speaks highly of Aqua NC, though many of their customers have said in public comments that the company's rates are too high and have expressed concerns about quality of service. Rudder described the benefits he sees the company providing to residents, adding, "I sound like I'm sticking up for the company, but I'm honestly not."<sup>113</sup>

Concern is growing among customers of private companies about the "revolving door" between the NCUC, the Public Staff, and private companies. The term "revolving door" refers to government staff who leave public agencies to use their regulatory knowledge to work for private interests, or vice versa. The privatized water industry – like many industries in NC – has seen its share of this practice, which can undermine regulatory and legal processes and create advantages for industry interests. Jo Ann Sanford, the attorney who currently represents Aqua NC in its rate case proceedings, chaired the NC Utilities Commission until 2006.<sup>114</sup> William Grantmyre, currently an attorney with Public Staff who is assigned to Aqua's 2011 rate case, served as president of Heater Utilities, now a subsidiary of Aqua NC.<sup>115,116</sup> Revolving door practices in both the Commission and the Public Staff justifiably erode the public's trust in the agencies, and indicate the influence of the private water/wastewater industry.

---

*High rates and poor service can be traced to failure of both the regulatory agency and Public Staff to fulfill their statutory roles, as well as to the practices of private utilities themselves.*

---

<sup>112</sup> Calculated from North Carolina Utilities Commission, Docket Numbers W-715 Sub 3, W-1012 Sub 2, W-1044 Sub 15, W-218 Sub 301, W-472 Sub 15, W-1120 Sub 5, W-1082 Sub 3, and W-472 Sub 15, NCUC, accessed March 2011, <http://ncuc.commerce.state.nc.us/>.

<sup>113</sup> Kenneth Rudder (Public Staff) phone conversation with author (K.H.), June 22 2010.

<sup>114</sup> North Carolina Utilities Commission, "Appointed Commissioners – Past and Present," NCUC, 2011, <http://www.ncuc.commerce.state.nc.us/overview/uchistor.htm>.

<sup>115</sup> Public Staff of the North Carolina Utilities Commission, "Public Staff-Legal Division," 2011, <http://www.pubstaff.commerce.state.nc.us/pslegal/pslegal.htm>.

<sup>116</sup> Manta Small Business finder. Records for Heater Utilities, Inc., Aqua NC, and Brookwood Water Corporation. 2011. <http://www.manta.com>.

# Community Case Studies – Privatization in Action

## 1. ASHEVILLE, NC – MOSSWOOD & CROWN POINTE MANUFACTURED HOME PARKS

Mosswood and Crownpointe Manufactured Home Parks (MHPs) are adjacent neighborhoods in Asheville, Buncombe County, NC. Both neighborhoods combined have about 800 residents, more than 10% of whom are Latino and speak little to no English (Figure 9). Nearly 30% of households have a household income of less than \$15,000.<sup>117</sup> Mosswood has 161 units, while Crownpointe has only 30.

As with an increasing number of MHP owners across NC, the owner of these two properties recently chose to sub-meter residents' water usage and charge separately for water (which had previously been included in lot rent). As explained in Chapter 1, MHP owners must apply for a Certificate of Authority from the NC Utilities Commission (NCUC) in order to resell water. Sub-metering is financially beneficial for the MHP owners, while MHP residents, as some of the lowest-income North Carolinians, face additional struggles when water prices increase. Mosswood and Crownpointe MHPs exemplify the harmful effects sub-metering can have on water affordability and customer service, especially for the smallest systems.

---

*When a municipality doesn't directly supply all residents in its jurisdiction...it can create an inequity in the form of higher prices and inferior service to homes within multifamily developments.*

---

### Water pricing and affordability

In May of 2010, Allen Moss of Moss Enterprises Inc., the owner of both MHPs, sent a notice to residents that the cost of water – which had previously been included in rent – would begin to be a separate charge. Each household's water use would be metered, and usage would be reflected in the water bill. "It's a hardship for most of the people here," said resident Marianne James, who has lived in Mosswood for 11 years and has seen steep increases in the cost of living in the past two years. The water bill is just another burden on Marianne and her neighbors. For years, Mosswood residents paid \$250 per

month for lot rent plus a \$15 monthly fee for each additional person in the household. Now that the water bill comes separately each month, residents report a reduction in rent of \$5 per month, but added monthly water bills of \$40 to \$60.

When a municipality doesn't directly supply all residents in its jurisdiction with water and the same level of service, it can create an inequity in the form of higher prices and inferior service to homes within multifamily residence developments such as MHPs. Because Moss Enterprises does not allow its residents to access direct metered service from the City of Asheville, but instead holds a Certificate of Authority to resell Asheville water, residents of Mosswood and Crownpointe are forced to pay higher prices than residents served directly by the City of Asheville's water system.

The City of Asheville charges each residential customer a capital fee of \$3.82 each month to contribute to infrastructure improvements, but owners of multifamily residences pay a monthly fee based on meter size. In 2009, when Moss Enterprises applied for a Certificate from the Utilities Commission, the City's charge for each of the two MHPs was \$770.00 monthly. The company requested to fully recover this fee each month by dividing it by the number of units in each MHP and raising residents' base fees accordingly. Because Crownpointe has only 30 units, while

---

<sup>117</sup> US EPA EJ View, "Demographic and Economic Data," US Environmental Protection Agency, 2010, <http://oaspub.epa.gov/envjust/>.

Mosswood has 161, Crownpointe residents' base fee is far higher. The Utilities Commission approved both base fees as requested. The result is that Crownpointe residents' monthly rates are an average of \$30 higher than Mosswood residents, an example of the additional burden that can be faced by customers of the smallest systems (Table 3).

<i>Costs (per month)</i>	<i>City of Asheville /Buncombe County Metropolitan Sewage District<sup>118,119</sup></i>	<i>Mosswood MHP<sup>120</sup></i>	<i>Crownpointe MHP<sup>121</sup></i>
<i>Base rate (per month)</i>	\$3.00	N/A	N/A
<i>Administrative fee (per month)</i>	N/A	\$9.96	\$37.04
<i>Usage rate (per 100 cubic feet)</i>	\$3.77	\$2.82	\$2.82
<i>Sewer (per 100 cubic feet)</i>	\$3.77	\$3.51	\$3.51
<i>Average monthly bill*</i>	\$44.82	\$43.80	\$70.88

**Table 3. Monthly rates and average monthly bills for Mosswood and Crownpointe MHPs compared to municipal rates. \*based on 4,000 gallons per month water and 4,000 gallons per month sewer.**

### Customer Service

Mosswood and Crownpointe residents express concerns about Moss Enterprise's responsiveness to reported water service problems and the clarity of their bills. Marianne James heard from the landlord that someone was coming to install meters under each mobile home, but as far as she could tell, she received a bill based on usage before the meters were actually installed. In the last five years residents could recall the park losing water pressure several times while the owner worked on the system, and one resident said the property manager never called back to answer questions and often failed to notify residents of the potential for water outage.

Residents receive bills that have charges for water and sewer, but also an administrative fee which is broken down into meter-reading and a separate billing service. With several different companies and agencies to deal with - the NC Utilities Commission, Moss Enterprises, If It's Water (the meter-reading and billing service) - there are plenty of opportunities for communication and accountability to break down. Although the Commission requires the landlord to notify tenants of an intent to apply for a Certificate of Authority to resell water, most residents we spoke with in 2010 weren't aware that Moss Enterprises had acquired a Certificate in early 2009, and were caught off guard when they started receiving separate bills in 2010. The non-English speakers in the neighborhood are especially excluded from public participation as most notifications are printed only in English.

One young Latina mother who lives in Mosswood reports receiving notifications from Moss Enterprises in both Spanish and English; however, water bills sent by the billing service only come in English and she often has difficulty understanding them. She and many of her Spanish-speaking neighbors miss opportunities to have input into decision-making simply because of the language

<sup>118</sup> City of Asheville Water Resources Department, "Schedule of Fees and Charges Effective July 1, 2010," *City of Asheville*, 2010, [http://www.ashevillenc.gov/uploadedFiles/Departments/Water\\_Resources/Water\\_Rates\\_FY2010\\_11.pdf](http://www.ashevillenc.gov/uploadedFiles/Departments/Water_Resources/Water_Rates_FY2010_11.pdf).

<sup>119</sup> Metropolitan Sewerage District, "FY 2011 Rates, Fees and Charges Effective July 1, 2010," Metropolitan Sewerage District, 2010, <http://www.msdbc.org/documents/SewerRatesFY11.pdf>.

<sup>120</sup> North Carolina Utilities Commission, "Order Granting Certificate of Authority and Approving Rates," Docket WR-924, Sub 0, NCUC, 2009, <http://ncuc.commerce.state.nc.us/>.

<sup>121</sup> North Carolina Utilities Commission, "Order Granting Certificate of Authority and Approving Rates," Docket WR-924, Sub 1, NCUC, 2009, <http://ncuc.commerce.state.nc.us/>.

barrier. In some cases, fear of discrimination, even for legal Latino residents, also plays into the decision not to voice concerns.<sup>122</sup>

## 2. RALEIGH, NC – NEUSE RIVER VILLAGE

When large corporations such as Aqua NC acquire “troubled” MHP water systems, they are often strategically located near potentially more wealthy service areas such as new subdivisions or planned developments. In the words of Aqua America President Nicholas DeBenedictis, “The purchase of these systems often leads to additional acquisitions by expanding our local service territory and putting us in the strategic position to serve other nearby systems.”<sup>123</sup> Often, as in the case of Neuse River Village, this corporate strategy has tragic impacts on affordability and customer service for low income residents already in the MHP, and clearly exemplifies the failure of the current regulations to protect affordability and adequate service.

### Water pricing and affordability

Neuse River Village MHP had struggled for years with health violations and poor service, so the NCUC allowed Aqua NC to purchase the system, passing on twice the purchase price and repair costs to its customers. Previously, park owner Bryon Unger had included water and sewer service in the monthly lot rents of \$298 as a courtesy, and this amount was not lowered after Aqua NC began to charge separately.

A key contradiction is introduced when a private company begins to meter residents for water usage: the company may acquire the “troubled” system under the assumption that they will repair the infrastructure or treatment in order to get the system water quality back in compliance. However, the new owners are often not held accountable for making repairs and have little incentive to do so, because (1) repairs can be expensive, and (2) leaking water pipes lead to increased water “usage” and therefore higher profits. In the case of Neuse River Village, meter installation occurred without repairs to the piping system, with the result that most of the community had extremely high charges for water, much of which wasn’t reaching or useable in their homes.

In the first few months after meter installation, the average monthly water usage in Neuse River Village households was 10,000 gallons, more than twice the household usage of other MHPs in the area<sup>124</sup>, and the average bill was \$117/month for water and sewer. Aqua NC reported this high-volume usage even though residents did not have lawns, washing machines, or dishwashers. Park owner Bryon Unger acknowledged that leaks were likely causing high bills, but took no corrective action, claiming it was Aqua NC’s responsibility. Meanwhile, Aqua NC’s General Manager asserted that residents had responsibility for the piping connecting meters to the main meter<sup>125</sup>; in fact, according to NC’s General Statutes, the landlord is actually responsible. Frequently, this statute and other rules governing landlord/tenant contracts are not followed in affordable housing settings such as MHPs, with little enforcement by local authorities. In this case, no one accepted accountability for repairing pipes for an extended period and residents continued to pay high costs for water that they weren’t even able to use.

Less than six months after meters were installed, Aqua NC disconnected water service to over half of the 130 Neuse River Village homes, citing delinquent water bills. In some cases, residents had not received notification of the change and did not pay bills because they thought the bills were not legitimate; in other cases, it was simply a matter of affordability. Over a few months,

---

<sup>122</sup> Anonymous resident in discussion with the author (K.H.), 2010.

<sup>123</sup> Carolina Newswire. “Aqua America Subsidiary Purchases North Carolina Water and Wastewater System; Three North Carolina and Five Pennsylvania Acquisitions This Year,” 2004.

<sup>124</sup> Sarah Ovaska, “State Probes Cut-offs,” *The Raleigh News and Observer*, April 29, 2005.

<sup>125</sup> Myers, 2006.

one family's cumulative bill rose to \$680, an amount they could not afford to pay. Along with others who also lost water service, the family had to use the nearby woods as a bathroom. A resident of the community, Juan Rivera, said, "The children are going to get sick." Because of the lack of sanitation, residents were concerned about their health and that of their children. A baby became infected with E. coli and had to be hospitalized, according to Tracy Pilkington, a long-time resident.

### Failure of NCUC to protect consumers

The lack of an adequate process for public input demonstrates a common pattern in the state, reflecting the failure of the Public Staff to fulfill its role. The NCUC held a public hearing concerning the franchise application for NRV in January 2004, but did not accommodate Spanish-speaking residents, who made up the majority of the community (Figure 10). At the hearing, two people spoke of the community's inability to pay the new rates on the sub-metered private system and pointed out past service problems. Tracy Pilkington had lived in the community for over ten years, and once went over a year without continuous water. Pilkington asked the Commission "if the pipes are going to be replaced," concerned that bills would be "seriously high" without the community seeing any of the benefits of improvement.



Figure 10: Neuse River Village, Map of Minority Population<sup>126</sup>

In response to her statement, Jimmy Little of the Public Staff merely pointed Ms. Pilkington to the NCUC customer complaint process, assuring her that if she did have problems with the company, she could contact the Public Staff, who "usually have good results," and that she could find everything filed with the Commission at the NCUC website<sup>127</sup>. Rather than consider these valid concerns in their investigation, the Public Staff recommended that the NCUC approve the company's high rates (\$33.75 a month base rate, in addition to volumetric usage charges), and the NCUC approved the transfer and the installation of water meters without requiring the repair of leaks.

<sup>126</sup> US EPA EJ View, "Demographic and Economic Data."

<sup>127</sup> North Carolina Utilities Commission, "Application for Certificate and Rates for Water & Sewer Service-Neuse River Village-Wake County," Docket W-218 Sub 167, NCUC, 2005, <http://ncuc.commerce.state.nc.us/>.

## **Lack of transparency**

Beyond their functional exclusion at the public hearing, non-English speaking Neuse River Village residents felt that Aqua NC's treatment of them was discriminatory. Community members who spoke predominately Spanish paid higher bills, according to Cheryl Gant, a former organizer with the Housing Rights Center of Wake County.<sup>128</sup> This disparity corresponded to differences in ability to request leak repairs, unavailability of contact information in Spanish, and different levels of political power. When one Latina resident began receiving \$100+ water and sewer bills for minimal water use, she called Aqua NC's customer service line to see why the water charges were so high, but found that no one spoke Spanish. In order to communicate, she drove to the Cary office and told them her concerns. She described the staff's behavior as racist toward her and other Latino customers.

At one point, a sheriff was stationed at the entrance to the park, which served to further intimidate immigrant residents, with or without documents, exacerbating tensions. In fact, Aqua NC's office staff may have actively discriminated against Latino residents by asking them for identification at the MHP entrance, while white residents were not asked for ID. Cheryl Gant also observed a connection between speaking out against high water bills and the identification checks, preventing many residents from exercising their rights to public participation.<sup>129</sup>

## **Customer service**

After the local media exposed the poor management that led to the loss of water for families and children, the Attorney General's Office became involved and required the park owner to provide copies of the leases and information on how he had notified the residents of the transfer to the private water utility.<sup>130</sup> His office concluded that the owner and the company had met their legal obligation to inform the community, even though few residents knew that the transfer occurred until after they received their first \$100+ water bills. This decision demonstrates that the law must require that notifications be presented in a manner and language that residents will understand, or the purpose of a notification will not be fulfilled.

In addition to a lack of communication regarding the switch to a metered system, many residents remained unaware of how to function within the new system. Pilkington said she and her neighbors "didn't know where to send [the bill]." Because water and sewer charges were automatically included in the lot rental price prior to privatization, some residents either did not realize that they had an additional bill to pay or were uncertain how to do it. Instead of attempting to communicate with residents and clarify the billing process, Aqua NC did not point out the nonpayment to residents, and instead told authorities later that the company "gave" residents a period of free service before cutting the water off six months later.<sup>131</sup>

Even residents who did realize they needed to pay their bills struggled to find a payment option they could use. There was no local payment office for Neuse River Village residents, yet the majority did not have checking accounts and didn't know how to obtain a money order. Aqua NC does accept payments wired through Western Union, but this involves extra costs (in 2010, Western Union charged more than 10% of the amount to be wired)<sup>132</sup> and can have up to a three-day delay. Pilkington knew how to get a money order and she sent it to the address listed, but never received any notification that it was received. Moreover, she said, "The lady [at the Aqua NC main office] told me to just wait and pay [the bill] when Hydraulics (Aqua NC) opens its office in Cary."

---

<sup>128</sup> Cheryl Gant (Housing Rights Center), phone conversation with author (M.G.), 2006.

<sup>129</sup> Ibid.

<sup>130</sup> Ovaska, 2005.

<sup>131</sup> Myers, 2006.

<sup>132</sup> Western Union, "Estimate Money Transfer Fees tool," 2010, <http://www.westernunion.com>.

Pilkington had no idea that it would be months before this office would open and by then her back payment was astronomical. This lack of disclosure of information led to confusion and, for many households, loss of water service.

Notification did not improve with the community over time. Pilkington reported that she never received the requisite five-day warning before loss of water when Aqua NC worked on the pipes, and people only received a notice on their doors after Aqua NC had already turned off their water. In addition Pilkington said that Aqua NC was merely patching up “crumbling” pipes, not replacing them. Although Pilkington praised her improved water quality, she wished there could be “more honesty with the company” and “more communication.”<sup>133</sup>

Following negative media attention, Aqua NC promised to implement changes that would improve disclosure. In 2005, they told the community that Aqua would establish a call line for Spanish-speaking residents and hold customer trainings to learn how to reduce water waste; the company’s NC general manager even made a visit to the community. As of 2011, the company has established a national bilingual call line, but water conservation training is still limited to a posting on Aqua NC’s website and an optional educational “leak kit.”<sup>134</sup>

Based on limited interviews in 2011, the MHP’s current owners have apparently adopted an earlier management strategy for some of the homes on site. On a recent visit to several residents in Neuse River Village, we found that many are now renting mobile homes rather than owning them. The owner of some of these rented mobile homes is paying Aqua NC directly, service appears to have improved, and residents who rent their mobile homes are now receiving their water “in-rent” again. They say the cost of housing is now affordable overall, providing them economic relief. One resident who owns her mobile home and pays Aqua NC directly was in Neuse River Village during the earlier water cutoffs, and says that service has now improved and costs are more reasonable.

### **3. CHARLOTTE, NC – PARK SOUTH STATION**

The majority of Aqua America’s activity in North Carolina revolves around the acquisition of small, troubled systems such as the ones described above. However, in the last several years Aqua NC has begun to profit from water resale in newly constructed neighborhoods, making deals with developers and increasing the company’s profit margins without the responsibility of providing the water source or treatment. This trend has picked up speed since the Utilities Commission first approved a franchise for Aqua NC to resell Town of Pittsboro water in the Chapel Ridge subdivision in 2006. In 2007, Aqua NC obtained a Certificate of Public Convenience and Necessity to resell water and wastewater services at a profit in a new subdivision in Mecklenburg County, Park South Station. In this neighborhood, Aqua NC can charge for water and wastewater while many of the responsibilities for treatment, sourcing and infrastructure outside of the development fall to the municipal supplier.

#### **Water pricing and affordability**

When Stan Coleman received his first bill from Aqua NC in May of 2008, he was suspicious of the company’s motives in providing water to his community. Coleman lives in Park South Station (PSS), a mixed income subdivision in metropolitan Charlotte. After receiving the initial bill – which included more than \$63.00 in flat charges – he investigated the neighborhood’s water service and discovered that Aqua was purchasing Charlotte-Mecklenburg Utilities municipal water

---

<sup>133</sup> Tracy Pilkington (Neuse River Village resident), phone conversation with author (M.G.), 2006.

<sup>134</sup> Customer service representative (Aqua America), phone conversation with author (K.H.), March 23, 2011.

and sewer service and reselling it to PSS residents at a monthly average gross profit of 355% and a gross annual profit of 172%.<sup>135</sup>

In a formal complaint dated June 29, 2010, Coleman elaborates on the injustices of the situation in Park South Station (PSS). Specifically, he calls attention to the fact that residents of PSS are within Charlotte city limits, and feel that they have the right to have access to the City's public water system. Aqua NC charges Park South residents their statewide uniform rates (currently \$63.33 flat fee for sewer and \$15.18 base charge for water plus a usage charge), although no improvements to the system are planned and Aqua NC has few maintenance costs and no treatment costs; CMU treats the water and wastewater for the system. Except for maintaining the internal water and wastewater lines and billing, the company is making substantial profit from its acquisition of PSS water and wastewater services.<sup>136</sup>

### **Failure of NCUC to protect consumers**

PSS residents also find fault with the NCUC's policies for letting Aqua NC "off the hook" regarding record-keeping and transparency. In reselling water and sewer to PSS, Aqua NC charges the same uniform rates they charge in areas where they operate water systems themselves. Residents are frustrated with the company and the regulatory agency. Resident Deborah Larke told City Council members, "We feel like hostages. We're stuck with Aqua,"<sup>137</sup> while Coleman wrote, "Despite multiple calls to Aqua NC and despite informal efforts involving the Public Staff... I have not been able to resolve this matter." After receiving the letter of response from NCUC, which he considered "many pages of detailed information wholly irrelevant to the substance of my complaint," he had to cancel all his appointments for a day to drive to Raleigh and deliver a second complaint letter by hand to the NCUC, along with a petition signed by hundreds of neighbors, including both English and Spanish-speaking residents. He fears that the Public Staff and the North Carolina Utilities Commission are acting against public interest in granting Aqua NC a franchise for PSS, since the public utility could have provided service and there was no need for the private company to have gotten involved. Pressure is also building on the Charlotte City Council to make changes to a city policy which prohibited direct service from the city due to the width of streets in the Park South Station neighborhood. So far, the Council seems receptive to reexamining the policy.<sup>138</sup>

The community feels the government and the company need to be more accountable to the public. At the time of publication, Coleman had intervened legally in Aqua NC's 2011 rate case, hoping to challenge the Commission's rate base calculations and claiming that Aqua NC's rate base costs and operating expenses are not reasonable.

## **4. FUQUAY VARINA, NC – NORTHGATE COMMUNITY**

Some developments, even where close to existing public water supply, have been tied into a privately owned water supply in an arrangement between a developer and a private water supplier. Despite being close to the town of Fuquay Varina's public water lines, the developer of Northgate donated a single lot to the private Heater Utilities company to drill a community well for the 30 modest homes to be built in the 1970s- 90's.

---

<sup>135</sup> North Carolina Utilities Commission. "Consumer Statement of Position – Dr. Stan Coleman," Docket W-218 Sub 315, NCUC, June 29, 2010, <http://ncuc.commerce.state.nc.us/>.

<sup>136</sup> North Carolina Utilities Commission. "Consumer Statement of Position – Dr. Stan Coleman," Docket W-218 Sub 315, NCUC, June 29, 2010, <http://ncuc.commerce.state.nc.us/>.

<sup>137</sup> Beth Shayne, "Neighbors protesting private water rates," *WCNC News* (Charlotte, NC), May 3, 2011.

<sup>138</sup> Ibid.

## Customer service

The lot where the well was drilled was adjacent to a Burlington Mills contaminated site which had been known for over 30 years to the NC Groundwater Section, perhaps even to the developer. By 2000, Heater Utilities was being acquired by Aqua NC, and the toxic solvent trichloroethylene (TCE) was showing up in the well water distributed to the community's residents. Quarterly tests sent to Public Water Supply show a rising level of TCE over the next several years, but test results were slow to get to regulators. Only when Aqua NC's well was close to violating the drinking water standard for TCE on an annual average basis in 2005 did they notify the system's customers and install a filter to remove the toxic solvent.

The water tested free of solvent for six months after the filter was installed, but tests soon showed increasing TCE again—which should have alerted both the company and regulators that the filter was exhausted and overdue for replacement. Instead, more foot-dragging ensued-- the filter wasn't replaced until 2007. Residents were fed up with Aqua NC and didn't trust state regulators to protect them either, so they bought bottled water, met with CWFNC and retained an attorney to work for a settlement between Guilford Mills and Aqua NC. The obvious path was to hook up Aqua customers to city water, but Guilford has only offered to pay part of the cost of hookups, and Fuquay Varina will only connect the community if all residents agree to do so, an unreasonable condition, as all residents would be giving up their right to seek redress for any health effects of the contamination. This is a situation that could have been completely avoided by simply providing public water directly to residents when the community was built.

The Northgate housing developer and the former head of the NC Groundwater Section both had relatives living in the Northgate community. Interestingly, while most Northgate customers continue to get their water from Aqua's contaminated well, the homes of those relatives were hooked up to Fuquay Varina's water supply years ago.

## 5. SANFORD, NC - CAROLINA TRACE

The Carolina Trace neighborhood, adjacent to a country club in Lee County, is a mixed community consisting largely of fixed-income seniors and young military families<sup>139</sup> and a significant Hispanic population<sup>140</sup>. The neighborhood's water system is a subsidiary of Utilities, Inc. which purchases part of the water supply wholesale from the City of Sanford and supplements this with a series of wells. As of 2010, residents have grown increasingly frustrated with the company's customer service, the water quality, and the failure of the NC Utilities Commission to limit the company's frequent rate increases despite extensive feedback from the community.

### Customer Service

Residents of Carolina Trace have protested the past two rate increases vehemently because they felt that service and quality continued to be poor. According to one resident, "in the past two years we have had more sewer and water problems than ever, yet the price is increasing yet again. We have even had sewage spewing from the ground in our yards...and smells in our home. Several times the water has been bad and we have been asked to boil it. I am afraid to even drink our water."<sup>141</sup> "We have frequent breaks in the lines," wrote another.<sup>142</sup> Residents feel that the justification for a large rate increase should be transparent and linked to tangible improvements to water quality or service.

---

<sup>139</sup> North Carolina Utilities Commission, "Transcript of Testimony heard 8-26-2010," *NCUC*, Docket W-1013 sub 9, 2011, <http://ncuc.commerce.state.nc.us>.

<sup>140</sup> US EPA EJ View, "Demographic and Economic Data."

<sup>141</sup> North Carolina Utilities Commission, "Consumer Statement of Position Email/Letters and Public Staff Responses (4)," *NCUC*, Docket W-1013 sub 9, July 29 2010, <http://ncuc.commerce.state.nc.us>.

<sup>142</sup> *Ibid.*

The billing practices of Utilities, Inc. also create hardships for the Carolina Trace community. Vince Roy, speaking on behalf of many of his neighbors as a “customer representative,” spoke of the eighteen-day window given to customers to mail payments in after they receive a bill. Utilities, he said, cut off water to an average of 35 homes a month (out of 1500) in the neighborhood due to delinquent payments resulting from the rigidity of their payment requirements and the inconsistency of mail delivery schedules.

### **Failure of NCUC to protect water customers**

Carolina Trace residents feel disillusioned by their interactions with the NC Utilities Commission and the Public Staff. Faced with back-to-back rate increases in 2008 and 2010, resulting in a total increase of more than 100%, residents looked to the Commission for relief but felt their voices went unheard. “Things are tough all over,” wrote resident Ann Martin, “but I thought that the North Carolina Utilities Commission was supposed to consider the impact of these rate increases on the residents.”<sup>143</sup> Some, like Dennis Hayden, felt the whole public participation process was purposely set up to discourage involvement: “Why are meetings held at 9:30AM during a weekday when working people (especially in these bad economic times) cannot afford to be off work to attend? How do such rulings possibly support the citizens of NC? They seem to me to only minimize the voice of the people which the NCUC is mandated to represent!”

To most residents who attempt to participate in the Commission’s decision-making process, the evidence is that the private utility companies, not the public, are the beneficiaries of most of NCUC’s rulings. Frustrated customer Mike McDonald noticed a “revolving door” trend between the NCUC and the companies they regulate: “I just think the way the system is set up is in favor of the utilities. I understand there are relationships. For example I know that attorney Ayers [representing Utilities, Inc. at the public hearing] was mentored by [Edward Finley].”<sup>144</sup> Mr. McDonald went on to elaborate that when Finley was appointed to the Utilities Commission, Mr. Ayers got a promotion in the law firm they had worked in together.<sup>145,146</sup> This corrosion of the public’s trust is an indicator of a regulatory body that is compromised in fulfilling its duty to fairly consider public input in decision-making.

## **6. CHAPEL HILL, NORTH CAROLINA – WILDCAT CREEK**

The Wildcat Creek neighborhood receives water from Heater Utilities, a subsidiary of Aqua NC. The system’s water quality has been poor for many years, even before Heater was purchased by the larger company. Residents were angry that they paid higher rates for service and quality that hadn’t improved much despite new ownership.

### **Water Quality**

In 2004, Wildcat Creek’s water quality was so bad that buyers were discouraged from purchasing homes in the neighborhood. Sediment infiltrated into the pipes, and bacterial contamination caused off-and-on “boil-only” advisories, including one in early 2004 that lasted 18 months. Radium has also been detected in the community’s water supply. Residents toward the end of the supply line experience brackish water conditions resulting from improperly flushed system lines.

---

<sup>143</sup> North Carolina Utilities Commission, “Consumer Statement of Position Email/Letters and Public Staff Responses (4),” *NCUC*, Docket W-1013 sub 9, July 27 2010, <http://ncuc.commerce.state.nc.us>.

<sup>144</sup> North Carolina Utilities Commission, “Transcript of Testimony heard 8-26-2010.”

<sup>145</sup> *Ibid.*

<sup>146</sup> Business-Leader Raleigh-Durham. “Christopher J. Ayers: Leader Profile,”

<http://www.businessleader.com/raleighdurham/index.aspx?page=lprofile&hindex=Overview&hfor=583&table=Award/Impacts>.

Early attempts by Aqua NC to increase rates to the company's consolidated statewide rates met with firm customer opposition. "Because of the anxiety and inconvenience that we've had, particularly in the last 18 months where we've been under continuous boil-water advisories and with the issues of the coliform bacteria and radon (*sic*) and the substandard service that we've had for a good 15 years, we just consider a rate increase to be unacceptable at this point," said resident Deborah Staves. During the boil-only advisory, Heater was required by law to reimburse the community for bottled water, but many residents were never notified of this service<sup>147</sup>. Community member Addie Laws had to replace appliances because of sediment infiltration into the piping. She has had to purchase bottled water for years: "I feel like I have two water bills: I have the water that I drink and cook with and there's the water that I take a shower with or sometimes afraid to shower with."<sup>148</sup>

### **Lack of transparency of private water companies**

Residents in Wildcat Creek felt that Heater consistently fails to communicate vital information to them, concealing the fact that they were applying for a rate increase, not providing information about water quality health hazards, and making it difficult for residents to discover information about the company's plans for system improvements. In fact, Debra Nichols believes that Heater only made the improvements to the community's water supply in that period due to the upcoming rate-case hearing (Nichols 2006).

Although the system's bacterial levels have been in compliance since January 2005,<sup>149</sup> the residents still harbor frustration at the past and present lack of disclosure. "They have not been forthright with us about the issues," said Addie Laws.<sup>150</sup> After Aqua NC purchased Heater, customers were not notified of a new billing system. Nichols was given incorrect information by a customer service representative, and was told when she tried to negotiate a payment date that would align with her paycheck schedule that the company's policy is "rigid."<sup>151</sup>

### **Failure of NCUC to protect water customers**

Despite protests from residents during the 2004 rate case, the NCUC granted the rate increase. Kenneth Rudder, director of Public Staff's Water Division, gave the company credit for taking steps to improve the situation when coliform bacteria contaminated the well. Overall, Rudder believes that the 18 month boil-only warning was "not due to poor management." Rudder implied that he did not believe the residents really cared about the slow response, claiming that many of the customers from Wildcat Creek told him after the rate-increase hearing "in the back of the room" that things had improved and they just did not want a rate increase.<sup>152</sup> When Public Staff dismisses public testimony and instead cites undocumented off-the-record comments, the public must question whether the Staff credibly serves as an advocate for the public interest.

---

<sup>147</sup> Debra Nichols (Wildcat Creek resident), phone conversation with author (M.G.), 2006.

<sup>148</sup> North Carolina Utilities Commission, "Transcript of Testimony Heard 11/30/04 (Raleigh)," *NCUC*, Docket W-274 sub 478, December 7, 2004, <http://ncuc.commerce.state.nc.us>.

<sup>149</sup> Environmental Working Group, "Wildcat Creek S/D - Chapel Hill, NC Drinking Water Quality Report," *EWQ Tap Water Database 2009*, <http://www.ewg.org/tap-water/whatsinyourwater2/NC/wildcat-creek-s-d/0368116/>.

<sup>150</sup> *Ibid.*

<sup>151</sup> Nichols, 2006.

<sup>152</sup> Rudder, 2006.

# *Connecting Small Systems to Municipal Supplies: A Different Future for NC?*

## CHARLOTTE, NORTH CAROLINA - CABARRUS WOODS

In Chapter 1, Alabama’s policy of encouraging consolidation of water systems under public ownership was described as an alternative strategy for regulating an ever-growing and complex water industry. As examples in Chapter 2 have shown, NC has taken a very different approach, encouraging and even incentivizing large private companies to acquire individual small water systems. The impacts of this practice on water prices, affordability, and customer service are a perilous combination with private utilities’ lack of transparency and a regulatory agency that fails to protect consumers. Could North Carolina transition some of its small systems to public ownership through incentivizing connection to nearby municipal systems, providing economies of scale and better service to customers?

One way in which municipalities occasionally acquire privately owned water systems is through annexation. Under NC General Statute §160A-47, when a city annexes an area, it is required to provide the same level of services to that area within two years of annexation.<sup>153</sup> The interpretation of this statute when it comes to water line extension varies widely and depends on municipal policies. The statute does require water service to be comparable to city service, so cities

---

*Under [the publicly owned system’s] rate structure, average water bills for Cabarrus Woods customers will decrease by half, from \$80 per month to \$40.*

---

will typically either purchase any privately-owned water systems already in place, parallel the water lines and give customers a choice, or simply allow the privately-owned system to stay in place if service is comparable.<sup>154</sup>

In 2011, service areas of both Utilities, Inc. and Aqua NC were in negotiations to be annexed by the City of Charlotte, and the City proposed to purchase the systems from the companies. Twenty-four of Utilities, Inc.’s service areas in Mecklenburg and Cabarrus Counties (collectively called the “Cabarrus Woods System”) were proposed to be annexed by Charlotte, and the City offered to buy the systems outright for a total of \$25.7 million.<sup>155</sup> According to Utilities Inc.’s Regional Director for NC, Martin Lashua, Charlotte bought quite a few systems back from Utilities in a similar fashion in the 1990s, and the company has a good relationship with them. Most of the affected communities had been on community well systems and will now receive Charlotte-Mecklenburg Utilities (CMU) water. Under CMU’s current rate structure, average water bills for Cabarrus Woods customers will decrease by half, from \$80 per month to \$40. Aqua NC’s 7 annexed service areas cost the City \$4.2 million, and those customers will also see their bills cut in half under the current CMU rates.<sup>156</sup>

The NC Utilities Commission could promote municipal policies which encourage this type of acquisition. While purchase of annexed systems is not feasible for all municipalities because of large initial costs, encouragement of municipal hookups of new and annexed subdivisions could take NC a step closer to Alabama’s model of consolidated water systems that makes water and wastewater more affordable for customers.

---

<sup>153</sup> Prerequisites to annexation; ability to serve; reports and plans, NC General Statutes, 2010, §160A-47.

<sup>154</sup> Martin Lashua (Utilities Inc. Regional Director), phone conversation with author (K.H.), April 21, 2011.

<sup>155</sup> North Carolina Utilities Commission, “Application for Transfer of Utility System (to Owner Exempt), City of Charlotte, Mecklenburg Co,” *NCUC*, Docket W-354 sub 331, March 3, 2011, <http://ncuc.commerce.state.nc.us>.

<sup>156</sup> North Carolina Utilities Commission, “Application for Transfer of Public Utility Systems to Owner Exempt,” *NCUC*, Docket W-218 sub 325, March 23, 2011, <http://ncuc.commerce.state.nc.us>.

## Chapter 3. Challenging the Myths that Drive Privatization

Proponents of privatizing water and other public services invoke several arguments to advocate for the sale or lease of services and infrastructure to for-profit companies. They frequently contend that privatizing services: (1) increases economic efficiency and thus creates cost-savings for municipalities and customers; (2) improves service and brings increased technical expertise to solve problems; and (3) injects more capital to finance needed infrastructure improvements, transferring risk to the private sector. However, evidence for these purported advantages of privatization over public ownership and operation is lacking or inconsistent and, in some cases these perceptions are the inverse of the actual situation.

### ***Myth 1: Privately-operated systems are more economically efficient and decrease costs to customers.***

***Facts:*** In 2005, a World Bank Report concluded that there is no significant difference in efficiency between publicly-run and privately-run systems.<sup>157</sup> The International Monetary Fund, historically a proponent of privatization of water, agrees: “Much of the case for PPPs [Public Private Partnerships] rests on the relative efficiency of the private sector. While there is an extensive literature on this subject, the theory is ambiguous and the empirical evidence is mixed.”<sup>158</sup> The Pacific Institute dismisses arguments regarding efficiency differences between publicly and privately-owned systems, stating there is “no clear evidence that private companies are more economically efficient.”<sup>159</sup>

Economic “efficiency” has generally been associated with competition, but it’s important to note that water utilities are, by their nature, monopolies. Research by Economist Johann Willner shows that because of the intrinsically limited competition in the utility and infrastructure sectors, privatization does not increase efficiency.<sup>160</sup> Although the public sector can abuse its monopoly status in some of the same ways as the private sector, the public sector has greater accountability to customers who are also constituents of local government, and does not have the same profit motive.<sup>161</sup> Publicly-owned and run utilities also have more extensive mechanisms to regulate operations, report transparently to customers and be responsive to local service requests and public concerns about pricing and service policies.

In fact, the structural drive for profit of most privately acquired water utilities tends to increase water prices, though the process of rate setting is more complex than a simple monopoly and depends on local circumstances.<sup>162</sup> The Pacific Institute analyzed cost factors among private and public utilities as to their impacts on costs (Figure 1).<sup>163</sup> Private for-profit utilities allow for a profit margin for investors based on capital investments and, in some cases, operational expenses. On the other hand, public water suppliers might have higher costs if they hire more employees to improve quality and service in response to public concerns, but do not need to incorporate a profit

---

<sup>157</sup> Antonio Estache, Sergio Perelman, and Lourdes Trujillo, “Infrastructure Performance and Reform in Developing and Transition Economies: Evidence from a Survey of Productivity Measures,” *World Bank Policy Research Working Paper 3514*, 2005, World Bank.

<sup>158</sup> Hall, “Water in Public Hands.”

<sup>159</sup> Wolff and Hallstein, 2005.

<sup>160</sup> Hall, “Water in Public Hands.”

<sup>161</sup> Hall, “Financing Water for the World.”

<sup>162</sup> Wolff and Hallstein, 2005.

<sup>163</sup> Ibid.

margin into their customer rates. Because of these variables, it is difficult to discern an intrinsic economic efficiency or cost advantage of private over public utilities.<sup>164</sup>

Cost Driver	Public	Private	Contracts <sup>1</sup>
Competitive Pressure	0	0	-
Profit Requirement	-	+	+
Profit Motive	0	0	-
Risk Aversion	+	0	0
Economies of Scale & Scope	0	0	0
Income Tax Status <sup>2</sup>	-	+	+
Property Tax Status <sup>2</sup>	-	+	0
Debt Service Tax Status <sup>2</sup>	-	+	0

1. This column addresses contracts with private companies for operation or management of publicly owned assets, not contracts between government entities. 2. There are higher costs in these categories for private companies, but these costs also generate a benefit for taxpayers in the form of tax revenue.

**Figure 21: Cost drivers for Private and Public Water Systems. Some factors tend to increase cost (+); others tend to lower cost (-); and yet other factors have cost impacts that depend on circumstances (0).<sup>165</sup>**

While using efficient practices to minimize costs is important, it should not be the sole consideration in the overall effective operations of a utility charged with providing a public service and protecting public health. When economic efficiency is the dominant driver in the water management process, insufficient attention may be given to service, maintenance and quality in order to reduce costs. In fact, a common result of water system privatization is a reduction in the workforce at a water or wastewater facility. At a 1997 water industry conference, Enron President Jeffrey Skilling emphasized that this practice was the path to profit: “You must cut costs ruthlessly by 50 to 60 percent. Depopulate. Get rid of people. They gum up the works.”<sup>166</sup> Enron, which in 1998 began acquiring water companies in an attempt to ride the global trend toward water privatization, actively opposed unions in the UK, Argentina, Guatemala, and India that could have driven up labor costs to ensure adequate staffing and better working conditions. Insufficient or inexperienced staff, inadequate training, and low workforce morale can all contribute to poor service and decreased responsiveness to public concerns.

Cost-savings may also come at the expense of critical maintenance or infrastructure improvements. Although the infrastructure investments may be a lesser concern in NC, where water companies’ profits usually come from a rate-base return on investment, the failure to maintain and repair systems, thus creating a long term liability, is one of the major reasons for the canceling of management contracts in major US cities, such as Atlanta.<sup>167</sup> Private entities often cannot deliver comparable service and water quality while providing shareholder profits and meeting cost-savings commitments. Major European-based corporations have been exiting the U.S. water market since 2004, turning back utilities to public operations. The water industry publication *Global Water*

<sup>164</sup> Ibid.

<sup>165</sup> Ibid.

<sup>166</sup> Barlow and Clarke, 2002.

<sup>167</sup> Food and Water Watch, “United Water: Suez Environnement’s Poor Record in the United States,” 2010, accessed April 2011, <http://www.foodandwaterwatch.org/reports/united-water/>.

*Intelligence* warned that cities “may have to trim their expectations of savings and performance guarantees.”<sup>168</sup> Global water conglomerates have often failed to meet their promised cost-reductions and created public opposition through negligent service and high water prices.

Another common argument is that consolidated rates used by companies such as Aqua NC create economies of scale and reduce rate shock; all customers pay equal amounts, no matter how capital-intensive their own water system’s improvements will be. The evidence from North Carolina alone indicates that this type of benefit appears to reach few individual customers. Many Aqua NC customers have spoken out against consolidated rates to the Utilities Commission, especially those who cannot afford the high rates and those whose water systems need very little maintenance and improvement. Additionally, as noted in Chapter 2, there are not reliable mechanisms to track Aqua NC investments in specific systems or report them transparently. Without proper oversight of system-specific improvements, low-income areas with troubled systems can be required to pay the high consolidated rates, while the company invests little in fixing their systems. While the financial efficiency for the water corporation may improve under consolidation, only customers whose systems are receiving infrastructure improvements are experiencing any cost benefits.

Conservation, and the associated reductions in cost of treatment and delivery, are critical forms of operational efficiency, but private companies have frequently ended water conservation and efficiency programs, because they work against the operator’s volume-based income. This is a problem shared with deeply indebted public utilities struggling to make bond payments. From a private corporate perspective, efficiency programs are not capital-intensive and don’t bring in investors. In fact, inefficient water use can actually increase the overall income of private utilities by driving the utility toward bigger capital projects with an assured rate of return.<sup>169</sup> This may be especially true in NC, where the profit allowed is based directly on the overall infrastructure expenditure of the utility.

Aqua NC has no formal water efficiency program, although they have held meetings with homeowner associations to discuss water efficiency.<sup>170</sup> Aqua NC has made total capital investments in infrastructure in NC which total more than \$129 million as of January 2011.<sup>171</sup> This total investment is the basis of the allowable rates calculated by the NC Utilities Commission. The greater the investment, the higher consolidated statewide rates for all customers. Since the company is incentivized to purchase troubled systems (see Chapter 2), this means that individual customers’ rates spiral higher, while not all customers see the benefits of these projects. A water efficiency program would benefit all customers more equitably.

Atlanta’s contract with United Water was terminated four years after it began, because the company failed to deliver the cost savings and the service quality that had been promised.<sup>172</sup> The Cottonwood community, in Wake County, NC had been told to expect cost savings through private operations when they sold their community well to Crosby Utilities, Inc. The private utility claimed to have more experience to maintain the system. The Cottonwood residents have not received the promised improved service, and have seen significant increases in rates. Community members contend that the company is knowingly driving up costs to increase profits. One Spanish-speaking resident of Cottonwood saw a clear difference compared to a publicly-owned system where he had

---

<sup>168</sup> Larry Chertoff, “US private firms shrink from weak deals,” *Global Water Intelligence* 4 (8), 2003, accessed April 2011, <http://www.globalwaterintel.com/archive/4/8/general/us-private-firms-shrink-from-weak-deals.html>.

<sup>169</sup> Gleick et al., 2003.

<sup>170</sup> Myers, 2006.

<sup>171</sup> North Carolina Utilities Commission, “Aqua’s Application for Authority to Increase Rates and Charges in All Service Territories,” Docket W-218 Sub 319 (CWS Systems/Utilities Inc.), *NCUC*, January 21, 2011, accessed April 2011, <http://ncuc.commerce.state.nc.us/>.

<sup>172</sup> D. Jehl, “As Cities Move to Privatize Water, Atlanta Steps Back,” *The New York Times*, February 10, 2003.

previously been a resident: “*Es agua compañía privada – más caro*” (“Well, it’s private water – it’s more expensive”).<sup>173</sup>

Service, quality, and conservation for consumers must not be sacrificed to provide economic “efficiency” for a water system. Market forces have not been demonstrated to ensure a safe, reliable source of water.<sup>174</sup> The best gauge of operational success of water providers is efficacy in delivering safe, clean water and responsive service at an affordable cost to all of their customers. As awareness grows about the threats to the quantity and equitable distribution of this ever more scarce resource, many water customers who are educated about the factors impacting private utility water pricing can be expected to be less willing to allow market control of their water supplies. Instead, customers aware of industry practices would be even more likely to choose publicly managed systems and conservation mechanisms that will ensure a safe and adequate water supply for future generations.

## **Myth 2: Private companies bring technical expertise and improve services.**

**Facts:** Small communities often feel they lack the technical expertise to manage a public water system. On the surface, private companies seem like a viable alternative, as they have experience in managing or owning utilities. However, the opportunity for local public officials to raise capital in the short term by privatizing water supply functions has seldom resulted in improved service or reduced cost for customers. In NC, where it is smaller systems that are generally under private ownership or management, the relationship often dates back to the time a development or mobile home park is built, even in cases where public water supply lines were nearby or even adjacent to the development. Access to a publicly owned system is not offered as an alternative to residents of some newly developed community—the decision that the local supply would be handled by a private service is often made by the developer before any homes are sold. In fact, private water corporations actively recruit developers to commit to relationships on their websites.<sup>175,176</sup> Residents who move from an area with a publicly owned water system often don’t understand the implications for reduced customer involvement in decision-making with a privately owned water supplier. Based on informal community interviews in over a dozen MHPs and other communities in 2006 and 2011, residents of communities on privately owned or managed water supplies are typically unaware of their rights under NC Utilities Commission regulations. If a community with a water system operated by a homeowners’ association decides to contract with an outside private company, they seldom plan for measures to ensure some continued resident input and control of the system.

In a related issue of private investment actually increasing costs, even to customers of publicly owned water and wastewater suppliers, the expertise offered by private engineering companies may serve to increase customer costs more than necessary and deter conservation efforts. Engineering firms often receive a percentage of the total costs for an infrastructure project that they design, and thus, have little motivation to avoid costly supply “pipes and dams” projects that can increase public indebtedness for publicly owned water systems. The need to service this debt through water sales often interferes with a water system’s timely implementation of conservation measures in times of drought or other water shortage. By contrast, smaller investments in leak

---

<sup>173</sup> Anonymous resident, phone conversation with the author (K.H.), 2010.

<sup>174</sup> Gleick et al., 2003.

<sup>175</sup> Utilities, Inc., “Developer contact,” *Utilities, Inc. website*, accessed April 2011., [http://www.uiwater.com/business\\_center/developer\\_contact.php](http://www.uiwater.com/business_center/developer_contact.php).

<sup>176</sup> Aqua America, “Business Development,” *Aqua America website*, accessed April 2011, <https://www.aquaamerica.com/Pages/AcquisitionsExistingSystems.aspx>.

detection, maintenance and repair, or conservation and efficiency programs to reduce water consumption will reduce system operational costs, but do not require the large capital projects that are profitable for design engineers, bond holders or for-profit water companies.<sup>177</sup>

In contrast to publicly-owned systems, private companies do not typically share expertise with neighboring systems. Formal and informal partnerships with neighboring municipal systems can be a valuable capacity-building tool for water system operators. In the public sector, the Association of Metropolitan Water Agencies (AMWA) provides resources, workshops, and publications to its members.<sup>178</sup> For very small systems, a helpful option is to consult with other system operators nearby for technical, managerial, and financial advice.<sup>179</sup> However, because of the proprietary nature of private companies' operations, privately-owned utilities are less likely to collaborate in order to find the best solutions for effective system operation.

Workforce reductions and cuts to employee pay and benefits are one strategy private companies use to maximize profits. Employees of private utilities have been shown to earn substantially less than employees of public utilities<sup>180</sup>, and job cuts have been experienced after privatization of many city systems.<sup>181</sup> In *Blue Gold*, Maude Barlow and Tony Clarke explain, "Since the name of the game is to maximize those profits, cutting costs means laying off workers while raising water rates to generate more revenues."<sup>182</sup> When layoffs include more senior employees with the technical expertise and experience to run a system, communities are often left with poorer water quality and service.

Private companies often project that they will improve service and reduce the cost of operations in order to win contracts. Proponents of privatization in general argue that "market forces" make companies more responsive to their customer base. However, monopoly ownership in the utilities sector means there are no alternatives for people to choose from when the water service or quality is poor. In publicly-owned water supply decision-making, customers can elect a water council or other public officials who can be held accountable for pricing and service decisions. Such accountability and responsiveness is not directly available to customers of private for-profit systems. Although most states have utility commissions to provide a level of oversight, the commissions can only act in the limited ways outlined in state general statutes on pricing issues. Drinking water quality in NC and many other states is regulated by a separate agency. For the smaller water utilities characteristic of the privatized systems in NC, the Safe Drinking Water Act, and the state agency that enforces it, require less frequent monitoring.<sup>183</sup> Participation in public hearings on water rates involves going to a separate and formal hearing before the NC Utilities Commission, often far from a customer's residence. Further, the Public Staff, established in 1977 to serve as the advocate for the "using and consuming public", seldom modifies a private utility's initial rate proposals significantly, even in the face of customer testimony about poor service or failure to improve water quality.<sup>184,185,186</sup>

---

<sup>177</sup> Association of Metropolitan Water Agencies (AMWA), "Evaluating Privatization II: An AMSA/AMWA Checklist," *AMWA*, 2002.

<sup>178</sup> Association of Metropolitan Water Agencies (AMWA), "About AMWA," *AMWA*, 2011, accessed April 11, 2011, [http://www.amwa.net/cs/about\\_amwa/about](http://www.amwa.net/cs/about_amwa/about).

<sup>179</sup> US EPA Office of Groundwater and Drinking Water, "System Partnership Solutions to Improve Public Health Protection, Volume 2," *US Environmental Protection Agency*, 2006, accessed April 11, 2011, [www.epa.gov/ogwdw/smallsystems/pdfs/publichealthstudyv2.pdf](http://www.epa.gov/ogwdw/smallsystems/pdfs/publichealthstudyv2.pdf).

<sup>180</sup> US Department of Labor Bureau of Labor Statistics, "Occupational Employment Statistics", accessed April 2011, <http://data.bls.gov/oes/search.jsp>.

<sup>181</sup> Food and Water Watch, "Water Privatization Threatens Workers, Consumers and Local Economies," 2009, accessed April 2011, <http://documents.foodandwaterwatch.org/unionJobsFinal-web.pdf>.

<sup>182</sup> Barlow and Clarke, 2002.

<sup>183</sup> Facility Oversight. Rules Governing Public Water Systems. North Carolina Administrative Codes. 15A: 18C.1300.

<sup>184</sup> North Carolina Utilities Commission, "Recommended Order Granting Rate Increase and Requiring Customer Notice," Docket W-715 Sub 3, *NCUC*, June 1, 2010, <http://ncuc.commerce.state.nc.us/>.

A growing area of interest for private water utilities is acquisition or construction of distribution systems that allow them to purchase bulk water, often at discounted rates, from a nearby municipal supplier, and then re-sell it at a profit through sub-metering of a subdivision or manufactured home park. This is a very low-risk option for a private water corporation, which does not need to provide the source water or treatment, and thus has little or no accountability for water quality. The re-seller needs only to construct and maintain the distribution and metering system within a development, and bill the customers. For this kind of operation, there is less technical expertise required. No improvement in service should be expected by customers of a private re-seller, such as Aqua NC in the Charlotte Park South Station neighborhood, but due to the requirement for investor profit, customers can expect to pay higher rates than those paid by nearby municipal customers.

### ***Myth 3: Privatization brings in private sector capital and transfers risk to the private sector.***

***Fact:*** Proponents of privatization also argue that water companies will bring in added private financing to improve infrastructure. However, leaders of private companies have acknowledged that the private sector does not have the financial willingness to take on the risk of such investments in the absence of public subsidies. Says JF Talbot, the CEO of SAUR International (the world’s fourth largest water company), “The scale of the need far outreaches the financial and risk taking capacities of the private sector.”<sup>187</sup> He actually dismisses the claim that the private sector is an investor, that regulation and profitability are compatible, and that full cost recovery is viable, saying that only government subsidies and loans can meet the need. Without this government support, multinational companies will pull out and “stay at home.”<sup>188</sup>

North Carolina, like most of the country, is in need of infrastructure improvements, and many water utility boards and municipal governments continue to express interest in financing needed capital-intensive projects through privatizing utilities to bring in private capital. In communities with limited resources, the private sector alone simply cannot provide needed investment capital.<sup>189</sup>

The cost of financing for privately-owned utilities is higher than for publicly-owned ones.<sup>190</sup> Most damaging to the credibility of the myth of increased capitalization, EPA’s 2006 Community Water System Survey provides documentation that the capital invested by private utilities in system improvements is actually lower than that invested by publicly owned systems of similar size. In the 5 years prior to 2006, private companies only invested 15% as much as public utilities in systems serving fewer than 100 people, and 11% as much for systems serving between 101 and 500 people. In addition, a lower percentage of private companies than publicly-owned utilities made major capital investments within the time period covered by the Survey.<sup>191</sup>

---

<sup>185</sup> North Carolina Utilities Commission, “Order Granting Rate Increase and Requiring Customer Notice,” Docket W-472 Sub 15, *NCUC*, February 10, 2010, <http://ncuc.commerce.state.nc.us/>.

<sup>186</sup> North Carolina Utilities Commission, “Order Granting Rate Increase and Requiring Customer Notice,” Docket W-1082 Sub 3, *NCUC*, February 23, 2010, <http://ncuc.commerce.state.nc.us/>.

<sup>187</sup> J. Talbot, “Is the International Water Business Really a Business?,” 2002, World Bank Water and Sanitation Lecture Series.

<sup>188</sup> Hall, “Financing Water for the World.”

<sup>189</sup> Wolff and Hallstein, 2005.

<sup>190</sup> S. Jacobs, *Regulatory reform in the United States*, (OECD publishing, 1999).

<sup>191</sup> US EPA Office of Groundwater and Drinking Water, “2006 Community Water Systems Survey,” *US Environmental Protection Agency*, 2009, <http://water.epa.gov/aboutow/ogwdw/cwssvr.cfm>.

Although the private sector is often introduced to finance water systems, private companies frequently depend on support from governments. For small and lower-income communities in particular, private capital is not the best answer to accountably meet the needs of customers. Most of the initial investments to purchase systems and make infrastructure improvements do not result in profits that stay in the local economy. Private companies are generally reluctant to assume the initial risk, so they frequently rely on local government incentives, such as loans, tax abatements or profit guarantees in order to minimize their risk.

The NC Utilities Commission’s “incentive account” for Aqua NC further reduces the financial risk involved for the company to operate in NC, passing on this cost to consumers. The Acquisitions Incentive Account was set up in 2004, and allows the company to recover costs paid to acquire “nonviable water and wastewater systems” by raising the rate base their customers pay.<sup>192</sup> Essentially, when Aqua NC takes on a “troubled system,” they get to pass on to their customers twice the cost of their investment in improving these troubled systems. In addition, since Aqua NC’s rates are determined based on a return on investment, the more the company spends on infrastructure improvements, the higher their profits.

Public Staff say that the NCUC provided this financial mechanism for the company because they feel that Aqua NC is filling a niche; Public Staff Water Division director Ken Rudder told CWFNC that they have been instrumental in improving “troubled systems.”<sup>193</sup> Rudder said he is glad the companies “know what they’re doing,” but admits that the financial incentive in place is a big reason the company agrees to purchase the systems.

---

*The capital invested by private utilities in system improvements is actually lower than that invested by publicly owned systems of similar size.*

---

In this example, as in other cases of privatization, Aqua NC does provide the needed up-front capital for infrastructure repairs; however, they make up 200% of their costs at the expense of their customers. Since they have guaranteed profit margins and an additional income source through the incentive program, Aqua NC assumes little risk and passes it on in a way that places proportionally greater burden on lower-income households.

## **Community Experiences: Challenging the Myths of Privatization**

Chapter 2 described the situations of real communities facing privatization in NC. Many of these communities’ experiences provide evidence against the purported benefits of privatization.

The Neuse River Village neighborhood in Raleigh, NC saw firsthand that private ownership and operation of their community water system did not bring in technical expertise or improve services. Health violations and poor service had plagued the community’s water for years when Aqua NC bought the system. Aqua NC began to meter water usage and charge high volumetric rates without checking first to make sure that leaky supply pipes were repaired; as a result, residents paid for far more water than they were actually using. In Utilities Commission hearings, residents complained that without oversight of the company’s improvements, service would continue to be poor and bills would be very high without the community seeing any benefits.

When a private owner acquires a “Certificate of Convenience and Necessity” or “Certificate of Authority” simply to resell water, as in the cases of Crownpointe Mobile Home Park in Buncombe County or Park South Station in Mecklenburg County, the owner is relying on the

---

<sup>192</sup> North Carolina Utilities Commission, “Application for Approval of the Acquisition by Aqua America, Inc. of the stock of Heater Utilities,” Docket W-274 Sub 465, NCUC, January 30, 2004, <http://ncuc.commerce.state.nc.us/>.

<sup>193</sup> Ken Rudder (Public Staff) phone conversation with author (M.G.), 2006.

expertise of the municipal supplier during most stages of the water supply. This is one reason why residents of Park South Station are frustrated that Aqua NC is allowed to profit on their water system when the water and wastewater are both treated by Charlotte-Mecklenburg Utilities. The benefit to the community in terms of technical expertise is small, and Aqua NC took on very little financial risk in acquiring the system.

Similarly, in Crownpointe Mobile Home Park, residents are now charged a metered rate for the same municipal water they had always received before “in rent.” However, an administrative fee to cover fees paid by the landlord to the City of Asheville now drives up the cost so that Crownpointe residents pay an average of 60% more on a monthly basis than residents served directly by the City water system. Small systems run in-house by landlords of multifamily residences vary widely in the level of technical expertise available to communities. Another MHP in the Asheville area, Eden Glen, has struggled for years with high iron levels from their community well.<sup>194</sup> Well operators have been inconsistent in their skills in managing water quality, but the community does not have someone with reliable expertise to turn to for water problems they perceive as making water unfit to use for drinking, bathing, or washing clothes.

## **Countering the Myths: Strong Advocacy by Aqua NC Customers Brings Hope for Reining in Rate Increases**

Aqua NC proposed a rate increase of about 19% for its water customers in its filing with the NC Utilities Commission earlier this year [2011]. After hearing extensive oral testimony from customers and over 180 written comments about financial impact, poor service and incorrectly calculated rates, Public Staff filed its recommendations with the Commission, calling for only a 2% increase. Among erroneous expenses requested in the company’s application, the Public Staff found salary increases for national executives not related to staff time in North Carolina and costs related to future customers rather than current customers. If adopted by the Commission, the recommendation would also implement a volumetric rate for wastewater customers, instead of a high fixed fee.<sup>195</sup>

With such a change of approach from the Public Staff, North Carolina may begin to see consumer advocates actually responding to the concerns of “the using and consuming public” with enough public pressure and involvement. The Aqua NC rate case will be decided soon, and if private water customer continue to stand up for their rights to clean, safe and affordable water, the case could be a turning point for overcompensated privatized water utilities in NC.

---

<sup>194</sup> Wade Knox (NC Public Water Supply), phone conversation with author (K.H.), 2011.

<sup>195</sup> North Carolina Utilities Commission, “Public Staff’s Testimony and Exhibits of K. Fernald, D. Furr, J. Tweed and J. Hinton,” Docket W-218 Sub 319, *NCUC*, May 26, 2011, <http://ncuc.commerce.state.nc.us/>.

# Recommendations to the North Carolina Legislature and the North Carolina Utilities Commission

## Assuring affordability

### 1. **Mechanisms for Incorporating Affordability into Rate Considerations**

Establish statutory requirement for Public Staff and NC Utilities Commission to take affordability into account for low-income neighborhoods in determining allowable rates, rather than solely relying on rate-of-return calculations. Disallow consolidated single tariff rates for large water companies when they impact affordability for people in the lowest income neighborhoods. The costs of system modification that utilities recover through base-rates often do not proportionally benefit individual customers.

### 2. **Leak Detection and Repair**

Require that water utilities provide certification of leak detection and repair by an independent contractor for all water service lines serving individual residences before franchise for sub-metered water is approved, and every 3 years.

### 3. **Water Subsidies for Low-Wealth Communities**

The State should ensure that every person living within access of a public water system can receive an adequate supply of clean water at an affordable price. When annual water payments are over the EPA accepted threshold of 2.5% of annual income, then basic water usage (the household's amount of water needed for drinking, cooking, cleaning, and maintaining healthy living conditions and sanitation) must be subsidized.

### 4. **Prohibit Consolidated Rates Without Accountability for Expenditures for each system**

Enforce requirement for private companies with consolidated rates to keep financial records for individual systems and report them publicly to the Commission. When *per capita* expenses for individual systems differ by more than 10%, require the company to establish an unconsolidated rate structure.

## Enhanced customer notification and participation in decision-making

### 5. **Delivery of Consumer Confidence Reports**

Ensure that public utilities issue "consumer confidence" reports to all customers, including tenants, by amending the NC Drinking Water Act.

### 6. **Customer Notification Requirements**

Require provision of all printed and electronic materials on proposed franchises, rate increases and opportunities for public comment and hearings to be issued in all languages spoken by more than 10 percent of their water customers. Require at least 30 days between the date of company notification to each household and public hearing or end of a public comment period, to facilitate participation.

### 7. **Consumer Access to Utilities Commission Information and Staff**

Ensure that Spanish-speaking staff are available during regular business hours for customer service complaints, and provide interpretation for public hearings in language(s) spoken by participants.

### 8. **Clear Billing**

Public utilities must issue customers clear information stating the name and contact information for the water system's owner and operator as well as the payment options. Require utilities to offer in-person payment options or other clear alternatives for customers without checking accounts.

9. **Public Approval for Privatization to Occur**

Create a participatory process of water and sewer system decisions, to allow local community input over their own water supplies. Publicly-owned and operated water systems that seek permission to privatize ownership or operation from the Utilities Commission must also receive public approval, through a public referendum or a mail-in ballot open to all system customers. This procedure should extend to owners of multi-family residences that seek a Certificate of Authority or Certificate of Public Convenience and Necessity.

10. **Mechanism for Resident Petition for Public System Hookup**

Establish a process for residents of a neighborhood or subdivision with a privately owned water supply, but within 1 mile of a publicly owned system to petition to be hooked up to that system, and request purchase of the system.

## **Consolidation of public water systems**

11. **Reduce Number of Small and Very Small Systems**

Consolidate public water systems under existing municipal water and sewer systems in order to lessen the State’s regulatory burden and improve service and water quality for customers. Require the Utilities Commission to encourage small systems to hook up to nearby larger municipal systems, and only approve new subdivisions if they can connect to an existing system.

12. **Funding Mechanisms for Publicly-owned Water Systems**

Provide funding for publicly-owned water system improvements and purchase of nearby small/very small systems to reduce apparent need to privatize systems.

13. **Restrict Granting of Certificates of Convenience and Necessity, or “Franchise” Within Municipal Jurisdictions**

Prohibit multi-family residences from receiving a “franchise” when within there is a municipal jurisdiction with a publicly-owned water/wastewater utility. The creation of a franchised utility adds further costs for residents, while connecting to a nearby municipal system provides economies of scale for system customers. Establish incentives/requirements for municipalities and other publicly-owned water systems to acquire water systems that are within the jurisdiction when requested by the customers of privately owned utility.

14. **Restriction of Certificates of Convenience and Necessity Outside of Municipal Jurisdictions**

Require system owners applying for a franchise outside of the jurisdiction of a publicly-owned water system to demonstrate that granting the franchise would be in the public interest, with required review by and approval by the Public Staff.

## **Rate reform**

15. **Conservation Rate Structures Following Leak Detection and Repair**

Encourage adoption of rate structures that promote fair distribution of costs and water conservation. An increasing-block rate structure charges a lower volumetric rate for a basic block amount of water. This type of structure could promote conservation in NC and decrease costs to low-volume water users provided that water utilities ensure leak detection and repair before implementing new rates.

16. **Limit Fixed Fees**

Set a cap on fixed fees as a percentage of overall water and sewer rates to prevent disproportionate charges to low-occupancy homes and low-volume water users.

17. **“Price Index” Mechanism**

Publish a price index for the water and wastewater industry in NC each year, including cost increases due to inflation, raw materials, management, and other costs for both publicly-

owned and privately-owned systems. The price index should also include affordability thresholds for residents at various income levels. Individual rate increases should be limited to the accepted range published in the price index. This mechanism is used in other industries and has been applied to water and wastewater utility regulation in other states, such as Florida.<sup>196</sup>

## **Multifamily residential rates and responsibilities of landlords**

### **18. Clarify Landlord and Tenant Responsibilities for Service Lines**

Change language in §42-42 (Landlords and tenants) to clarify that landlords have responsibility for leaks in tenants' service lines. When residents do not own the unit, they should not legally be responsible for wear and tear on general housing components. The residents do not own the service lines and will not be able to recover the cost of their investment upon leaving for another residence.

### **19. Reduction of Rent After Sub-metering**

Require reduction of rent when franchise holders transition from providing "in-rent" water to sub-metered charges. When the onset of the water billing system occurs without lowered rent payments, residents often rightfully perceive this as being charged twice for water by passing on costs associated with meter installation and/or the water supplier's base-rate charges.

---

<sup>196</sup> Establishment of Price Index, Adjustment of Rates; Requirement of Bond; Filings After Adjustment; Notice to Customers, FL General Statutes, 2010, §25-30.420.

## Bibliography

- American Water Corporation, "About American Water," 2011, <http://www.amwater.com/About-Us/>.
- Aqua America, "2010 Annual Report to Shareholders," Aqua America – Investor Relations, <http://ir.aquaamerica.com/>.
- Aqua America, "Business Development," *Aqua America website*, accessed April 2011, <https://www.aquaamerica.com/Pages/AcquisitionsExistingSystems.aspx>.
- Aqua America, Form 10K, ANNUAL REPORT PURSUANT TO SECTION 13 or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 for the fiscal year ended December 31, 2010, <http://ir.aquaamerica.com/secfiling.cfm?filingID=950123-11-18861>.
- Aqua America, "North Carolina home page," *Aqua America*, <https://www.aquaamerica.com/NorthCarolina/Pages/Home.aspx>.
- Aqua America, "North Carolina Map," *Aqua America*, <https://www.aquaamerica.com/Documents/NorthCarolina.pdf>.
- Arnold, Craig Anthony, "Water Privatization Trends in the United States: Human Rights, National Security, and Public Stewardship," *William & Mary Environmental Law and Policy Review*, Vol. 33 (2009), p. 785.
- Association of Metropolitan Water Agencies (AMWA), "About AMWA," *AMWA*, 2011, accessed April 11, 2011, [http://www.amwa.net/cs/about\\_amwa/about](http://www.amwa.net/cs/about_amwa/about).
- Association of Metropolitan Water Agencies (AMWA), "Evaluating Privatization II: An AMSA/AMWA Checklist," *AMWA*, 2002.
- Barlow, Maude and Tony Clarke, *Blue Gold: The Fight to Stop the Corporate Theft of the World's Water*, (New York, The New Press, 2002).
- Barlow, Maude and Tony Clarke, "Who Owns Water?," *The Nation*, September 2, 2002, <http://www.ratical.org/co-globalize/whoOwnsWater.html>.
- Beecher, Janice A., "Consolidated Water Rates: Summary" in *Consolidated Water Rates: Issues and Practices in Single-Tariff Pricing*, (Washington, D.C.: U.S. Environmental Protection Agency and the National Association of Regulatory Utility Commissioners, 1999).
- Berry, Kate and Eric Mollard, *Social Participation in Water Governance and Management: Critical and Global Perspectives* (London: Sterling, VA, 2010).
- Business-Leader Raleigh-Durham. "Christopher J. Ayers: Leader Profile," <http://www.businessleader.com/raleighdurham/index.aspx?page=lprofile&hindex=Overview&hfor=583&table=Award/Impacts>.
- Carolina Newswire. "Aqua America Subsidiary Purchases North Carolina Water and Wastewater System; Three North Carolina and Five Pennsylvania Acquisitions This Year," 2004.
- Central Intelligence Agency, "World Factbook: South Africa," *CIA Website*, 2011, <https://www.cia.gov/cia/publications/factbook/geos/sf.html>.
- Certificate of Convenience and Necessity, NC General Statutes, 2011, §62-110 (g).
- Chertoff, Larry, "US private firms shrink from weak deals," *Global Water Intelligence* 4 (8), 2003, accessed April 2011, <http://www.globalwaterintel.com/archive/4/8/general/us-private-firms-shrink-from-weak-deals.html>.
- City of Asheville Water Resources Department, "Schedule of Fees and Charges Effective July 1, 2010," *City of Asheville*, 2010, [http://www.ashevillenc.gov/uploadedFiles/Departments/Water\\_Resources/Water\\_Rates\\_FY2010\\_11.pdf](http://www.ashevillenc.gov/uploadedFiles/Departments/Water_Resources/Water_Rates_FY2010_11.pdf).
- Clabby, Catherine and Pat Stith, "State Failing to Ensure Suppliers Test Your Water," *Raleigh News & Observer* (Raleigh, NC), 2006.

- Committee on Economic, Social and Cultural Rights, "General Comment No. 15: The Right to Water (Arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights)" (presentation, Geneva, November 26 2002).
- Conant, Jeff, "For Money or for Life," *Earth Island Journal*, 21, no. 3 (2006): 33-39.
- Covington, C., 2004. Transcript of Testimony Heard 11/30/04 (Raleigh). NC Utilities Committee.
- Crouch, Michelle, Bruce Henderson, and Peter Smolowitz "Who Gets the Water? - the Carolinas Face New Limits as Growth Outpaces Supply," *Charlotte Observer* (Charlotte, NC), 2002.
- Davidson Water Inc, "Through the Years", *Davidson Water website*, January 21, 2011, <http://www.davidsonwater.com/history/history.asp>.
- Environmental Finance Center, "Financial and Spatial Analysis of Residential Water and Wastewater Rates and Rate Setting Practices," 2006, Retrieved August 12, 2010 from [www.efc.unc.edu/publications/pdfs/PPres2.pdf](http://www.efc.unc.edu/publications/pdfs/PPres2.pdf).
- Environmental Working Group, "Wildcat Creek S/D - Chapel Hill, NC Drinking Water Quality Report," *EWQ Tap Water Database 2009*, <http://www.ewg.org/tap-water/whatsinyourwater2/NC/wildcat-creek-s-d/0368116/>.
- Eskaf, Shadi and Jeff Hughes, "Report on the Impact of Switching to an Increasing Block Rate Structure for Water and/or Uniform Volumetric Rates for Wastewater Customers of Aqua North Carolina, Inc.," *UNC Environmental Finance Center*, 2009, <http://www.efc.unc.edu/projects/AquaNC.htm>.
- Establishment of Price Index, Adjustment of Rates; Requirement of Bond; Filings After Adjustment; Notice to Customers, FL General Statutes, 2010, §25-30.420.
- Estache, Antonio, Sergio Perelman, and Lourdes Trujillo, "Infrastructure Performance and Reform in Developing and Transition Economies: Evidence from a Survey of Productivity Measures," World Bank Policy Research Working Paper 3514, 2005, World Bank.
- Facility Oversight. Rules Governing Public Water Systems. North Carolina Administrative Codes. 15A: 18C.1300.
- Food and Water Watch, "Faulty Pipes: Why Public Funding--Not Privatization--Is the Answer for U. S. Water Systems," 2006, <http://www.foodandwaterwatch.org/reports/faulty-pipes/>.
- Food and Water Watch, "United Water: Suez Environnement's Poor Record in the United States," 2010, accessed April 2011, <http://www.foodandwaterwatch.org/reports/united-water/>.
- Food and Water Watch, "Water Privatization Threatens Workers, Consumers and Local Economies," 2009, accessed April 2011, <http://documents.foodandwaterwatch.org/unionJobsFinal-web.pdf>.
- Gleick, Peter, Gary Wolff, Elizabeth L. Chalecki, and Rachel Reyes, "The New Economy of Water: The Risks and Benefits of Globalization and Privatization of Fresh Water," *The Pacific Institute*, 2003, [http://www.pacinst.org/reports/new\\_economy\\_of\\_water/new\\_economy\\_of\\_water.pdf](http://www.pacinst.org/reports/new_economy_of_water/new_economy_of_water.pdf).
- Glennon, Robert, "Water Scarcity, Marketing, and Privatization," *Texas Law Review* 83, no. 7 (2005).
- Hall, David, "Financing water for the world – an alternative to guaranteed profits" (presentation, 3rd World Water Forum, Kyoto, Japan Public Services International, 2003).
- Hall, David, "Water and DG Competition", *European Public Services Union*, May 2003, <http://www.epsu.org/IMG/pdf/PSIRUonECcompwater2002final.pdf>.
- Hall, David, "Water in Public Hands: Public Sector Water Management – a Necessary Option," *Public Services International Research Unit (PSIRU)*, 2001, p. 10-15, <http://www.world-psi.org/TemplateRedirect.cfm?template=/ContentManagement/ContentDisplay.cfm&ContentID=10168>.
- Hughes, Jeff, "The Painful Art of Setting Water and Sewer Rates," *Popular Government* Vol. 70, No. 3 (2005), p. 4-14.

- Izaguirre, Ada Karina and Edouard Perard, "Private activity in water and sewerage declines for second consecutive year," *World Bank*, 2010, <http://ppi.worldbank.org/features/June2010/PPI-Water-note-2009.pdf>.
- Jacobs, S, *Regulatory reform in the United States*, (OECD publishing, 1999).
- Jehl, D., "As Cities Move to Privatize Water, Atlanta Steps Back," *The New York Times*, February 10, 2003.
- Kikeri, Sunita and Aishetu Fatima Kolo, "Privatization: Trends and Recent Developments," *World Bank*, November 1, 2005, [http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2005/11/08/000016406\\_20051108153425/Rendered/PDF/wps3765.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2005/11/08/000016406_20051108153425/Rendered/PDF/wps3765.pdf).
- Landlord and Tenant: Landlord to Provide Fit Premises, *NC General Statutes*, 2010, §42-42.
- Landlord and Tenant: Definitions, *NC General Statutes*, 2010, §42-40.
- Lappala, Eric, "Summary Preliminary Engineering Report: Water Supply Source and Transmission System: Eagle Water Alternative for the City of Raleigh (Prepared for Eagle Water Company, LLC)," June 9, 2010, <http://eagle-ater.com/Summary%20Feasibility%20Report%20Eagle%20Water%20Transmission%20System%20to%20Falls%20Lake%20Updated%20060910.pdf>.
- Loboia, Emanuele and David Hall, "Problems with Private Water Concessions: A Review of Experience" (presentation, Third World Centre for Water Management/Inter-American Development Bank Workshop on "PPPs in the Water Sector", Mexico City, September 25-26, 2002).
- Manta Small Business finder. Records for Heater Utilities, Inc., Aqua NC, and Brookwood Water Corporation. 2011. <http://www.manta.com>.
- Marsden, Bill, "Cholera and the Age of the Water Barons," *The Center for Public Integrity: The Water Barons*, February 3, 2003, <http://projects.publicintegrity.org/water/report.aspx?aid=44>.
- Martin, Edward, "Drying up (North Carolina Is Running Short of Water)," *Business North Carolina* 26, no. 10 (2001).
- Masons, Pinsent, *Pinsent Masons Water Yearbook 2010-2011*, (London: Pinsent Masons LLC, 2010), page xiv.
- Mayer, Peter W., Erin Towler, William B. DeOreo, Erin Caldwell, Tom Miller, Edward R. Osann, Elizabeth Brown, Peter J. Bickel, and Steven B. Fisher, "National Multiple Family Sub Metering and Allocation Billing Program Study," *National Multi Housing Council*, 2011, <http://www.nmhc.org/Content/ServeContent.cfm?ContentItemID=3242>.
- Metropolitan Sewerage District, "FY 2011 Rates, Fees and Charges Effective July 1, 2010," *Metropolitan Sewerage District*, 2010, <http://www.msdbc.org/documents/SewerRatesFY11.pdf>.
- Morrison, Jason, Peter Gleick, James Newcomb, and Todd Harrington, "Remaining Drops: Freshwater Resources: A Global Issue," *Pacific Institute*, January 2006, [http://www.pacinst.org/reports/remaining\\_drops/CLSA\\_U\\_remaining\\_drops.pdf](http://www.pacinst.org/reports/remaining_drops/CLSA_U_remaining_drops.pdf).
- NASBA Center for the Public Trust, *NASBA Website*, <http://www.centerforpublictrust.org/>.
- NC Housing Coalition. "Housing Facts and Statistics in NC," *NC Housing Coalition website*, 2010, [http://www.nchousing.org/research\\_publications/facts\\_stats/index\\_html](http://www.nchousing.org/research_publications/facts_stats/index_html).
- NC Public Water Supply Section, "About the Public Water Supply Section," 2011, [http://www.deh.enr.state.nc.us/pws/about\\_pws.htm](http://www.deh.enr.state.nc.us/pws/about_pws.htm).
- Ngwane, T., "Anti-Privatization Forum in Johannesburg, an Interview with BBC News Correspondent Mike Wooldridge," *BBC News*, 2004.
- North Carolina Division of Environmental Health, "Source Water Assessment Program – Interactive Map," *Public Water Supply*, May 12, 2011, [http://swap.deh.enr.state.nc.us/Swap\\_app/viewer.htm](http://swap.deh.enr.state.nc.us/Swap_app/viewer.htm).

- North Carolina Ground Water Association, 2010, <http://www.ncgwa.org/>.
- North Carolina Utilities Commission. "2009 N.C. UTILITIES COMMISSION REPORT-VOLUME XL," NCUC, 2009, accessed March 2011, <http://www.ncuc.net/statbook/2009Report.pdf>.
- North Carolina Utilities Commission, "Appointed Commissioners – Past and Present," *NCUC*, 2011, <http://www.ncuc.commerce.state.nc.us/overview/uchistor.htm>.
- North Carolina Utilities Commission, "North Carolina's Public Utility Infrastructure & Regulatory Climate," *NCUC Overview*, <http://www.ncuc.commerce.state.nc.us/overview/Overview.pdf>.
- North Carolina Utilities Commission, "Chapter 1, Rule R1-15: Investigation and Suspension Proceedings," *NCUC Rules and Regulations*, <http://www.ncuc.commerce.state.nc.us/ncrules/rulstoc.htm>.
- North Carolina Utilities Commission, "Chapter 7, Rule R7-23: Water Companies – Information on Bills," *NCUC Rules and Regulations*, <http://www.ncuc.commerce.state.nc.us/ncrules/rulstoc.htm>.
- North Carolina Utilities Commission, "Resale of Water/Wastewater," 2011, <http://www.ncuc.net/industries/water/resaleofwater.htm>.
- Office of executive director; public staff, structure, and function, NC General Statutes, 2010, §62-15.
- Ovaska, Sarah, "State Probes Cut-offs," *The Raleigh News and Observer*, April 29, 2005.
- Prerequisites to annexation; ability to serve; reports and plans, NC General Statutes, 2010, §160A-47.
- Public Citizen, "Water Privatization Backgrounder," *Public Citizen Website*, January 21, 2011, <http://www.citizen.org/cmep/Water/activist/articles.cfm?ID=9589>.
- Public Staff of the North Carolina Utilities Commission, "Public Staff-Legal Division," 2011, <http://www.pubstaff.commerce.state.nc.us/pslegal/pslegal.htm>.
- Safe Drinking Water Act Amendments of 1996*, Public Law 104-182, U.S. Statutes at Large 110 (1996), Stat. 1613.
- Schneider, Sue, "Spartanburg Water First Utility in Country to Win National Ethics Award from NASBA Center for the Public Trust," press release, *Spartanburg Water*, May 9, 2010, <http://www.spartanburgwater.com/pdfs/pressrelease/NASBACPTAwardPressRelease2010.pdf>.
- Shayne, Beth, "Neighbors protesting private water rates," *WCNC News* (Charlotte, NC), May 3, 2011.
- Smith, Harold, "Water and Wastewater Rate Survey Results and Industry Trends" (presentation, New England Water Works 2009 Annual Conference, September 23, 2009).
- Spartanburg Water, "Payment Options," 2009, <http://spartanburgwater.org/customers/payment-options.php>.
- Talbot, J., "Is the International Water Business Really a Business?," 2002, World Bank Water and Sanitation Lecture Series.
- The World Bank Group, "Sector Data Snapshots: 2009," August 11, 2010, <http://ppi.worldbank.org>.
- Thrill, Scott, "Watch Out: The World Bank Is Quietly Funding a Massive Corporate Water Grab," *AlterNet*, November 2010, <http://www.alternet.org/story/148700/>.
- Tully, Shawn, "Water, Water Everywhere: Today Companies Like France's Suez Are Rushing to Privatize Water, Already a \$400 Billion Global Business. They Are Betting That H2O Will Be to the 21st Century What Oil Was to the 20<sup>th</sup>," *Fortune Magazine*, May 15, 2000.
- United Nations, "General Assembly declares access to clean water and sanitation is a human right," UN News Center, July 28, 2010, <http://www.un.org/apps/news/story.asp?NewsID=35456&Cr=SANITATION &Cr1=>.
- US Department of Labor Bureau of Labor Statistics, "Consumer Expenditure Survey," *Bureau of Labor Statistics*, 2009, <http://www.bls.gov/cex/#tables>.

- US Department of Labor Bureau of Labor Statistics, "Occupational Employment Statistics", accessed April 2011, <http://data.bls.gov/oes/search.jsp>.
- US EPA, "Compendium of Full-Cost Pricing Issue Papers: Covering the Basics (preliminary draft)," prepared for Peter Shanaghan, EPA, May 20, 2009.
- US EPA, "Recommendations of the National Drinking Water Advisory Council to U.S. EPA on its National Small Systems Affordability Criteria" *US Environmental Protection Agency*, July 2003, <http://water.epa.gov/infrastructure/drinkingwater/pws/upload/Recommendations-of-the-NDWAC-to-US-EPA-on-Its-NSSA-Criteria.pdf>.
- US EPA EJ View, "Demographic and Economic Data," *US Environmental Protection Agency*, 2010, <http://oaspub.epa.gov/envjust/>.
- US EPA Office of Groundwater and Drinking Water, "System Partnership Solutions to Improve Public Health Protection, Volume 2," *US Environmental Protection Agency*, 2006, accessed April 11, 2011, [www.epa.gov/ogwdw/smallsystems/pdfs/publichealthstudyv2.pdf](http://www.epa.gov/ogwdw/smallsystems/pdfs/publichealthstudyv2.pdf).
- US EPA Office of Groundwater and Drinking Water, "2006 Community Water Systems Survey," *US Environmental Protection Agency*, 2009, <http://water.epa.gov/aboutow/ogwdw/cwssvr.cfm>.
- US EPA Office of Groundwater and Drinking Water, "FY2009 Inventory Data," *US Environmental Protection Agency*, accessed March 2011, <http://water.epa.gov/scitech/datait/databases/drink/pivottables.cfm>.
- US Water News Online Editor, "Groundwater Depletion Reduction on Tap," 2000, <http://www.uswaternews.com/archives/arconserv/tgrodep7.html>.
- Utilities, Inc., "Developer contact," *Utilities, Inc. website*, accessed April 2011., [http://www.uiwater.com/business\\_center/developer\\_contact.php](http://www.uiwater.com/business_center/developer_contact.php).
- Vaswani, Rahul and Steven Gasteyer, "Analyzing the Availability of Water and Sanitation Services in the United States," Rural Community Assistance Partnership, 2004, <http://www.rcap.org/stilllivingwithoutbasics>.
- Water for All Campaign, "Reclaiming Public Assets. From Private to Public Ownership of Waterworks," *Public Citizen*, September 2002, <http://www.wateractivist.org>.
- Western Union, "Estimate Money Transfer Fees tool," 2010, <http://www.westernunion.com>.
- Wolff, Gary and Eric Hallstein, "Beyond Privatization: Restructuring Water Systems to Improve Performance," *The Pacific Institute*, 2005.