

## **Building Change towards Full Cost Water: Lessons from the Rate Setting Process**

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### **Abstract**

Investments required by the water industry in the United States in the coming decades mandate significant amounts of capital (Anderson 2010; EPA 2009; AWWA 2012). As the water industry attempts to modernize its priorities and business models to meet 21<sup>st</sup> century challenges, it becomes increasingly important that governance and strategy evolve as well. This paper highlights the importance of rate setting strategy.

By analyzing disparate rate cases: Public Utilities Department of Raleigh and Aqua North Carolina (publicly owned and privately owned water utilities, respectively), the authors show that common strategies can exist with regard to rate setting procedures no matter how different the utility. This bolsters the argument that the water industry as a whole will benefit from developing common rate setting strategies. Specifically, the authors highlight three policies moving forward:

1. Strategize rate setting as an experience in conflict management
2. Work with rating agencies to give credit towards good rate strategy
3. Standardize accounting and benchmarking procedures to help prioritize rate cases towards key issues

### **KEYWORDS**

Rates, Strategy, 21<sup>st</sup> Century Water, Benchmarking, Change Management

## Introduction

The modern water industry in the United States evolved to solve the serious public health and safety challenges of the early 20<sup>th</sup> century. Cities required clean water, fire protection, and sanitary disposal of waste. In the 21<sup>st</sup> Century, the water industry has achieved its original public health and safety goals of clean water and sanitation. However, the new century brings new challenges.

Utilities across the United States are facing a “new normal” (Ursery 2011). Decreasing per capita demand has placed a permanent decline on water sales. Repairing and replacing aging infrastructure requires significant capital investments (AWWA 2012). Changing population dynamics (both growth and decline spurred by an uncertain economy) only add to indecision over necessary water investments (JohnsonFoundation 2012).

Where 20<sup>th</sup> century utility managers faced a pressing need to solve issues of public health, 21<sup>st</sup> century utility managers must tackle items such as sustainability, strict environmental compliance, and climate change. New technologies such as decentralized treatment owned and operated by others could further reduce revenues and diminishing federal and state grant and loan funding heightens the costs associated with capital improvements. These next generation problems cannot be efficiently tackled through 20<sup>th</sup> century solutions. Governance and innovation have, at a broad scale, not kept up with the new normal for water utilities. This stands especially true for issues encompassing the need for increased revenues and new business models.

Rate setting and rate increases are not new fields for the water industry. However, the scale and timing of new rate increases may prove unprecedented. Individually, utilities may find little difficulty in generally obtaining the rate increases necessary to continue operations. However, as necessary rate increases grow in both degree and number over time, common strategies on how to propose and market them to a skeptical public will prove vital.

One impediment to a common strategy lies in the realization that all utilities contain expressly unique forms of governance, financial issues, and population dynamics. The authors call this the water industry’s “individuality impediment”. Unique attributes contained by all utilities impedes the ability of the industry as a whole to work together towards solutions to common problems. However, no matter how unique the utility, common principles in rate setting strategy exist. To help demonstrate this, the authors’ paper analyzes the most recent rate increases for two disparate utilities:

1. Publicly owned Raleigh, North Carolina Public Utilities Department whose rates are set by an elected City Council<sup>1</sup>
2. Privately owned Aqua North Carolina whose rates are set by an appointed North Carolina Utilities Commission

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<sup>1</sup> The authors note here that one author, Bill Holman, serves as the co-chair of the Water Utility Transition Advisory Task Force (WUTAT). The WUTAT works extensively with the Public Utilities Department and plays a central role in the analysis of this paper. His knowledge of the WUTAT served only to inform the analysis.

By analyzing the rate setting process of two unique utilities, the authors show that no matter the incentives or governance structure, commonalities exist that lead to a successful rate setting process.

After highlighting a number of common tactics, the authors argue towards increased sharing of best practices towards rate setting governance. The case studies will show that understanding rate setting as an experience in conflict management may prove the best way forward for developing best practices for rate increases. As a whole, the water industry has much to gain by working together on this issue.

## Methodology

The water research community has conducted important work in the field of optimal rate structures and financing mechanisms towards the concept of full cost pricing (Lang et al. 2011; UNCEFC 2009). Various factors determine the ability of a water utility to sufficiently invest in infrastructure to meet future water challenges. From changing per capita consumption to increased tendencies for drought, the vast array of financial challenges facing a water utility has made the development of an integrated strategy for full cost pricing nearly impossible. Despite such difficulties, one can begin to group driving forces that determine the rate setting process in an effort to define an integrated strategy to full cost pricing. The authors have determined three key determining factors behind a rate setting process:

- 1. Financing**

*The rate and debt structures available to a utility. For example, tiered rates and revolving loan funds.*

- 2. Governance**

*The decision-making process necessary to approve a rate increase*

- 3. Public support**

*Public willingness to accept a rate increase*

Just like a stool, all three legs (financing, governance, and public support) remain necessary for the successful functioning of the rate setting process. However, the relationship is much more nuanced. Financing, governance, and public support all have the potential to influence one another. Further, the way a utility manager utilizes the tools provided within these structures, his or her strategy, has the potential to shape the utility's ability to recover the full cost of providing water and wastewater services.

Previous research has attempted to define optimal governance, finance, and engagement structures for utilities towards meeting service goals. This study is not an analysis of proper ways to fully recover costs. Rather, it is an analysis of the strategy that may be used to reach that goal. By analyzing strategy instead of structure, the conclusions of this paper may be used by a multitude of utilities. In analyzing rate setting strategy, this paper uses two case studies of rate setting from utilities operating in North Carolina: Raleigh Public Utilities Department (Raleigh) and Aqua North Carolina (Aqua NC). The rate increases analyzed in this paper occurred in 2011. The reasons for choosing Raleigh and Aqua NC's 2011 rate increase attempts are threefold:

*Different*

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A major impediment to developing a universal strategy towards recovering the cost of water services rests in the fact that every utility maintains nuances in financing, governance, and public support opportunities that belie a “one size fits all” approach to rate setting. These two utilities diverge with regard to governance, finances, and public support. Raleigh and Aqua NC have vastly different investment priorities and incentives. Additionally, they maintain different governance structures to which rates may alter. Finally, public perception of utility rate cases vary between the publicly owned, and investor owned utility.

### *Unique*

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The situations encountered by both utilities in the most recent rate setting process diverged from traditional previous encounters; for Raleigh, a drought and economic recession required the development of an independent advisory group to review the proposed rate increase and utility policies. For Aqua NC, a short timeframe between rate increases caused strong public opposition that in part led to the complete contesting of its rate increase by an independent public body. These unique scenarios help highlight the ability of strategy to overcome difficult rate setting environments.

### *Reflective of ongoing trends*

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Although the scenarios facing Raleigh and Aqua NC stand unique to the utilities individually, they reflect a broader trend towards more significant and frequent rate increases across the country<sup>2</sup>. As such, the situation lends itself to broader implications across the water industry.

Upon highlighting key elements to both Raleigh’s and Aqua NC’s rate setting process, this paper will derive common strategies through a method that not only promotes general usability throughout the water industry, but also provides unique inferences towards reaching full cost pricing.

## **Background on Utilities**

### **City of Raleigh**

The City of Raleigh Public Utilities Department<sup>3</sup> delivers water and wastewater services to 177,000 metered customers serving a population of almost half a million in Raleigh and other municipalities in Eastern Wake County. It operates three wastewater treatment plants and two drinking water facilities.

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<sup>2</sup> For Raleigh, the need to greatly increase rates over a period of three years as compared to normal rate increases occurred due to drought and economic recession. For Aqua NC, rate increases occurred in part due to the upgrades necessary from poorly maintained utilities purchased by the company, indicative of the larger issue of inadequate infrastructure investment.

<sup>3</sup> See [raleighnc.gov](http://raleighnc.gov)

City residents pay a low rate for water and sewer services as matched to comparably sized neighbors in both the surrounding area and states. However, great diversity exists in bill structures for residents due to the merger of Raleigh's utility with neighboring towns. Raleigh maintains eight different rate schedules to meet buy-in requirements for towns connecting to the City's water (Raleigh 2011). The City Council and mayor approve the Utility's proposed water and wastewater rate increases.

The rate case in question for this paper retains interest in part due to the events leading up to the rate increase. A severe drought between 2007 and 2008 greatly reduced demand for water (Easley 2008). Additionally, the economic recession drastically cut population growth and housing starts in the region, reducing expected revenues from new water hookups. Indeed, prior to the recession, 17% of utility revenues stemmed from a 3% annual population growth and subsequent connection fees (Carman 2012).

To meet projected population growth, in 2007 Raleigh began construction of a new 20 million gallon per day capacity (MGD) water treatment plant. While the new plant provides security to meet future capacity needs, when it came on line in 2010, demand for water had not recovered from the drought and recession<sup>4</sup>.

After the 2007-2008 drought and economic recession, the Raleigh faced a revenue shortfall. To meet this shortfall, the utility requested, and the council approved, a rate increase of 13%. Further, the City Council called for a tiered water rate structure to further incentivize conservation measures for future droughts (Geary 2009).

Raleigh's need to modernize its legacy billing system delayed implementation of the tiered rate structure. In July 2010, Raleigh increased rates again by 9% (WRAL 2009). In November 2010, the tiered rate structure went into effect, leading to a relative rate increase of 3% for city residents (Pardo 2009; Ovaska 2010). Raleigh's rate model would need an additional 9% rate increase to ensure continued coverage of operating costs and significant debt coverage on revenue bonds in 2011.

### Aqua North Carolina

Aqua North Carolina is a subsidiary of Aqua America<sup>5</sup>, a publicly traded company with 2010 revenues close to \$125 million serving almost one million customers. Growth in the organization, both nationally and in North Carolina, has occurred through utility acquisition, an ongoing strategy within the company (Aqua 2011). Aqua North Carolina alone maintains 1,315 water systems (predominately suburban and drinking water related) serving almost 100,000 customers (Sanford 2011b).

Controls on revenues and income within North Carolina for privately owned public utilities stands similar to controls in other states. The rate setting process for privately owned utilities occurs through the North Carolina Utilities Commission<sup>6</sup>. The Commission vets and approves all utility rate increase

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<sup>4</sup> See: <http://www.raleighnc.gov/services/content/PubUtilAdmin/Articles/DempseyEBentonWTP.html>

<sup>5</sup> See [aquaamerica.com](http://aquaamerica.com)

<sup>6</sup> See [ncuc.net](http://ncuc.net)

requests in a formal public process. During this process, an independent body called the Public Staff<sup>7</sup> acts as the consumer advocate; challenging the utility on necessary costs and investments.

In 2010, Aqua NC requested approximately a 19% increase in revenues through rate increases to become effective sometime in 2011 (Sanford 2011b). Included in its document of intent for a rate increase, Aqua NC stated the following issues requiring higher revenues:

1. Cost of compliance
2. Infrastructure upgrades for 1,315 predominately suburban water systems
3. Declining per capita consumption

Other than declining per capita consumption, the reasons for Aqua North Carolina's rate increase are different from Raleigh's. The driving factor behind Aqua NC's rate increase lies in the need to recover a fair return on equity investment from infrastructure improvements placed on its predominately suburban water systems. Such systems maintain high capital demands and do not benefit from economies of scale provided to larger city treatment works such as Raleigh.

Despite the regulated nature of the rate setting process, Aqua NC's 2011 petition for a rate increase stood as a highly contentious issue. One reason for the contention lies in the general animosity placed towards private water companies in the State amongst certain environmental interests and public consumers<sup>8</sup>. Another factor of contention influencing public opinion on the rate setting process came from the issue of two years previously Aqua NC successfully arguing a separate rate increases. This rate increase established statewide uniform rates; helping Aqua NC spread the costs of upgrading failing systems through its customer base though simultaneously substantially increasing certain customers' utility bills<sup>9</sup>.

In lieu of such contention and facing significant public pressure, the Public Staff, representing consumers, fully contested the rate increase proposed by Aqua North Carolina (Sanford 2011b). It disagreed on Aqua NC's assumptions regarding cost of operations and necessary investments. According to the Public Staff, Aqua NC's suggested rate increase of 19% should be an order of magnitude less at 0.002%.

## Rate Increase Strategy

The analysis in this paper considers the rate setting process as an experience in conflict management. Analyzing rate setting through the process of conflict helps one comprehend exactly the role strategy

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<sup>7</sup> See [pubstaff.commerce.state.nc.us](http://pubstaff.commerce.state.nc.us)

<sup>8</sup> For example, see Clean Water for North Carolina at [www.cwnc.org](http://www.cwnc.org)

<sup>9</sup> See docket case here: <http://ncuc.commerce.state.nc.us/cgi-bin/flrdocs.ndm/INPUT?compdesc=AQUA%20North%20Carolina%2C%20Inc.&numret=014&comptype=W&docknumb=218&suffix1=&subNumb=274&suffix2=&parm1=000129133>

(on either side of the conflict) plays to promote a specific outcome<sup>10</sup>. This paper does not try to justify the relative “success” of various strategies. Success implies a particular rate or investment strategy being better than another strategy. Rather, the below analysis attempts to define the role unique decisions play in the conflict that is rate setting.

### **Raleigh: Creation of the WUTAT**

On the 28<sup>th</sup> of June, 2010, faced with approving another rate increase the Raleigh City Council voted to create a Water Utility Transition Advisory Taskforce (WUTAT) (WUTAT 2012). Increased water rates were necessary at the time to help the Utility maintain its high credit rating from all three credit agencies (Hessenthaler, Rosenberg, and Mann 2011; McEachern, Weber, and Beglin 2011; Yip and Teras 2011). However, the political implications of facing requests for significant rate increases in 2011 and future years incited the desire to create an independent third party of citizens, the WUTAT, to vet utility decision making and advise the council towards the best processes moving forward.

The original purpose of the WUTAT stood to provide recommendations to the City Council on the following (WUTAT 2012):

1. Establishing rates to cover all costs of the water utility
2. Establishing conservation and education programs
3. Establishing a low income assistance program

The Council later asked the WUTAT to review the advantages and disadvantages of merging the city’s water and wastewater utilities with its stormwater utility.

The City Council appointed an 11-member panel of various experts and interests to fill the seats of the WUTAT. From the end of 2010 through all of 2011, the WUTAT met at least monthly to deliberate on the issues recommended by the City Council. The water utility and rate consultants also worked with the WUTAT; providing rate scenarios, educational services, and plans for future capital investments. In turn, the WUTAT developed a set of guiding principles and delivered a series of recommendations to the City Council; on both rate setting and utility operations.

### ***The WUTAT’s role in conflict management***

As the WUTAT met, deliberated, and advised throughout 2011, it played an important role with regard to conflict management in the rate setting process for the water utility. Three clear roles appear with regard to the WUTAT and conflict management:

#### ***An Independent Body***

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<sup>10</sup> Conflict does not have to be hostile. The authors use the term conflict to reflect potentially competing interests over some scarce set of resources. In this case, the competing interest involves the price of water services. The competing resource is the limited amount of capital available to all parties.

While the City Council and the Raleigh Public Utilities Department may not have directly competing interests, a balance of priorities creates a certain level of conflict throughout rate setting. The WUTAT, in its position as an independent body, serves a unique role of allowing Raleigh and the Council to discuss, in depth, the issues at hand.

As an independent body, the WUTAT theoretically only acts on the priorities granted to it by the City Council. Since these priorities presumably reflect City Council priorities, the WUTAT in turn can question and vet utility priorities based upon the council's. The City Council may then use the analysis of the WUTAT in replacement or in conjunction with its own analysis.

### *A Water Expert*

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The intricacies of operating a public utility encumber the ability of a decision maker to fully understand the necessary management and investment decisions involved in a fully functional system. Since City Council members change over time, it is unlikely that a majority will be experts in the water industry. The WUTAT may instead serve as the water expert. This provides the water utility the opportunity to adequately defend its investment priorities.

### *A Change Agent*

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More than a knowledge arm, the WUTAT has the capacity, through its structure and through Council mandate, to act as an agent for change. Issues such as water reuse, integration with other public agencies, and new utility business models can be difficult points of deliberation within a City Council. The WUTAT, however, has the capacity to ask questions on such issues and get the utility to respond in kind.

Raleigh engaged with the WUTAT by providing the necessary information and staff time to answer questions presented at its meetings. Utility staff would present its own recommendations for issues such as rate increases, water reuse projects, conservation policies, and future water supply needs. WUTAT members would then deliberate with staff over the issues, often agreeing with the staff on views for necessary rate increases.

The WUTAT eventually recommended a 9% rate increase similar to the one proposed by the utility to the City Council. The rate increase would more adequately reflect the true cost of operations; with increases focused on sewer administrative charges thus raising the fixed price of sewer services and increasing revenues from base charges as opposed to volumetric charges<sup>11</sup>. The City Council approved the recommended increase effective July 1, 2011.

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<sup>11</sup> Previously, Raleigh water rates reflected a revenue stream focused on drinking water even though the majority of costs stemmed from sewer service (WUTAT 2012).

Work for the WUTAT continues through the present. While the recommendation for the 9% increase passed, a likely 7-9% increase in rates must occur again in 2012 (WUTAT 2012). The WUTAT has recommended that the City Council establish a permanent advisory board similar to the WUTAT to continue to advise the City Council on utility matters. Such a body would continue the conflict management process already begun by the WUTAT. A complete list of the WUTAT's recommendations may be found in the Appendix section of this paper.

### **Aqua North Carolina: Working with the NC Utilities Commission**

On the 21<sup>st</sup> of January, 2011, Aqua North Carolina filed for a request for a general rate increase with the NC Utilities Commission (Sanford 2011b). The purpose of the rate request lies in Aqua NC's desire to receive what is determined as a "fair" return on equity investment. To understand the nature of this request, and the role of both the Utilities Commission and Public Staff in the rate setting process, it is important to overview the stipulations behind the rate increase.

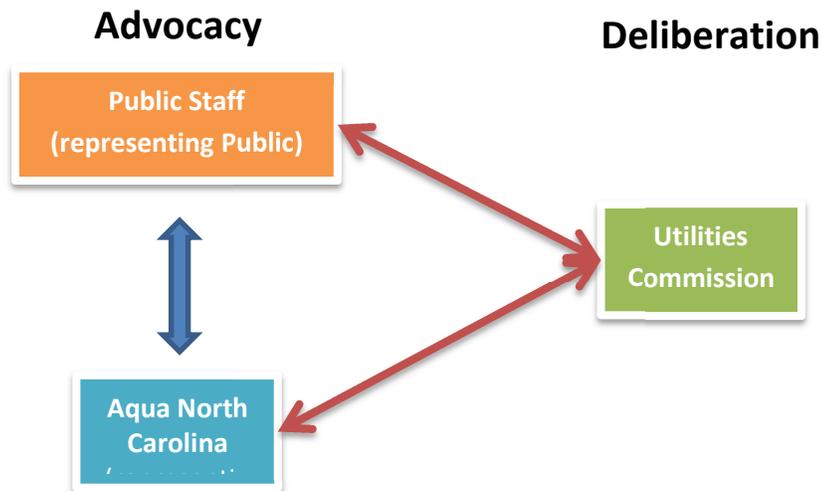
In North Carolina, a privately owned public utility may only make a profit on its equity investment in capital. This means that no profit may be made on debt services (for example, bank loans) or consumption. So while a private utility generates revenue from water consumption, it technically only profits on equity investments. Typically, a private utility will divide financing expenses for capital projects as 50% equity and 50% debt servicing. Only prior spent monies on projects such as pipe replacement or plant upgrades may be recovered in a rate case (Gordon 2011). A private entity operating as a public utility has an incentive to consistently attempt to recover equity investment through multiple rate cases. Additionally, it suggests that the timing of equity investments should occur close to the time of a new rate case, shortening the period between investment and profit.

The role of the Public Staff stands to act as the consumer advocate and question the necessity of expenses and capital improvements incurred by the utility. The Public Staff may contest various assumptions or costs made by the utility. For example, in the most recent rate case, the Public Staff questioned the necessity of a wastewater treatment plant upgrade claiming the excess capacity was an undue burden on ratepayers. Using the information provided by the private water utility, Public Staff, and the public the NC Utilities Commission must make a final decision on the rate case within 270 days of filing.

### ***The System's role in conflict management***

Aqua North Carolina's 2011 rate case proceeding functioned as a three-pronged conflict management endeavor representing three fields of priorities. The private company, Aqua NC, represented the interest of its shareholders; reflecting a desire to maintain a fair return on equity in light of the water services provide to its customers. Public Staff has a mandate to intervene "on behalf of the using and consuming public" (PublicStaff 2010). Finally, the Utilities Commission is responsible to "both the public and utilities" (UtilitiesCommission 2012).

*Figure 1: Conflict Management Structure with Third Party*



As Figure 1 shows, the three actors represent a three-pronged deliberation with Aqua North Carolina at one spectrum, Public Staff at another and the Utilities Commission deliberating between both parties. At some level, this stands very similar to a court proceeding with a judge, defense, and prosecution. This proceeding allows for a complete and transparent vetting of the quality of service and necessity of investments.

At a high level, the role of the Public Staff and the role of the WUTAT stand quite similar. Though the mandates of the two groups differ, both serve a function of questioning, understanding, and vetting utility investments. Both recognize that investment prioritization and rate setting ultimately stands as a priority classification and distribution of scarce resources.

Aqua America and its subsidiary Aqua North Carolina are not new to rate cases (Aqua 2011). While details may change, the general procedures behind each new rate case remain very similar. Throughout these processes, Aqua North Carolina has maintained a series of strategies to help manage its rate cases. A central theme amongst these strategies is that of education. Three strategies mentioned in a conversation with Aqua NC involve communication with the Utility Commission, customers, and legislators (Roberts 2011).

#### *Educating the Utilities Commission*

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Aqua North Carolina would make a point to consistently be in conversation with the Utilities Commission regarding intended actions. The Company also works with the commission to solve complex problems such as taking over small, failing, systems.

#### *Customer Education and Outreach*

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At hearings during the rate case, the Company would talk with attending customers about service issues and educate these customers regarding the Company's policies

### *Legislative Education*

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In areas where Aqua North Carolina is present, the Company would educate legislators as to the necessity of the rate increase and other investments.

In November of 2011, the NC Utilities Commission granted Aqua North Carolina a 10% increase in revenue. This approximately split the difference in findings between the water utility and the Public Staff. While Aqua acknowledges that different rate setting strategies in the future could lead to better returns, it is generally impossible to tell from available information exactly what part of the strategy led to the decision to increase rates by 10% (Roberts 2011). Instead, it is important to consider the elements of strategy that led to an agreement in the first place. To do this, the authors consider commonalities in strategy between the Raleigh and the Aqua NC rate setting processes.

### **Commonalities in Strategy**

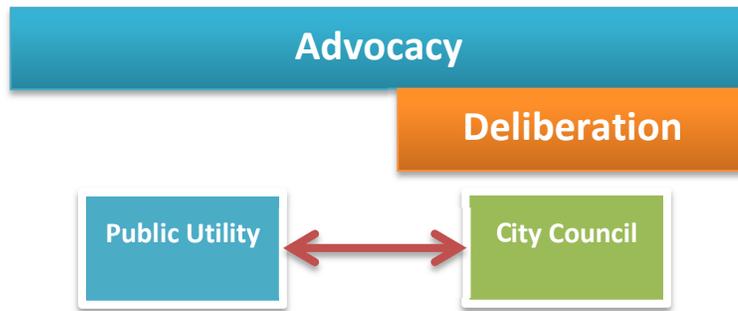
Despite the obvious differences between the Raleigh Public Utilities Department and Aqua North Carolina, it remains possible to draw strong similarities between the two with regard to rate setting strategy. The purpose of highlighting these similarities is twofold:

1. Reveal to the water industry as a whole that common practices exist despite differences in financing, governance, and public support.
2. Demonstrate common themes that may help determine the successful completion of a rate increase

The most poignant similarity between the two case studies incorporates the conflict resolution structure involved. In both cases, two advocates worked together at varying levels of opposition to assist one decision maker in determining a rate. There are clearly three actors with three distinct roles. While it is impossible to say exactly how either rate case would play out sans the WUTAT or Public Staff, it is reasonable to assume that both parties played an integral role in determining the ultimate rate increase.

One can imagine that many water utilities across the United States do not retain this conflict management structure. Instead, a utility may enter into a rate case conversing only with a city council or utility board. Under these situations, the city council or board serves as both the "public advocate" and decision-making body. Further research is required to determine how such a system impacts rate making as compared to the three-pronged system described here.

*Figure 2: Conflict Management Structure without Third Party*



Another commonality between the Raleigh and Aqua NC rate cases stemmed from the independence theoretically imposed upon both the WUTAT and Public Staff. For both the Public Staff and WUTAT to retain its role as advocate and advisor respectively, a level of independence from the utility seeking a rate increase must be assumed. If, for example, the Raleigh City Council saw the WUTAT as merely an extension of the Utility's decision-making, then it will lose confidence in the WUTAT's ability to objectively analyze utility decisions. Similarly, if consumers see the Public Staff as simply an extension of Aqua North Carolina's decision making, then they will lose confidence in it its ability to be seen as a vetting agency of the Company's investment plans.

Finally, both Aqua NC and Raleigh placed great emphasis on the role of education in accomplishing its needed rate increase. For Aqua North Carolina, these educational services took the form of customer and legislative outreach. For Raleigh, education took the form of informing WUTAT members regarding the water industry and the decision making process of the utility.

### Implementing change: Lessons for the future

Whether or not the conflict management approach mentioned here stands beneficial in the long run for helping utilities realize the full cost of water services remains to be seen. However, if utilities do emphasize the three-actor approach mentioned here (two advocates and a deliberator), certain lessons are worth considering.

#### *Staying independent while managing conflict*

As stated earlier, in order for groups such as the WUTAT and Public Staff to function in their respective roles, they must appear to be independent from the utility in question. A situation may arise, as has occurred in the case of the WUTAT, where the independent body approves of the vast majority of recommendations made by the utility. This scenario can cause concern amongst the body making the final rate decision, and with the public. Council members have expressed just such a concern. Some fear that the WUTAT may become simply an amplifier for utility concerns as opposed to a truly independent body. Future iterations of independent bodies similar to the WUTAT would benefit from extra insurances of detachment.

An opposite situation may cause similar problems. If the independent body only opposes the utility in question, the ability of the body to independently vet utility decision making again becomes compromised. For Aqua North Carolina's most recent rate case, strong public pressure resulted in the Public Staff contesting all points raised by the utility. Rate case documents show the most recent rate increase to be the first case not resolved through negotiated stipulation with Public Staff in many years (Sanford 2011a). Sans concerted action, future rate cases stand to be dragged in further contention.

### *Move from technical to political*

Rate setting is not just a referendum on recovering costs; it is a referendum on investment priorities. Yet, rate cases remain highly technical processes. Understanding the data inputs and assumptions remains important for proper pricing. However, a focus on technicalities can come at the expense of broader, more important, policy questions. A role largely unrealized in both rate cases is the ability to use the conflict process to ask serious questions on investment policy and business models. This role has the potential to implement fundamental change in the water utility. It also gives the utility an opportunity to explore investment and business avenues it would have otherwise been unable to pursue.

### *Increase education and outreach to those that matter*

Both the Raleigh and Aqua NC rate cases provided time and opportunity to educate stakeholders. Such education and stakeholder outreach has gained in notoriety amongst the water industry in recent years. Both Los Angeles and Louisville have been successful in increasing rates, despite tough economic times, in part due to deliberate and prolonged stakeholder outreach (Halloran and Jurotich 2012; Baker and Mowery 2012). Developing and institutionalizing ongoing education and outreach could increase the public support necessary to support higher rates.

However, outreach must maintain limits. If the role of an advisory agency such as the WUTAT stands to be an educated group to inform a decision making body, it does not necessarily improve a utility's position to invest heavily in the decision making body's education of the water industry (especially if this body rotates frequently such as a city council). In this scenario, education undermines the actual role of the WUTAT to serve as the knowledge arm of the City Council on matters of water policy and finance<sup>12</sup>.

## Conclusions

It is well known that the next generation of water management decisions must encompass significant capital investment (Anderson 2010; ASCE 2010; EPA 2009; AWWA 2012). Advancements in rate calculations and debt financing to pay for such investments only work if the necessary rate increases occur in parallel. This paper has shown that even dramatically different utilities may maintain strategic similarities in rate setting that help the process move forward. One should not interpret this paper as

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<sup>12</sup> To note: the WUTAT has recommended that the City Council take time through a retreat with the water utility to be educated on utility business (WUTAT 2012). Based on the logic presented in this paper, taking great strides to educate the City Council does not reflect an efficient use of resources. Rather, the Utility should focus education on the WUTAT.

revealing a “best practice” for rate setting strategy; but rather this paper advocates a need for the water industry to work together towards common mechanisms for working through the rate setting process. Thus stated, the experiences of Raleigh and Aqua North Carolina lend key attributes for the water industry to consider when moving towards a common rate setting strategy.

#### *Rate setting as an experience in conflict management*

Understanding the rate setting process for what it is (an exercise in the fair allocation of scarce resources) has the potential to assist a utility in assessing whether its current rate setting procedure fully accounts for this practice. Important to consider here is the role decision-makers play in advocacy. Does the decision making body also play an advocacy role or does a degree of separation exist, as is the case for Aqua North Carolina and Raleigh? In a move towards an integrated strategy for rate setting, assessing the conflict management role of different parties is a fundamental starting point.

However, it would be remiss to ignore the costs associated with such added bureaucracy. The Aqua North Carolina rate setting process cost the company approximately \$0.5 million. The Raleigh Public Utility’s work with the WUTAT cost the utility substantial time in upper management assistance.

#### *Work with rating agencies to include this strategy*

Rating agencies already consider governance when rating municipal utilities on the ability to pay back revenue bonds (Francoeur, Paollicelli, and Hu 1999). For example, Moody’s encourages the use of an independent board for rate setting, noting its advantage of political insulation (Francoeur, Paollicelli, and Hu 1999). Governance and strategy should be considered in parallel by the rating agencies. A utility has limited control over governance while it has much greater potential to shape strategy. Proper strategy could help ensure a utility maintains the ability to increase rates despite tough economic times or unusual circumstances.

The water industry as a whole can benefit from working with rating agencies to systematically consider strategy in rate setting. This does not mean that the industry and rating agencies must agree upon a set “best practice” strategy for rate setting. Instead, considering strategy in rate setting could begin with utilities describing and marking specifics of its strategy to rating agencies and in its accounting.

#### *Consider standardized benchmarking and accounting practices*

A sincere benefit provided by groups such as the WUTAT and the systematic rate procedures faced by Aqua North Carolina is the ability to ask important policy questions regarding a utility’s investment and business strategy. However, arguments and extended discussions over technical details limit the ability to hold programmatic conversations. One way to move past technical issues towards programmatic issues is to standardize the technical questions and data collection throughout the industry. Standard data accounting can allow utilities and decision makers to focus on the direction of the utility instead of the nature of the data. Industry-wide benchmarks can assist decision makers unfamiliar with the water industry towards focusing on utility improvements in relation to top performers.

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## Appendix: WUTAT Recommendations

1. The Council should create a permanent Water Utility Advisory Committee to advise the Council and the Public Utility Department.
2. The Council should conduct an annual workshop with the Water Utility Advisory Committee and the Public Utility Department.
3. The Council should direct the Public Utility Department in consultation with the Water Utility Advisory Committee to complete the preparation of a Strategic Plan by 2014.
4. The Council should benchmark the Public Utilities Department against utilities of similar characteristics.
5. The Council should seek legal assistance in determining how to protect infrastructure replacement reserve funds, revenue stability reserve funds, and other designated reserves funds so that they are only expended for their proscribed and intended uses.
6. The Council should direct the Water Utility Advisory Committee to work with the Public Utility Department to create a cost curve and template to analyze the costs, benefits, risks and rewards of policy or investment proposals.
7. The Council should extend the Environmental Management System (EMS) framework to those departmental programs that are responsible for Public Health, Water Quality, Water Reclamation and future products, not herein envisioned and should maintain National Biosolids Partnership status for biosolids management.
8. The Council should direct the Public Utility Department to conduct a comprehensive water audit consistent with AWWA standards on in 2012.
9. The Council should ensure that all decisions and the practices of the Public Utilities Department have symmetrical equity between and among the city and its merger partners.
10. The Council should direct the Manager, PUD, its merger partners, and the storm water utility in the Public Works Department to develop and fund a strategic communications plan to support public education.
11. The Council should direct PUD to continue to provide technical and financial assistance by supporting its existing water efficiency and conservation programs.
12. The Council should review the work completed by AmeriCorps staff for PUD and establish a program to provide financial assistance to low income customers.
13. The Council and the merger partners should, within the next several years, conduct a comprehensive assessment of alternative water utility governance models.