Washougal Effective Utility Management Assessment
I. Executive Summary pg. 3

II. Introduction: Research Problem and Significance of Research pg. 4
   A. Literature Review pg. 10
      i. SAIC Feasibility Report on Public-Private-Partnership pg. 11
      i. FCS Group Utility Rate Analysis Report pg. 11
      ii. Effective Utility Management Case Studies pg. 12
      iii. Summary of Literature Review pg. 12
   B. Research Questions and Objectives pg. 13

III. Research Methods pg. 15
   A. Data Collection Instrument and Purpose pg. 15
   B. Data Target Population pg. 17
   C. Research Instrument and Sampling pg. 19
   D. Survey Feedback From Target Participants pg. 20

IV. Research Findings pg. 22
   A. Ten Attributes of Effectively Managed Utilities pg. 22
   B. Water Utility Attributes Findings pg. 24
      i. Water Utility Aligned Attributes pg. 25
      ii. Water Utility Misaligned Attributes pg. 26
   C. Wastewater Utility Attributes Findings pg. 27
      i. Wastewater Utility Aligned Attributes pg. 28
      ii. Wastewater Utility Misaligned Attributes pg. 30

V. Conclusions and Recommendations pg. 31
   A. Discussion of the Research Findings pg. 31
B. Utility Attribute Selection for Improvement  pg. 32  
   i. Financial Viability (FV) and Infrastructure Stability (IS)  pg. 33  
   ii. Stakeholder Understanding and Support  pg. 38  
Works Cited  pg. 45  
Appendix A- Research Instrument  pg. 47  
Appendix B- Case Studies Background Information  pg. 51  
Appendix C- Leadership Environment  pg. 55  
Appendix D- Implications for Leadership Projects  pg. 60
I. Executive Summary

The city of Washougal has attempted to undertake a comprehensive review of its utility services over the last decade and all of the initiatives fell short of their original intent. The first utility rate analysis in 2000 never came to fruition and the rate analysis by FCS Group that was initiated in 2007 and completed in 2010 identified revenue requirements for capital improvements but did not include a comprehensive review of the true cost-of-service in delivering water and wastewater goods and services.

A recent public-private-partnership (PPP) analysis undertaken by a private firm fell short of addressing the core issue of identifying the cost of delivering water and wastewater utility services. More significantly, perhaps, the PPP recommendations to outsource operation and maintenance of the utilities have caused a deep rift within the department and a lot of lingering suspicion about hidden agendas. These background conditions have prompted this capstone project study.

The qualitative data generated by utility staff as part of this capstone project will provide further justification to management and the governing body for the need to conduct a comprehensive review of the utility rate design, structure, and true cost-of-service. In order to efficiently and effectively manage the utility, a cost-of-service analysis for the many service programs offered by the utility is a critical first step.

The research findings of this capstone study identified specific utility attributes that the utility staff identified as being important to ensure the effectiveness of the organization. The survey information was used to develop a recommended plan of action for the administrative and political leaders responsible for the policy and management well-being of utility services for the City of Washougal.
II. Introduction: Research Problem and Significance of Research

“What is our level of service? As stated by SAIC in the feasibility report for Public-Private-Partnership options no benchmark assessments or gap analysis was conducted to identify current level of service.”

“The study never identified our current level of service so how do we know what our priorities are and where we can improve as a public utility?”

“Over the last three years we have experienced huge utility rate increases, executed a $15 million dollar bond for capital improvements, and explored public-private-partnership options. We have no direction and leadership is non-existent.”

Utility staff comments on Public-Private-Partnership Feasibility Report completed by SAIC, December 2012.

In March 2011, the Washougal mayor and city administrator asked me to go on special assignment and partner with the community development director on creating a Strategic Plan for the community and municipality. The project is now complete and I am transitioning back into my former role as public works director.

In my nearly two years on special assignment I have grown distant from utility staff. I have also identified a whole host of issues, including how the utility department is deployed, communicates, and how it delivers services to the Washougal community.

Additionally, in August 2012, the city council instructed the city administrator to explore alternative service delivery options for all three of the utilities provided by the city; water, wastewater and storm water. A feasibility report analyzing water and wastewater services was
provided to staff by an engineering consultant in December 2012. The consultant was tasked with analyzing the water and wastewater utility operations and current maintenance programs.

Exploring a potential utility service delivery public-private-partnership (PPP) creates a variety of leadership challenges with respect to our core mission to deliver efficient and effective public utility services. This is especially the case because a public-private-partnership is perceived by the union as a threat to their jobs. The utility rate issue has created an emotionally charged atmosphere internally with the recent feasibility study on outsourcing the utility operations (PPP). External stakeholders are also emotionally charged due to the escalating rates that have been implemented across the board for all customer classifications within the service area. Balancing competing internal and external interests is the first in a long series of steps that will need to be undertaken by various parts of the organization and governing body.

Recurring themes from utility customers included the ratepayers assuming that they were picking up the tab of escalating benefit and wage packages that the employees were enjoying over the last several years and a lack of efficiency and effectiveness by leadership in addressing a “broken model” in public service. Wages and benefits are a small part of the equation in analyzing fixed costs carried by the utility enterprise funds, but a comprehensive review of the full portfolio of costs is examined further in the cost-of-service action plan for financial viability and infrastructure stability in section III of this report.

In reviewing the 2012 City Trends Report generated by the Association of Washington Cities (AWC) many of the same issues facing Washougal are prevalent among other municipalities throughout the state of Washington. In 2012 the AWC undertook a major study of issues facing local municipalities. The AWC sent an electronic survey to elected officials, administrators, managers, and high ranking department heads from the 281 cities affiliated with
AWC (Association of Washington Cities, 2012 City Trends Report, *Evaluating the municipal landscape with its critical shifts, challenges and opportunities*, p. 5). The survey documented a common concern by local officials regarding the need for achieving increased efficiency in the delivery of program services to offset the pressures on cost increases.

In response to economic pressures to reduce operating costs, the AWC report concluded that there is heightened interest by local officials in exploring efficiency initiatives, including new partnerships and service models (AWC, 2012, p. 7). Similar to the other municipalities within Washington, the city of Washougal’s governing body pressed the administration to take a closer look at the efficiency and effectiveness of its water and wastewater utility services after implementing significant annual rate increases in 2011 ranging from 10 percent to 28.5 percent (City of Washougal Water, Sewer and Storm water Utility Rate and System Development Charge Study, FCS GROUP, November 2010; pp. 22). The rate analysis provided by FCS GROUP was scoped to provide a five-year horizon for utility rate increases through 2015.

Table 1 below illustrates the recommended increases made by FCS GROUP. These increases were ratified by the Washougal city council in December 2010 with an ordinance built-in escalator to raise rates through 2014. The cumulative increase over the life of the rate analysis covers the cost to construct capital improvements and to replace and repair failing infrastructure. As illustrated in Table 1 below, the cumulative rate increase in bold red indicates the need for increases ranging from 85.9% to 152.8% over five years. These types of increases are not easy for the current governing body to implement, especially in the midst of an economic recession.
Table 1- City of Washougal Five-Year Utility Rate Increases (2011-2014)

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Annual %</td>
<td>13.5%</td>
<td>13.5%</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Cumulative</td>
<td>13.5%</td>
<td>28.8%</td>
<td>45.6%</td>
<td>64.5%</td>
<td>85.9%</td>
</tr>
<tr>
<td>Sewer Annual %</td>
<td>28.5%</td>
<td>27.5%</td>
<td>27.5%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Cumulative</td>
<td>28.5%</td>
<td>63.9%</td>
<td>108.9%</td>
<td>129.8%</td>
<td>152.8%</td>
</tr>
<tr>
<td>Storm Annual %</td>
<td>14.5%</td>
<td>14.5%</td>
<td>14.5%</td>
<td>14.5%</td>
<td>14.5%</td>
</tr>
<tr>
<td>Cumulative</td>
<td>14.5%</td>
<td>31.1%</td>
<td>50.1%</td>
<td>71.9%</td>
<td>96.8%</td>
</tr>
</tbody>
</table>

Table 1: (City of Washougal Water, Sewer and Storm water Utility Rate and System Development Charge Study, FCS GROUP, November 2010; pp. 22-23, 28).

The water utility enterprise fund includes projections for the debt service on capital improvements already constructed as well as for capital improvements scheduled to be constructed during the five year rate analysis horizon. The proposed water rate increases also created a system reinvestment fund that set aside reserves for future capital improvements rather than financing capital improvements with revenue bonds. The adopted sewer rate increases also created a system reinvestment less aggressive than the water utility to mitigate draconian rate increases.

The storm water utility was created in 2007 and carried no debt into the five-year rate analysis that was conducted by FCS GROUP. The rate increases adopted also anticipate the need to construct capital improvements based on regulatory requirements by the federal and state government for phase two municipalities that hold National Pollution Discharge Elimination System (NPDES) permits.
In response to political pressures from customers, the elected body amended the utility rates in December 2012 to reduce both the water and wastewater rates through 2015. Water rates were lowered by increasing the system development charges (SDC) for single family residential connections and wastewater was reduced by leveraging unrestricted general fund reserves in the amount of $500,000 to mitigate continued utility rate increases. In short, the enterprise funds were infused with capital from the general fund to mitigate on-going rate increases, which is the exact opposite of how municipal governments typically function in trying to extract revenue from the enterprise funds (utilities) in a legal and appropriate manner. The City uses SDC revenue to construct new public facilities that allow for growth in the community, and to pay for debt on previously constructed growth-related facility improvements.

The public-private-partnership recommendation contained in the feasibility report came as a surprise to many internal and external stakeholders (citizens). However, the report surveying municipalities by Association of Washington Cities (AWC) confirms a state-wide trend in the direction of embracing these partnerships well beyond the Pacific Northwest. The report included answers to the following specific question in Table 2: How do you think these traditional city services will be delivered in your community a decade from now? The results are summarized in Table 2 below (Association of Washington Cities 2012).
Table 2 clearly illustrates (see the highlighted cells) that utility service providers will be pressed to find additional efficiencies and become more effective by considering alternative ways of delivering water and sewer services. These alternatives might include public-private partnerships and intergovernmental agreements. The trend survey in Table 2 indicates that 60 percent anticipate no change in the way they deliver water and sewer services to their customers. More importantly, almost 1 in 4 anticipate that they will be delivering these utility services in a much “different way” than they currently provide them. The responses from the trend survey conducted by AWC suggests that Washougal’s utility service framework will look much different a decade from now. But from a leadership point of view, how can this change be managed most effectively?

Currently Washougal has 5,000 utility service connections that are funded largely from fee revenues. Similar to other small cities that lack economies of scale, the city will be challenged to generate enough revenue to build and maintain infrastructure that meets customer needs and meet regulatory requirements administered by the Washington State Department of Health and Ecology (AWC, 2012, 26).

During the past two years, considerable changes have occurred within the city of Washougal’s water and wastewater utility department. There have been significant and
continuous utility rate increases with more on the horizon. The department has added a city engineer to the utility management team, which will potentially result in scope of work augmentations within the department. Subsequent to receiving SAIC’s feasibility report recommending outsourcing, the utility team has lost its sense of direction, identity, and priorities. There seems to be limited vision and a lack of strong and reliable leadership willing and able to sustain the utility department’s future and provide support for the many important services we provide to the community.

Fundamental choices have been made by legislative and executive branches with respect to the basic services that the utilities department needs to provide and how they should be organized. The trail of choices made by the organization was to self-assess utility rate needs without considering external audit validation to identify long term revenue needs of the utility. The utilities true cost-of-service has been organized and ran internally by utility staff without consideration for an outside source to enter and make an unbiased assessment, leaving the utilities to run blind without accurate data and information.

In response to the background information summarized above, the researcher decided to undertake an initiative to assess the current effectiveness of utility management as the first step in restoring a sense of focus and confidence by employees in the utilities department and laying the groundwork for future changes that may be necessary. In the section that follows I will summarize the results of my literature review to obtain assistance in guiding and shaping my utility management assessment strategy.

**Literature Review and Preliminary Research**
One of the first steps I took was to conduct a literature review of the following three case studies, each of which utilized the primary survey companion document provided by the consortium on effective utility management in April 2009:

- Massachusetts Water Resources Authority (MWRA)
- Green Bay Municipal Sewer District (GBMSD)
- Gwinnett County Department of Water Resources (GCDWR)

(Water & Wastewater Utility Management Case Studies, A Companion Document to the Primer for Effective Utility Management, April 2009, p.7)

Additional case study information can be found in Appendix B for further background on how the primer survey has been used to enhance utility service efficiency and effectiveness.

The second step in my literature review was to examine the feasibility report on public-private-partnership (PPP) alternatives provided by SAIC in December 2012. The third and final step of my literature review consisted of an examination of the report offered by FCS GROUP on the utility rate analysis conducted in 2010. These three study areas are important for fully understanding the drivers in escalating utility rates and the impact that these increases have had and will continue to have in the future.

The cost drivers in FCS Group’s analysis indicated limited system reinvestment reserves for funding future capital improvements and covering existing debt service from capital improvements that had already been constructed and put into service. The feasibility report offered by SAIC in 2012 focused on operation and maintenance which were not identified by the utility rate analysis as a significant cost driver in escalating utility rates. The PPP initiative did not address CIP cost drivers but it did provide entry level efficiency recommendations that could be pursued to further enhance alignment between management and staff within the utilities and
thereby achieve some potential cost savings. These opportunities are discussed further in Appendix D, “Implementing the Washougal Strategic Plan”.

In reviewing the case studies, the PPP feasibility report, the rate analysis report and other utility-related literature, the researcher was hoping to identify a theoretical framework or a strategic leadership strategy for linking the short-term goals of the project with the long-term strategic needs of the organization. However, I was unable to effectively accomplish this task until identifying a framework to further comprehend the literature being reviewed (Kumar, 2005 39).

A further literature review identified an existing survey instrument that seemed to meet the short-term goals of collecting reliable assessment information on the current state of Washougal utility operations. In addition to collecting base-line information necessary to undertaking a cost of service study, the survey had the additional advantage of building staff ownership of the problem. (Kumar 2011, 20).

**Summary of Literature Review and Preliminary Research**

The combination of escalating utility rates, efficiency analysis provided by SAIC in the PPP feasibility report, and a lack of leadership within the utility department led the researcher to conclude that an important first step was to conduct a base-line assessment of the City of Washougal’s current utility assets and needs. This strategy was reinforced by the governing body’s decision to not outsource the maintenance and operation of the water and wastewater utilities. This decision placed more pressure on the organization to take a more pro-active initiative in identifying efficiency strategies. It is clear that utility managers in Washougal will need to identify strategies to deliver services “in a different way”, especially given the escalating
projected rate increases needed to run the organization, but an absence of political will to implement these increases by the elected officials.

**Research Questions and Objectives**

The proposed study sought to answer the following three research questions:

1. What are the current conditions of the 10 assets/attributes ranked by the utility employees and managers?
2. How do department employees rank the importance of each of the 10 attributes identified in the consortium effort?
3. How well does the existing management structures and processes support the core attributes assessed by utility department staff?

The above three research questions emerged from the literature review, which emphasized the importance of collecting base-line data on utility priorities and the current state of operations and capital needs. The research questions have been designed to identify any differing perceptions among staff with respect to these basic issues. This information can then be compared to the existing information from the FCS Group and SAIC reports. This information should inform the researcher on the condition of the attributes, the importance of each attribute, and the specific focus needed within the utilities that will be pursued further to align management with target participant ranking. In addition to using this information to improve organizational operations, it can also be used to identify leadership strategies for building better trust between management and employees within the organization. Finally, the information can be used to build a longer-term strategic and operating plan for the organization. Currently, the city of Washougal’s water and wastewater utilities does not have a strategic plan or business plan
in place. Many of the case studies researched used the survey I have identified for this study to update their existing strategic plans. They have also used it to develop a business plan, team-building and organizational change initiatives.
III. Research Methods

This section will provide further detail on the data collection instrument and the purpose it serves in conducting the research. The section describes sampling criteria and the target population identified to complete the primer survey.

Data Collection Instrument and Purpose

The primer survey has been utilized by a wide range of utilities to assist them in identifying the condition of their attributes, developing priorities, and improving performance of the utility in multiple service areas. The website hosted by the coalition partners provides a link to case studies that have utilized the primer to bring focus to their utility operations. The Effective Utility Management Consortium (EUMC) is referenced throughout this document in acronym form (Effective Utility Management Consortium 2008).

The EUMC created a survey framework that was intended to help utility managers identify and address their most pressing needs. The survey “primer” identified by the EUMC includes the following three crucial steps:

1. **Assess Current Conditions** - The condition assessment utilizes a scale of 1-5, where 1 is an effective and systematic approach that is achieving goals consistently, and a 5 identifies no system or framework in place for addressing the attribute. A specific example of the scale could be a wastewater treatment plant that habitually violates its permit and discharges untreated wastewater to a receiving water body. The utility would receive a Product Quality condition assessment of 4 or 5; either no system in place or it is addressed as a specific need arises. On the opposite end of the spectrum, a wastewater plant that incurs no violations and consistently meets its permit requirements on a
monthly basis would potentially receive a 1 or 2 for the condition assessment for the

*Product Quality* attribute.

2. **Rank Importance of Attributes** - The EUMC focused on attributes that would be relevant in any utility system regardless of size, budget, or circumstances facing the utility. It is important to note that the survey participants are asked to rank attributes from 1 to 10 based on importance, and a scale will not be provided. The most important (self-assessed) attribute will be ranked 1, the least important attribute will receive a 10. It will be challenging for the survey participants to prioritize their rankings since all are ultimately important for the effective management of the utility. Assessing the importance of each attribute as it pertains specifically to Washougal’s water and wastewater utilities will be a crucial component in gathering primary data.

3. **Management Alignment** - Once the condition assessments of the attributes are ranked and the importance ranking of each attribute is completed by the target participants, the summary data can be used to identify any alignments or misalignments among survey participants. Table 3 below is an example matrix that shows the utility attribute condition assessment and importance ranking from a primer survey participant. Table 3 is not a product of a Washougal assessment but was provided by the consortium as an example (Effective Utility Management Consortium Primer Survey, 2008 p 24). In the example, four attributes were identified to explore further in improving utility effectiveness.

- CS- Customer Satisfaction
- FV- Financial Viability
- SS- Stakeholder Support
- ED- Employee Development and Leadership
The researcher will use the example in Table 3 to assess the key attributes of the operation of Washougal’s utilities. The researcher will combine the primer survey scores from each of the nine target participants completing the survey and average them by dividing by the total submittals. Attributes in the “highlighted box” indicate that the utility should consider taking further action based on utility staff, management, and administration that have provided their condition assessment and importance ranking for each attribute.

**Data Target Population**

The data collected was comprised of both primary and secondary research. The primary research was collected by using the primer survey provided by the EUMC. The secondary
research includes case studies of water and wastewater utilities that have used the primer survey to update strategic plans, regain focus, and identify priorities in service delivery. The following nine employees within the Washougal water and wastewater department were identified to participate in the condition assessment and attribute ranking process.

- City Engineer- 18 months of service
- Assistant Public Works Director- 6 years of service
- Water-Wastewater Manager- 12 years of service
- Water Supervisor- 10 years of service
- Water Quality Specialist- 5 years of service
- Wastewater Supervisor- 11 years of service
- Wastewater Lead worker- 7 years of service
- Finance Director- 3 years of service
- Public Works Director- 14 years of service

The targeted participants were identified based on their professional role within the utility service department at the city of Washougal. The sampling group was chosen because of a combination of their technical/professional expertise and their positional authority in the organization (Kumar 2011 207). Many of the target participants who were identified are experts in their specific field and scope of work within the utility department. For example, the researcher intentionally identified supervisors and lead workers within the city of Washougal utilities in an attempt to strike a balance between administration, management, and field staff assessment of the utility attribute conditions and importance assessment. Without supervisors and leads participating to help identify misalignments, the project would ultimately be self-serving for administration and management.
No specific saturation point was identified but the researcher acknowledges that by not having additional external and internal stakeholders participate in the survey that additional data and information is not provided. However, this kind of data from external stakeholders is not in alignment with the purpose of this stage of my research. It will become relevant in subsequent phases of this project. It is important to note that the research instrument is designed in a manner where it could be utilized with future assessment updates that would capture information from a larger sample size if the prospective environment warrants additional participation from internal and external stakeholders.

**Research Instrument and Sampling**

The research instrument is designed to provide a benchmark assessment of the Washougal water and wastewater utilities department. The research instrument is attached as Appendix A of this report. The instrument has been developed by six major water and wastewater associations and the U.S. Environmental Protection Agency (EPA). In 2007, the group entered into a historic agreement in which they pledged to support effective utility management collectively and individually throughout the water and wastewater sector and to develop a joint strategy to identify, encourage and recognize excellence in water and wastewater utility management (Effective Utility Management Consortium, 2008).

Prior to routing the primer survey and background information on the benchmark assessment to the target participants, the researcher requested and met with each participant individually. The meetings were intended to familiarize the respondent with the purpose and content of the survey, documents, and other information that is crucial in completing the survey exercise. As discussed in the case study portion of the project later in section III, the primer survey was delivered electronically from management to utility staff. However, due to
miscommunications on expectations in completing the survey the data received was inaccurate and stalled the process of identifying utility attributes that needed further attention. Given that the timeframe for completing the survey was limited, the researcher met individually with each of the nine target participants. The intent was to clearly communicate instructions, expectations, and importance of the primer survey in identifying future priorities and rebuilding the culture of trust that has diminished over the last several years.

**Survey Feedback from Target Participants**

The researcher did not share the capstone proposal with the participants but provided a brief overview on why the primer survey was the chosen data instrument for enhancing communication with utility staff. After discussing escalating utility rates, public-private-partnership initiatives that challenged working relationships and the addition of a city engineer into the utility department, the researcher received an overall positive feedback on the intent of the project. The researcher also gathered the following crucial information during the pre-survey meetings to further inform the process in qualitative terms.

- Utility staff recommended that, even though line staff would not be participating in the primer survey, it may prove beneficial to gain their feedback in a face-to-face meeting. The results could be presented to demonstrate the input from the nine participants in the survey to identify any further alignments or misalignments between management and line staff.

- Utility staff also identified the potential need to have the survey filled out separately for the two utilities. Four of the participants are assigned specifically to a utility. Both the water supervisor and water quality technician agreed that they would base their assessment on the water utility, and the wastewater supervisor and lead worker agreed to
do the same in the wastewater utility. The Water/Wastewater Supervisor, City Engineer, Assistant Public Works Director, and Public Works Director agreed that since their scope of work for each job description covered both utilities that they would complete the primer survey separately for each utility to provide additional specificity in conducting a condition assessment and importance ranking for each attribute. Table 1 provides the scheduled utility rate increases for both utilities and it clearly illustrates a significant difference between water and wastewater utility rates over the five-year horizon.
IV. Research Findings

In this section I will report the findings of my research. The section is divided into three subsections starting with definitions of each utility attribute identified by the EUMC. The next section provides an overview of the water utility survey results and describes each attribute’s location within the matrix and what its designation implies. Included in this section are the research findings for the water utility describing the attributes that are aligned, attributes that narrowly missed being actionable items at this time, and misaligned attributes that are the core information needed to pursue improvement within the water utility.

The final section provides an overview of the wastewater utility survey results and describes each attributes location within the matrix and what its designation implies. Included in the final section are the research findings for the wastewater utility describing the attributes that are aligned, attributes that narrowly missed being actionable items at this time, and misaligned attributes that are the core information needed to pursue improvement within the wastewater utility.

Ten Attributes of Effectively Managed Utilities Identified By the EUMC

The ten utility attributes identified by the EUMC are provided below in simple form with the comprehensive definitions available in Appendix A. The survey participants reviewed the comprehensive attribute definitions in preparation of participating in the survey exercise.

Product Quality (PQ): Produces potable water, treated effluent, and process residuals in full compliance with state and federal regulations.
Customer Satisfaction (CS)- Provides reliable, responsive, and affordable services in line with explicit, customer-accepted service levels.

Employee & Leadership Development (ED)- Recruits and retains a workforce that is competent, motivated, adaptive, and safe-working.

Operational Optimization (OO)- Ensures ongoing, timely, cost-effective, reliable and sustainable performance improvements in all facets of its operations.

Financial Viability (FV)- Comprehends the full life-cycle cost of the utility and establishes and maintains an effective balance between long-term debt, asset values, and operations and maintenance expenditures and revenues.

Infrastructure Stability (IS)- Comprehends the condition of and costs associated with critical infrastructure assets. Maintains and enhances the condition of all assets over the long-term at the lowest possible life-cycle cost.

Operational Resiliency (OR)- Ensures utility leadership and staff work together to anticipate and avoid problems.

Community Sustainability (SU)- Is explicitly cognizant of and attentive to the impacts its decisions have on current and long–term future community and watershed health and welfare.

Water Resource Adequacy (WA)- Ensures water availability consistent with current and future customer needs through long-term resource supply and demand analysis.

Stakeholder Understanding & Support (SS)- Engenders understanding and support from oversight bodies, community and watershed interests, and regulatory bodies for service levels, rate structures, operating budgets and capital improvement programs.
Water Utility Attributes Research Findings

The primer survey matrix below in Table 4 shows the survey results of the target participants in assessing water utility attributes. The attributes that are in the cells designated Customer Satisfaction (CS) and Product Quality (PQ) represent functions that are being performed well and deemed important by the survey participants. The attributes that are in the cells designated Stakeholder Support (SS), Operational Optimization (OO), and Operational Resiliency (OR) are identified as somewhat important but meeting expectations based on the rating provided by survey participants. These three attributes (SS, OO, OR) narrowly missed being actionable items as shown below in Table 5. The attributes that are in the cells designated Community Sustainability (SU) and Water Resource Adequacy (WA) are not important attributes to the survey participants to focus on at this time regardless of their current performance.

The attributes that reside in the three cells that have been highlighted are attributes that need to be given high priority according to the survey participants. Financial Viability (FV), Infrastructure Stability (IS), and Employee Development (ED) in the highlighted cells are the key results to the research survey to focus on in pursuing effective utility management. In the next three subsections that follow I will discuss in greater detail the survey results that produced this grouping of attributes for the water utility.
### Water Utility Aligned Attributes

Seven target participants submitted self-assessments of the water utility based on the ten attributes identified by the EUMC. Two specific attributes emerged as being especially important and currently are in alignment with utility priorities based on the results from the primer survey of the target participants.

1. **Product Quality (PQ)** - The primer survey descriptors emphasize regulatory compliance and consistency in the product delivered to the customer. Potable water delivered to utility customers consistently exceeds state and federal requirements. Water is extracted from the Troutdale aquifer at a production depth of 100 feet below the surface and is high quality water based on industry standards. The water is treated with sodium hydroxide to raise the pH and treated with disinfectant prior to distribution.
2. **Customer Satisfaction (CS)**: Washougal’s Waste Water Utility has especially focused on customer service over the last two years in response to rate-payer concerns over significant increases in utility rates. Staff strives to provide reliable and responsive services on a consistent basis. Based on narrative feedback through the primer survey and follow-up conversations, management may have sacrificed other functions by pulling them off assignments to ensure that customer satisfaction is consistently achieved.

The results in Table 5 were determined by taking the primer survey results from the seven participants and calculating the average by dividing the scores by the total participants. It is important to note that the attribute condition assessment and importance ranking scores are rounded to the closest whole number as illustrated in the Table 4 matrix. The attributes identified below are potentially candidates to address in future management assessment and performance improvement initiatives. Conditions and priorities can change rapidly making it crucial to be aware of attributes that are hovering close to action levels within the utility assessment.

**Table 5-Water Utility Attributes Narrowly Missing the “Yellow Box”**

<table>
<thead>
<tr>
<th>Water Attribute</th>
<th>Condition Assessment Avg.</th>
<th>Importance Ranking Avg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholder Support (SS)</td>
<td>3.4</td>
<td>5.6</td>
</tr>
<tr>
<td>Operational Optimization (OO)</td>
<td>3.3</td>
<td>5.9</td>
</tr>
<tr>
<td>Operational Resiliency (OR)</td>
<td>2.6</td>
<td>6.0</td>
</tr>
</tbody>
</table>

**Water Utility Misaligned Attributes**

Target participants identified three attributes that reside in the “yellow box” and may need further attention and focus by the utility as shown in Table 6 below. The results in Table 6
were determined by taking the primer survey results from the seven participants and calculating the average by dividing the scores by the total participants. The condition assessment and importance ranking were not weighted and all surveys were valued equally regardless of positional authority within the utility. This information is summarized in Table 6 below and is the core information needed to pursue improvements within the water utility.

**Table 6-Water Utility Misaligned Attributes**

<table>
<thead>
<tr>
<th>Water Attribute</th>
<th>Condition Assessment Avg.</th>
<th>Importance Ranking Avg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Viability (FV)</td>
<td>4.1</td>
<td>4.0</td>
</tr>
<tr>
<td>Infrastructure Stability (IS)</td>
<td>3.1</td>
<td>3.9</td>
</tr>
<tr>
<td>Employee Development (ED)</td>
<td>2.7</td>
<td>4.9</td>
</tr>
</tbody>
</table>

**Wastewater Utility Attributes Research Findings**

The primer survey matrix below in Table 7 shows the survey results of the target participants in assessing wastewater utility attributes. The attributes that are in the cells designated Product Quality (PQ), Customer Service (CS) and Operational Resiliency (OR) represent functions that are being performed well and deemed important by the survey participants. The attributes that are in the cells designated Employee Development (ED) and Operational Optimization (OO) are identified as somewhat important but meeting expectations based on the rating provided by survey participants. These two attributes (ED, OO) narrowly missed being actionable items as shown below in Table 8. The attributes that are in the cells designated Community Sustainability (SU) and Water Resource Adequacy (WA) are not important attributes to the survey participants to focus on at this time regardless of their current
performance. The attributes that reside in the three cells that have been highlighted are attributes that need to be given high priority according to the survey participants. Financial Viability (FV), Infrastructure Stability (IS), and Stakeholder Understanding & Support (SS) in the highlighted cells are the key results to the research findings to focus on in pursuing effective utility management. In the next three subsections that follow I will discuss in greater detail the survey results that produced this grouping of attributes for the wastewater utility.

Table 7: Wastewater Utility Attribute Overall Ranking By Target Participants

<table>
<thead>
<tr>
<th>Rating</th>
<th>Higher Achievement</th>
<th>Lower Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PQ</td>
<td>CS</td>
</tr>
<tr>
<td>2</td>
<td>IS</td>
<td>FV</td>
</tr>
<tr>
<td>3</td>
<td>ED</td>
<td>OO</td>
</tr>
<tr>
<td>4</td>
<td>SS</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Wastewater Utility Aligned Attributes

Seven target participants submitted self-assessments of the wastewater utility based on the ten attributes identified by the EUMC. Three specific attributes emerged as being especially important and currently are in alignment with utility priorities based on the results from the primer survey of the target participants.
1. **Product Quality (PQ)** - The Publicly Owned Treatment Works (POTW) that is commonly referred to as the wastewater treatment plant complies with permit requirements on a regular basis and meets or exceeds all regulatory requirements administered by the Washington State Department of Ecology (DOE). The National Pollution Discharge Elimination System (NPDES) permit stipulates pretreatment and secondary treatment to wastewater prior to being discharged into the Columbia River. The city of Washougal has invested significant capital in its mechanical plant in the last 15 years to improve water quality prior to being discharged to the Columbia River.

2. **Customer Satisfaction (CS)** - Customer service for the wastewater utility in the collection system equates to “no news is good news” in ensuring that the collection system and its pump stations are functioning properly and not experiencing customer failures where wastewater is surcharged into customers' facilities. One other critical component of customer service is when failures do occur the staff expressed the importance of an expedient and passionate response, and the need to gather as much information as possible to make sure that a potential public health and safety issue is handled in the utmost professional manner. During maintenance of mainlines, manholes, and pump stations staff has interface with customers and are expected to conduct business in a professional manner.

3. **Operational Resiliency (OR)** - Utility leadership and staff have worked diligently to improve telemetry controls on remote wastewater lift stations to avoid wastewater overflows and failures. The wastewater utility has also undertaken recently a proactive program to flush wastewater mainlines to avoid failures from neglected maintenance.
It is important to note that the following three attributes in Table 8 below narrowly missed residing in the highlighted area. Customer Satisfaction (CS) and Employee Development (ED) are potentially candidates to address in the future effective utility management assessment initiatives. Conditions and priorities can change rapidly making it crucial to be aware of attributes that are hovering close to action levels within the utility assessment.

**Table 8- Wastewater Utility Attributes Narrowly Missing the “Yellow Box”**

<table>
<thead>
<tr>
<th>Wastewater Attribute</th>
<th>Condition Assessment Avg.</th>
<th>Importance Ranking Avg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Satisfaction (CS)</td>
<td>2.4</td>
<td>4.3</td>
</tr>
<tr>
<td>Employee Development (ED)</td>
<td>3.1</td>
<td>5.7</td>
</tr>
</tbody>
</table>

**Waste Water Utility Misaligned Attributes**

Table 9 below provides a summary of the three attributes identified by the survey participants in the wastewater utility that reside in the primer survey highlighted area for potential immediate action. As illustrated in Table 7, the three attributes in the highlighted area have been identified by the target participants as needing further attention to gain focus on utility priorities in the immediate future.

**Table 9- Wastewater Utility Misaligned Attributes**

<table>
<thead>
<tr>
<th>Wastewater Attribute</th>
<th>Condition Assessment Avg.</th>
<th>Importance Ranking Avg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure Stability (IS)</td>
<td>3.1</td>
<td>4.3</td>
</tr>
<tr>
<td>Financial Viability (FV)</td>
<td>3.3</td>
<td>4.9</td>
</tr>
<tr>
<td>Stakeholder Support (SS)</td>
<td>3.6</td>
<td>5.1</td>
</tr>
</tbody>
</table>
V. Conclusions and Recommendations

In this section I will discuss the research conclusions and present recommendations in pursuing effective and efficient utility management at the City of Washougal. This section includes three subsections that further explore the research findings, focus on the selection of utility attributes for improvement, and an action plan to immediately address low performance in attributes that have been identified by the target participants and chosen by the researcher to pursue further.

Discussion of the Research Findings

A follow-up meeting was held with the survey participants to discuss the primer survey results on April 23, 2013. Based on feedback provided by the participants, the researcher reached the following conclusions:

1. Develop a scope of work to request proposals to solicit cost-of-service professional services from the private sector to identify the pressing financial impacts of the water and wastewater utilities. Infrastructure Stability (IS) was identified by the primer survey participants as source of concern and is directly related to the financial viability of both the water and wastewater utility.

2. Stakeholder Understanding and Support (SS) has been identified as a core priority of both the water and wastewater utility. The researcher will develop an action plan to address the disconnect that is currently prevalent between customers, elected officials, and utility staff.
3. The target participant group also came to consensus on pursuing Employee Leadership and Development (ED) at the conclusion of the cost-of-service study. This specific attribute resided in the highlighted area for water utility participants and there was agreement to address it directly in future primer survey updates.

**Utility Attribute Selection for Improvement**

The survey participants for both the water and wastewater utility identified Financial Viability (FV) and Infrastructure Stability (IS) as high priority attributes that are not performing to stakeholder expectations. In reviewing both of these attributes in further detail, a direct correlation exists between the two attributes in understanding the full life-cycle cost of the utilities. Financial Viability (FV) establishes and maintains an effective balance between long term debt, asset values, operations and maintenance expenditures, and operating revenues. Infrastructure Stability (IS) is the condition of and costs associated with critical infrastructure assets. The researcher accepts the results as immediate leadership priorities within both utilities and proposes to address both of these underperforming attributes in a cost-of-service study.

Stakeholder Understanding and Support (SS) attribute was identified as high priority within the wastewater survey results and narrowly missed being a high priority within the water utility. Consensus was built during the post-survey workshop with participants agreeing that Stakeholder Understanding and Support (SS) needed to be pursued further. Conducting a cost-of-service analysis to address Financial Viability (FV) and Infrastructure Stability (IS) without engaging stakeholders on the purpose and intent of the study could create additional issues with unintended consequences. An action plan will be designed to address the Financial Viability (FV) and Infrastructure Stability (IS) attributes that have been identified as high priority and currently deficient by the utility management and maintenance team. The Financial Viability
(FV) and Infrastructure Stability (IS) action plan serves as the primary instrument to address deficient attributes and is supported by the Stakeholder Understanding and Support (SS) secondary action plan. The cost-of-service study informs the utility on what it needs to do to address its financial and infrastructure stability issues; the stakeholder support secondary action plan informs customers of the recommendations identified by the cost-of-service study provided by the financial consultant. The cost-of-service study will need to be completed and clearly communicated to the elected body which will serve as a tool to inform stakeholders within the water and wastewater utility of the priorities identified by staff and solidified by the financial consultant performing the cost-of-service study.

**Financial Viability and Infrastructure Stability Action Plan**

There was valuable information gained from the primer survey and interviews leading to combining two attributes that were identified by both the water and wastewater utility teams. Financial Viability (FV) and Infrastructure Stability (IS) will be combined into a single action plan since they have similar measures associated with their attribute definition provided by the EUMC.

In referencing FCS GROUP’s rate analysis report provided in 2010, a key “cost of service” analysis element was left out of the professional service agreement. It was determined at the completion of the rate study that the city did not maintain detailed billing system data by customer class (single family, multi-family, and commercial) that would be adequate to perform reliable cost of service analyses or to design alternative rate structures (City of Washougal Water, Sewer and Storm water Utility Rate and System Development Charge Study, FCS GROUP, November 2010, p. 3).
The cost of service study is crucial as a prerequisite to informing the financial viability and infrastructure stability of the utility. Follow-up meetings with the finance director and other key members of the utility team were held to design a cost of service scope of work that will further inform our financial viability status. The revised scope of work is strategically crafted to identify the specific needs of the utility while taking the primer survey data collected into consideration. The request for proposal is designed to identify qualified firms to consider the purpose of the project, our background as a utility, and what the utility wishes to accomplish in conducting the analysis. Significant effort and research was conducted to produce a proposal that aligns with the current needs and priorities of the water and wastewater utilities.

The research findings for both the water and wastewater utility identified the financial viability attribute as misaligned and needing immediate attention to start the process of pursuing alignment among stakeholders. The city adopted a five-year schedule of rate adjustments (2010–2015) for each utility using the existing rate structures. Washougal is now interested in moving forward with a cost-of-service and rate design study for the water and sewer utilities. The cost-of-service analysis will assign “cost shares” and establish “equity” for water and wastewater system customers based on customer class use of and demand on the infrastructure. The rate design will recommend rate structure modifications reflective of cost-of-service findings and policy objectives for rate stability, customer equity, efficiency of use, and administrative practicality. Given the time lapse from the previous study, the revenue requirement forecasts should be updated to reflect actual financial data and current costs for the water and sewer utilities prior to completing the cost of service analysis and rate design elements.

The researcher designed the cost of service scope of work with assistance from the city of Washougal’s Finance Director and Assistant Public Works Director over the course of several
weeks after reviewing the data collected from the primer survey. The results from the primer survey completed by key staff members served as a catalyst to convince administration and stakeholders close to the project that a cost-of-service study is warranted, and long overdue. The project is also supported by the Washougal Strategic Plan implementation initiative provided in Appendix D.

The following tasks identified by the researcher and utility management team need to be performed in the cost-of-service study. To further pursue Financial Viability (FV) and Infrastructure Stability (IS) attributes identified by staff as important and needing improved performance, specific tasks have been identified to provide a comprehensive review of programs and services within the current portfolio of activities within the water and wastewater utilities.

**Utility Account Audit.** Based on information provided in the 2010 FCS GROUP report, a utility account audit needs to be performed to provide accurate information in developing a cost-of-service model. The utility accounts identified to be audited include all classifications except the 4,476 single family residential accounts. The city requests that the 185 multi-family units, 178 commercial accounts, and 55 other accounts be audited totaling 418 utility account audits to solidify the accuracy of the cost of service model defined further in Task 2 and 3. The utility account audit will identify discrepancies from physical infrastructure in the field (meter type, size, and facility it serves) with utility account information currently provided through the city’s utility billing software system.

**Data Collection and Validation.** The consultant will analyze and summarize water and sewer customer statistics by customer class, including individual customer accounts, dwelling units, meter size, and monthly water usage patterns based on a recent 12-month period of detailed individual customer billing histories. The consultant will also validate historical data in
terms of reconciling customer and water usage records with historical rates and reported revenues to validate the reliability of data for use in the cost-of-service analysis. Depending on the initial outcome, this could include follow up meetings with city staff to determine potential reasons for significant discrepancies between physical infrastructure information and utility billing software data.

**Update historical water and wastewater system asset records.** The consultant will review and update the functional allocation of plant investment and operating expenses to water and wastewater system components and distribute system costs to customer classes in proportion to use, demand, and other service requirements. In the performance of this task, the consultant will draw upon the work performed in the 2010 rate study and update as appropriate to address the current conditions of the water and wastewater utility.

**Review Rolling Stock Funding Strategy.** The consultant will review the utility equipment, vehicles, and other rolling stock funding strategies developed by the city’s consultant under a separate study and incorporate the results as directed by the city into the revenue requirement forecasts, cost-of-service, and the proposed rate structure updates. *This part of the study will enable us to assess the effectiveness of an existing policy adopted in 2010 which calls for the phasing in of a reinvestment plan that sets equal to annual depreciation expense net of outstanding principal, phased in over time.*

**Water/Wastewater Rate Structure Update and Forecast.** The consultant will design water and wastewater rates for 2013-2015, incorporating previously identified rate structure changes, and recommending policy considerations. Based on the outcome of this analysis, the consultant will propose water and wastewater rates through 2018 necessary to cover all of the incorporated costs by customer class.
The consultant will recommend a class specific schedule of fixed charges increasing by meter size. The fixed charges will recover customer related costs, meters and services related costs, and a portion of peak demand costs (to promote revenue stability); a block volume rate for single family residential customers; class specific single block volume rates for multi-family residential and commercial customers reflective of each class’s unique demand characteristics.

**System Development Charge (SDC) Analysis.** The cost of service analysis should identify and recommend restructuring system development charges. The SDC analysis provided by the consultant will consider system demand criteria based on equivalent meter size to determine appropriate SDC charges. The analysis will include class specific flat rate options for single family residential and multi-family residential customers relevant to each class’s estimated per unit wastewater contribution and domestic level strength; a fixed charge per account, plus a volume charge for commercial customers reflective of sewer contribution and strength loading (commercial – domestic strength and commercial high strength).

**Example Utility Bills and Taxes.** It will be crucial that the consultant prepare sample water and wastewater bills for each customer class, comparing bills under the adopted rates and proposed 2013 cost-of-service rates including the impacts to each customer classification. Consultant will also extract the imbedded utility tax cost from the total utility bill to clearly demonstrate the cost of utility service separate from the taxes assessed to the enterprise funds for conducting business within the Washougal service area.

**Price Elasticity Demand Analysis.** The consultant will evaluate and demonstrate the ability of the resulting water and wastewater rates to generate the projected and required revenues by testing rates against composite system customer demands. The analysis will identify revenues to be generated from the fixed and volume components of the rate structures to provide
for continued revenue stability. The consultant will need to prepare a price elasticity of demand evaluation of water and sewer service costs based on historical data gathered from a variety of sources including similar sized municipal corporations. The price elasticity of demand component should also consider regional factors concerning economies-of-scale comparable in Southwest Washington. The evaluation will be used by the consultant to determine the relationship between price and revenue. The evaluation should be comprehensive enough to ensure rates do not significantly affect revenues based on demand for utility services.

**Utility Billing Efficiency Review.** The consultant will review and analyze the labor hours and materials associated with producing water and wastewater utility bills on a monthly basis. Currently the utility billing department splits the customers in half (east and west side) and customers receive a utility bill every other month. Referencing private sector industry standards for labor needs and automation considerations, the consultant will make a final recommendation based on robust analysis to pursue outsourcing utility billing and or identify efficiency enhancements with current human resources available within the utility billing department. Notification technologies for delinquent utility bills and work order requests should be strongly considered (email notification, automated phone notification system, tweets, RSS feeds) and enhanced payment options for utility customers for ease of use.

**Stakeholder Understanding and Support**

Public involvement in regards to escalating utility rates has been relatively non-existent over the last five years during various rate analysis initiatives. Additionally, customers have limited information on why the rates are continuing to grow for the next several years. The revenue bond obligated in 2010 finances capital improvement projects through 2015 and will be completely exhausted at the conclusion of the current CIP five-year program.
Unfortunately, this is not the end of capital projects that need to be constructed to stay within compliance with the Washington State Department of Ecology. The wastewater treatment plant is scheduled to be expanded in 2016 with an engineer estimate of $15 million dollars needed to construct the improvement (City of Washougal 2008, 7-8). Again, the wastewater treatment plant is not currently funded by the revenue bond. This is likely to result in another vicious cycle of escalating utility rates through 2018, specifically for the wastewater utility.

The Stakeholder Understanding and Support (SS) attribute for the wastewater utility was identified as a high priority that is not meeting stakeholder expectations. This specific attribute was discussed thoroughly at the post survey meeting with participants identifying it as a crucial component of informing stakeholders of the financial challenges the water and wastewater utility currently faces. Water and wastewater survey participants reminded me that the current utility bills are a combined utility bill including stormwater that is due bi-monthly for utility customers. Specifically, the concerns of utility customers have been the increases in aggregate, not a specific utility service. This is a critical reminder that stakeholders need to be informed on the true cost of providing utility services. Each of Washougal’s three utilities would benefit from educating customers about their public services.

Prior to 2011 many conversations took place emphasizing the importance of the cost-of-service initiative with administration, elected officials, and key utility staff members. Significant efforts have been undertaken to mitigate escalating utility rates by implementing cost savings initiatives, deferring capital improvements, augmenting system reinvestment criteria, and pursuing low interest loan opportunities to reduce the debt service burden on the water and wastewater enterprise funds. These efforts have not been clearly communicated to stakeholders beyond the few that attend city council meetings on a regular basis.
Staff undertook major cost-saving efforts simultaneous to the public-private-partnership initiative. Not knowing how the governing body would proceed with the feasibility report, the study was further delayed while waiting for guidance from the elected board. As a leader within the organization, I requested to regroup with the same team with which I discussed the cost-of-service project prior to being reassigned. After this meeting I determined that it was time to take what Gordon calls “command” action of the project (Gordon, 2006, 144). The stakes had risen to a point where it was important to take a calculated risk of acting, the desire to satisfy all affected utility customers in creating a plan of action had become an excuse for indecision (Gordon, p. 144). The decision to pursue a cost-of-service study has been deferred for seven years and the PPP study informed me that I needed to focus on our internal operations framework within the water and wastewater utilities. After identifying the limits of our internal capacity to perform the analysis, it was evident that we needed to seek professional help from a private sector specialist to identify the true cost of service for the water and wastewater utilities.

In pursuing public outreach it is critical to be fully cognizant of the risks and rewards associated with engaging the public. This is especially so on contentious issues that are focused on the cost of delivering and consuming public goods. The procedural republic model that emphasizes the importance of structures, processes, and formal rights reflects the internal focus on utility rates from a Federalist perspective. Utility rates were approved by the governing body with minimal public input but met the requirements of our municipal code and followed legal processes rigorously.

From an Anti-federalist perspective face-to-face communication with government and an opportunity to engage in the decision making process outweighed procedures and rigid rulemaking identified by the Federalists. One consequence of these two traditions of governance
is that it gives rise to a wide range of motivations and purposes for participating in public affairs. The cost-of-service initiative will provide equitable assessments to utility customer classifications but will also potentially shift the burden of who pays and how much. Utility customers that are burdened with enhanced assessments will be motivated to participate in the decision making process when the governing body will be considering formal action. Utility customers who are successful in having their voices heard will potentially impact final determination by the governing body. Utility customers that rely on the Federalist framework focusing on structures and procedures to represent them will potentially be burdened with higher utility rates. The governing body confirmed this tendency of being influenced by irate citizens during the budget process for FY 2013 in their decision to leverage general fund reserves to subsidize the utilities. It is important for career administrators to understand these different impulses that set the standard for citizen engagement, especially as they seek to develop and implement various kinds of public programs that depend on citizen support (Morgan et al pp. 99-101).

The goal of co-production arrangements is to reconnect with utility customers that have been skeptical of the escalating utility rates over the last several years. The bridge between local government and utility customers needs three specific strands: innovation, participation, and loyalty (Levine, 1984, 185). Recent attempts at co-production have been successful as evident in the creation of a Strategic Plan Advisory Committee (SPAC) made up of citizens, business owners, and stakeholders in the community working with dedicated staff towards common interests. It is clearly understood that a robust public engagement campaign to inform citizens of the justification of escalating utility rates to gain stakeholder support will be emotional, contentious, and ultimately outweighs continuing to govern in a framework that appears rigid.
and grounded in regulatory requirements and rules. Utility customers need to be informed of the driving factors that impact utility rates for the community regardless if they agree or disagree with the strategies identified in the cost of service study to pursue equity among utility customers. The strategies implemented in 2010 based on the utility rate report provided by FCS Group were designed to fund capital improvements projects. The false assumptions by utility customers included accusations that escalating rates supported staff wages and benefits. Utility customer concerns throughout the cost of service study will need to be heard to better inform the governing body and executive team in this crucial decision making process to determine the priorities of Washougal utilities in the immediate and long term future.

In undertaking a cost of service study where the outcome is likely to result in significant cost shifts in the rates for different customer classes, it will be critically important to align the mutual expectations of the governing body and various utility stakeholders groups. The outcomes of the cost of service study need to be clearly communicated to utility customers to avoid surprises and rebuild trust between stakeholders in the community and the local government.

It is important to explore beyond the public hearings that have historically yielded public input from the usual suspects on community issues that are combated with agency expertise panels (administration). The researcher has identified three specific strategies to engage citizens regarding the escalating utility rates including the strengths and weaknesses associated with each strategy. Focus groups, stakeholder dialogues, and community conversations have all been reviewed to deal with the lack of public engagement efforts up to this point in the utility rate increase epidemic. Focus groups are an efficient way to inform the governing body of the priorities and concerns of stakeholders. Typically focus groups are a controlled process that only
reaches specific stakeholders in the community drawing from citizens, business owners, interest
groups, and experts from within the municipality. Because focus groups are small and dialogic
in nature, they provide a good venue for informing participants on the highly complex technical
process for setting utility rates for different customer classes and for establishing cost recovering
mechanisms that are equitable between new and old customer classes.

Stakeholder dialogue is another strategy. In the past, stakeholders were limited to the few
who had a vested interest in utility rate changes. A more deliberate process is needed to engage
people in productive conversations about the issue of escalating utility rates to elicit their interest
and ideas about how to make it be successful given the current environment. Similar to focus
groups, the municipality could target participants who are significantly impacted or have a vested
interest in escalating utility rates. The most significant weakness of this strategy is its inability to
raise general awareness about the utility rate issue to the broader community. Gaining general
awareness is crucial in the utility rate issue since every utility customer is potentially impacted
by ongoing utility rate increases.

Community conversations are aimed at engaging a broader cross section of the
community in dialogue concerning the utility rate issue, including both specific stakeholders and
average citizens. There are two advantages of taking a broad community- based approach to a
cost of service conversation. First, it can generate positive press coverage and raise general
awareness. Second, such an approach can generate new ideas, resources, and partners who can
assist in problem-solving the issue in ways that the experts had not considered.

The goal of collaboration to co-produce is not to replace experts with citizen volunteers,
but to establish a linkage between professional expertise and accountability of career
administrators with local knowledge and attachment of citizens to produce an overarching public
good grounded in collaboration (Morgan et al p. 98). An outreach plan to inform citizens of the justification of escalating utility rates to gain stakeholder support will create an emotionally charged atmosphere that is discussed in further detail in Appendix C, Leadership Environment. Utility customers need to be informed of the driving factors that impact utility rates for the community regardless if they agree or disagree with the strategies identified in the cost of service study. Utility customer concerns still need to be heard to better inform the governing body and executive team in the decision making process of identifying a fair and equitable rate structure for all stakeholders in the Washougal community.
Works Cited


Appendix A

Effective Utility Management Research Instrument

Getting Started — The Self Assessment

The Self Assessment has five steps:

- Step 1: Assess current conditions
- Step 2: Rank the importance of each Attribute for your utility
- Step 3: Chart the results
- Step 4: Choose one or more Attributes to focus on
- Step 5: Develop and implement an improvement plan

[www.waterem.org/resources/interactive-primer/getting-started/]
Ten Attributes of Effectively Managed Water Sector Utilities

The Attributes emerge from analysis of current utility management practices and discussion among utility advisors regarding what they view as promising developments in utility management efforts.

**Attribute Definitions**

**Product Quality**

*Provides potable water, treated effluent, and processed waste in full compliance with regulatory and reliability requirements, and consistent with customer, public health, and ecological needs.*

**Customer Satisfaction**

*Provides responsive, responsive, and affordable services in line with customer-expected service levels. Receives timely customer feedback to maintain responsiveness to customer needs and emergencies.*

**Employee and Leadership Development**

*Recruits and retains a workforce that is competent, motivated, adaptive, and self-directing. Establishes a participatory, collaborative organization dedicated to continual learning and improvement. Ensures employee institutional knowledge is retained and improved upon over time. Provides a focus on and emphasis on opportunities for professional and leadership development and strives to create an integrated and well-connected senior leadership team.*

**Operational Optimization**

*Ensures ongoing, timely, cost-effective, reliable, and sustainable performance improvements in all facets of its operations. Minimizes resource use, loss, and impacts from day-to-day operations. Maintains awareness of information and operational technology developments to anticipate and support timely adoption of improvements.*

**Financial Viability**

*Understands the full life cycle cost of the utility and establishes and maintains an effective balance between long-term asset, service value, operations and maintenance expenditures, and operating revenues. Establishes predictable rates—consistent with community expectations and affordability—appropriate to income levels, provide for reserves, maintain support from bond rating agencies, and plan and invest for future needs.*

**Infrastructure Stability**

*Understands the condition of and costs associated with critical infrastructure assets. Maintains and enhances the condition of all assets over the long-term at the lowest possible life-cycle cost and acceptable risk consistent with customer, community, and regulatory supported service levels, and consistent with anticipated growth and system reliability goals. Assumes asset repair, rehabilitation, and replacement efforts are coordinated within the community to minimize disruptions and other negative consequences.*

**Operational Resiliency**

*Ensures utility leadership and staff work together to anticipate and avoid problems. Proactively identifies, assesses, establishes reasonable levels for, and effectively manages a full range of business risks (including legal, regulatory, financial, environmental, safety, security, and natural disaster-related) in a proactive way consistent with industry trends and system reliability goals.*

**Community Sustainability**

*Is explicitly cognizant of and attentive to the impacts its decisions have on current and long-term future community and watershed health and welfare. Manages operations, infrastructure, and investments to protect, restore, and enhance the natural environment; efficiently uses water and energy resources; promotes economic viability; and engenders overall community improvement. Explicitly considers a variety of potential prevention, watershed, and source water protection approaches as part of an overall strategy to maintain and enhance ecological and community sustainability.*

**Water Resource Adequacy**

*Ensures water availability, consistent with current and future customer needs through long-term resource supply and demand analysis, conservation, and public education. Explicitly considers its role in water availability and manages operations to provide for long-term supply and surface water sustainability and replenishment.*

**Stakeholder Understanding and Support**

*Engenders understanding and support from oversight bodies, community and watershed interests, and regulatory bodies for service levels, rate structures, operating budgets, capital improvement programs, and risk management decisions. Actively involves stakeholders in the decisions that will affect them.*

---

**Consider:**

- The degree to which your current management systems effectively support each of the Attributes and their component parts.

- All components of each Attribute

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description: use these descriptions to guide your level of achievement rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-VH (Very High)</td>
<td>Effective, systematic approach and implementation; consistently achieve goals.</td>
</tr>
<tr>
<td>2-H (High)</td>
<td>Workable systems in place; mostly achieve goals.</td>
</tr>
<tr>
<td>3-M (Medium)</td>
<td>Partial systems in place with moderate achievement.</td>
</tr>
<tr>
<td>4-L (Low)</td>
<td>Occasionally address this when specific need arises.</td>
</tr>
<tr>
<td>5-VL (Very Low)</td>
<td>No system for addressing this.</td>
</tr>
</tbody>
</table>
**Step 2: Rank Importance of Attributes**

**Purpose:**
It's hard to address everything at once. Some Attributes may be more important to your utility than others. The purpose of this step is to think about how important the Attributes are relative to one another, allowing you to focus on what is most important.

**Activity:**
Rank the importance of each Attribute to your utility with the most important Attribute designated "1," the second most important designated "2," and so on. The least important Attribute is designated "10." The following table has a sample page for a rating and ranking exercise.

Based on:
- Your utility's vision, goals, and specific needs
- The interests and considerations of all stakeholders (e.g., staff, customers, regulators, elected officials, etc.)
- Current or expected challenges in the particular Attribute area
- Recent accomplishments in addressing these challenges
- The long-term importance of the Attribute to your utility

Note: Importance ranking will likely evolve over time as internal and external conditions change.

Your analysis for Step 1 (rating achievement) should be separate and independent from your analysis for Step 2 (ranking importance).

The following contains the first several rows of a table in the [Self Assessment Tool] that can be used for Steps 1 and 2.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Attribute Components</th>
<th>Step 1: Rate Achievement (1-5)</th>
<th>Step 2: Rank Importance (1-10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Quality (PQ)</td>
<td>• Complies with regulatory and reliability requirements.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Consistent with customer, public health, and ecological needs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Satisfaction (CS)</td>
<td>• Provides reliable, responsive, and affordable services.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Receives timely customer feedback.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Responsive to customer needs and emergencies.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee and Leadership Development (ED)</td>
<td>• Recruitment, training, and succession planning</td>
<td></td>
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<td></td>
<td>• Collaborative organization dedicated to continual learning and improvement.</td>
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<td>• Employee institutional knowledge retained and improved.</td>
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<td></td>
<td>• Opportunities for professional and leadership development.</td>
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<td></td>
<td>• Integrated and well-coordinated senior leadership team.</td>
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</table>
**Steps 3: Graph Results**

**Purpose:**
The purpose of this step is to combine the results of the first two steps into one graph, allowing you to see how the Attributes compare relative to achievement and importance.

**Activity:**
Graph each Attribute based on your rating and ranking.

- For example, if you rated Product Quality (PQ) "4" for achievement and "3" for importance, you would place it on the graph as illustrated below.
- Similarly, if you rated Customer Satisfaction (CS) "3" for achievement and "6" for importance, you would place it on the graph as illustrated below.

The Self Assessment tool automates your rating and ranking input and will graph the results.

<table>
<thead>
<tr>
<th>Rating</th>
<th>PQ</th>
<th>CS</th>
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</thead>
<tbody>
<tr>
<td>5</td>
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<td></td>
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<tr>
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<td></td>
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<tr>
<td>1</td>
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<table>
<thead>
<tr>
<th>Ranking</th>
<th>More Important</th>
<th>Less Important</th>
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<tbody>
<tr>
<td>1 2 3 4</td>
<td>5 6 7 8 9 10</td>
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</table>
Appendix B

Case Studies Background

The Effective Utility Management Consortium (EUMC), which developed the primer survey presented in Appendix A, used a series of case studies to validate their primer survey instrument (Effective Water & Wastewater Utility Management Case Studies, *A Companion Document to the Primer for Effective Utility Management*, April 2009, p. 7). The external validation that brings credibility to the primer exercise is a crucial component in regaining focus and identity within the water and wastewater department at the city of Washougal. Massachusetts Water Resource Authority (MWRA) leveraged the survey to gain support from their governing board, the researcher anticipates utilizing the survey to gain support from staff in the wake of multiple initiatives that were not self-assessments and have challenged long-term financial viability, outsourcing, and staffing changes within the utilities. The MWRA leveraged the primer survey to gain board member support which due to similar circumstances the researcher intends to do with utility staff gaining credibility through a proven utility industry framework.

According to the Director of Planning and Coordination,

> We were able to show our Board members that our management improvement priorities are fully consistent with a nationally recognized and endorsed utility management framework. That was validating and should help generate solid Board support for our efforts over the five year timeframe of the Business Plan, said Marian Orfeo, Director of Planning and Coordination, MWRA (Effective Water & Wastewater Utility Management Case Studies, *A Companion Document to the Primer for Effective Utility Management*, April 2009, p. 6).

Many of the initiatives within the water and wastewater utilities have been driven by external drivers of change (i.e. consultant’s reports, stakeholder dissatisfaction with rate increases, equity concerns among customer classes). The researcher anticipates that a primer survey created by water and wastewater utility experts for utility managers will lend credibility
to the process and allows utility staff to provide their personal assessment on conditions and priorities in the department from where they sit in the organization.

In 2008, Green Bay Municipal Sewer District’s (GBMSD) executive director engaged 16 managers to participate individually in completing the utility self-assessment provided by the coalition partners. The executive director informed the managers that the self-assessment would be treated as an internal document to encourage the managers to provide candid feedback. The management team then reconvened as a group and condensed the individual assessments into a single group assessment to reach consensus on priority focus areas as it related to the ten attributes. The framework used by the GBMSD executive director encouraged teamwork through consensus building among both the leadership and management teams.

The primer results from the GBMSD experience brought focus to two separate perspectives; management was internally focused “inside the fence” with emphasis on employee development, product quality, and water resource adequacy. The commissioners found that external strategies were lacking in the self-assessment, including communicating with customers, environmental stewardship, and seeking stakeholder support. The primer and the self-assessment tool, in particular, were credited with giving the management team the opportunity to see external strategies in a different light and in balance with internally-focused goals.

The GBMSD primer survey study is significant to this capstone project on utility management strategies for the city of Washougal. Both the primer study and the specific case studies provide information that can be used to seek better alignment between two separate parties that have a vested interest in effective utility management. The GBMSD case study showed misalignment between management staff and the commissioners. The potential misalignment between utility leadership (management) and utility staff in Washougal will
require consensus building to combine management and line-staff focuses that may emerge from the primer and self-assessment tool. The identification of the conditions of each attribute within the utilities is crucial for the city of Washougal. The researcher hopes to replicate the following experience of the Green Bay Municipal Sewer District to address misalignments between internal and external stakeholders.

Another real benefit to using the Primer is the graphical illustration of the utility’s achievement rating for the Attributes and Importance ranking. This is a good way for the management team and staff to understand where we are and where we want to be, said Tom Sigmund, Executive Director, GBMSD (Effective Water & Wastewater Utility Management Case Studies, 2009, 7).

In 2009 the Gwinett County Department of Water Resources (GCDWR) used the primer to update its strategic plan that was originally revised in 2007. GCDWR has utilized strategic planning tools for business purposes since 1992 and found a few complications in the data they collected from the primer survey. The general manager routed the condition assessment and attribute ranking to 44 managers and received results electronically. When asked to rank the attributes from higher to lower importance, respondents assumed “1” to indicate least important, and “10” to indicate most important. After corrections were made by the respondents the general manager had difficulty compiling the data and tried different methods to clearly identify attributes that needed additional focus by the utility. Since the general manager was analyzing independent survey results outside of the consensus building workshop setting, it was difficult to represent the responses clearly.

Using a method of averaging results gave a meaningless ranking, with all scores in the middle of the ranking scale. In consultation with the management team, the general manager grouped the aggregate responses into levels of importance and achievement, which proved to be successful and provided the information GCDWR needed for its planning process.
It is important to note that the GCDWR case study had 44 respondents that made the interpretation of the data received complicated. With only nine respondents the researcher did not have this kind of complexity in tabulating the meaning of the results from the primer survey. As illustrated by the case studies, it is important to augment the data collection from the primer study with additional contextual information unique to the organization. Having completed a comprehensive strategic plan revision two years prior, the GCDWR found that they had two attributes that warranted additional focus. The results of the self-assessment process indicated that DWR was achieving expectations for Product Quality and Customer Satisfaction, which were also ranked as highly important Attributes. This indicated that DWR’s existing strategies for these areas were being well communicated and successfully implemented. The Financial Viability and Infrastructure Stability Attributes, on the other hand, received a low achievement rating, but a high to moderately high level of importance ranking. This indicated that DWR needed to focus its 2009 revised strategic plan in these two areas in particular. The management team decided to concentrate on developing strategies for understanding the full life-cycle cost of the utility, to improve on the Financial Viability Attribute and the Infrastructure Stability Attribute.
Appendix C

Leadership Environment

The researcher clearly communicated to administration in the spring of 2011 prior to special assignment that a cost-of-service study for the water and wastewater utility would be essential in identifying the efficiency and effectiveness of our utility services. The results from the primer survey completed by key staff members served as a catalyst to convince administration and stakeholders close to the project that a cost-of-service study is a crucial first step in pursuing effective utility management practices. The researcher has concluded that a cost of service study needs to be sooner rather than later because, like many complex environmental issues, it is likely to take many years to resolve or come to consensus on among multiple stakeholders. Escalating utility increases is a much different issue than watershed management or deforestation issues that bring hundreds of stakeholders to the table, but the researcher proposes to leverage “essential leadership” skills and practices in pursuing effective utility management.

Utility rate issues appear to rival environmental issues that were discussed in great length by the 2008 cohort in Dr. John Gordon’s course that included the assigned reading of “Environmental Leadership Equals Essential Leadership” co-authored by Joyce K. Berry. The three day seminar provided by Dr. Gordon changed my leadership framework to the extent that the researcher proposes utilizing the skills acquired in this course to pursue an effective utility management plan.

Complexity is at the core of successful utility rate management. This complexity is surfaced by cost-of-service analysis, which raises issues of which classes of customers should
pay what costs. This is both an economic question of “paying for what you use” but it is also a
question of equity. For example, should single family households pay the same rates as multi-
family units? What about different user groups within the business community? Should higher
users of utilities get a discount because they contribute more revenue than businesses that
consume utilities at a lower level? Debt service and other fixed costs for the water and
wastewater utility further complicate these issues of equity and the principle of “user pays”.

From what I have learned from the leadership studies during my EMPA program, there
are six defining leadership characteristics associated with the complexity of effectively managing
water and wastewater utilities. (Gordon, 2008 11)

Long Times to Resolution- In the context of environmental issues gaining consensus or
resolution takes decades to achieve, and regularly complex issues never reach full closure for
competing special interest groups and stakeholders involved in the project. The first initiative
considered by the city of Washougal was a utility rate study in 2000 to identify the revenue
needed to cover debt service and future capital improvements. A decade has now past and the
only baseline accomplishments that was established is a system reinvestment policy for capital
investment demands and raising rates to cover current and future capital improvement projects.

The cost-of-service study will scratch the surface on ongoing operations and maintenance
funding needs as well as customer impacts on public utility infrastructure. A stable and
predictable utility rate structure may not be achieved for another ten to 15 years, especially given
the capital improvement investments and cost-of-service analysis initiatives currently underway.
Leaders need to be as interested in the human relations aspects of issues as the technical to build
relationships toward finding common ground in identifying long term solutions and strategies
(Gordon, 2008 25).
It is painfully obvious that the utility rate issue that has lingered for 13 years and will most likely not be resolved in an expedited fashion; it will demand a long-term commitment by administration to demonstrate to the community the vision and values needed to bring stability to public utility infrastructure in the near and long-term future.

It is evident that moving pieces and dynamics on the utility rate issue over the last 13 years have not been guided by a coherent and long-term vision. There has been internal staff turn-over and the use of different consultants. Long solution times regularly mean that the same individuals that defined the problem are not there at the “end” for its resolution (Gordon, p. 97). The cost-of-service and stakeholder support initiatives will further inform the vision and values of the water and wastewater utilities, but leaders will have to actively pursue small wins in a long solution environment. It is obvious that the cost-of-service study will not resolve the escalating rate issue in the immediate future but will lay the groundwork for long term solutions to complex rate issues that have plagued the city of Washougal.

**Complexity**—Taking into consideration the shift of burden impacts that are likely to be recommended by the cost-of-service report from the external consultant, the elected governing body will be presented with some complex choices. The governing body can raise the utility rates on customers that reside in higher elevations within the community because it is more expensive to hydraulically provide water (pumping) than other customers in lower elevations. Adversely, if you charge industrial customers with historical high consumption rates additional increases how does that impact economic development initiatives aimed at retaining and recruiting business and industry into the community?

Ultimately the capital improvement plan (CIP) needs to be grounded in realistic and reliable information on depreciation and maintenance costs to ensure public health and safety. It
is important for leaders to remember that stakeholders typically do not have the same level of knowledge on these kinds of technical issues as the professional staff. It is therefore important for governing officials and the technical staff to communicate with stakeholders in ways that provide clear and concise information that is easily comprehended (Gordon, 2008 98). Designing and communicate this information is as important as obtaining the technical information related to depreciation and maintenance costs of the capital infrastructure. Multiple times in a public forum participants have been baffled by “bureau speak” that focuses on acronyms, technical details and best management practices.

**Weak and Scattered Science Base-** The Washougal utility currently lacks good technical information regarding the distribution and collection system, as well as the wastewater treatment plant. Currently the utilities do not have an asset management program that would identify depreciation and lacks formal computer maintenance management software (CMMS). These shortcomings have led to inaccurate labor costs and task tracking that is rudimentary in managing public infrastructure assets. The utility does not know what it costs to process utility billing payments, read meters, replace a hydrant, or maintenance of the sewer collection system mainlines. The infusion of technology to read meters (fixed network), task tracking for maintenance records and asset management software will be analyzed during the cost-of-service study. The key to this effort for leaders is to integrate the recommendations made on technology enhancements and create an environment for leadership skill development. Technology improvement initiatives serve as an ideal opportunity for leaders to emerge regardless of the organizational hierarchy or structure (Gordon, 2008 26).
**Emotionally Charged Atmosphere:** To take this a step further the utility rate issue and stakeholder support needed to inform customers on the cost of public goods is twofold. The issue is emotionally charged internally with a recent feasibility study on outsourcing the utility operations (PPP). External stakeholders are emotionally charged due to the escalating rates that have been implemented across the board for all customer classifications within the service area. Internal and external customers are up in arms over the escalating rates and the public perception is that the cost of service analysis will bring resolution to the lingering issue that has plagued the utilities for over a decade. For the burden shift to be successfully implemented over the next several years, additional pressure will be put on administration to align internal and external stakeholders on a shared vision that reflects the values of the organization and the community.

A large component of this complex work in an emotionally charged atmosphere will be to balance competing interests, to provide justification of the recommendation through robust planning for both the community and the agency (Morgan, p. 175). The cost-of-service study will serve as the agency “technical report” and will be further supported by using the recently adopted Washougal Strategic Plan where the community identified four core pillars of the community; Communication, Community Engagement, Core Services, and Economic Development. Each of the four pillars is directly relevant in the utility rate issue and each will be tested in regards to their importance to the community during stakeholder engagement initiatives.

Based on the lack of knowledge on the rate increases implemented in 2010, the action plan to pursue stakeholder understanding and support (SS) focuses on public engagement, dissemination of critical information, and workshops aimed to enhance awareness on the status of the public infrastructure.
Appendix D

Washougal Strategic Plan: Implications for Leadership Project

The Washougal City Council adopted the strategic plan for the agency and the community in January 2013. Once the cost-of-service has been conducted by the external consultant and a formal recommendation is made by administration to Council, it will be critical for administration to reference the recently adopted strategic plan as it relates to utility rates. Several components of the cost-of-service initiative are aimed directly at the priority pillars identified by the community, which include; communication, community engagement, core services and economic development. The recommended strategies identified in the strategic plan are specific, measurable, and include recommended indicators to monitor progress. Read the following priorities, goals, and strategies in the context of striving for effective utility management and specifically the attributes that have been identified as high priority within the water and wastewater utility.

- Infrastructure Stability (IS)
- Stakeholder Understanding & Support (SS)
- Financial Viability (FV)

The Strategic Plan was developed with the realization that the shortened horizon of 10 years and the many uncertainties limited both the boldness and the stated goals of the resultant plan. Thus, the underlying theme in development of the plan was to propose strategies which could reasonably be accomplished within the ten year time period, or at least set a solid foundation for accelerating actions and capitalizing on future opportunities. The Strategic Planning Advisory Committee (SPAC) definition of the term “pillars” reflects the concept that
achieving the Vision depends on a supporting foundation of key strategic components upon which all other actions are based.

**Linking Research Findings to the Strategic Plan**

Upon reviewing the existing management structures and processes as they relate to misaligned attributes within the utilities, the researcher has explored technology enhancements to start the process of realigning core attributes. This is called for, or at least anticipated by, the strategic plan, which emphasizes continued improvement in customer service and processes and procedures. The adoption of new communication technologies is critical to the future success of the Washougal utility in maintaining good customer service. The strategic plan also emphasizes the ability to ensure adequate budgetary support for essential equipment and technologies in delivering core services to the community. Two specific initiatives have been identified and supported by the research and the strategic plan. These include further analysis of utility billing and monthly water meter reading efficiency and cost effectiveness.

The city of Washougal initiated a touch pad meter reading program over ten years ago with the intention of upgrading to an Automated Meter Reading (AMR) system to improve customer service, communication, and create human resource capacity to focus on core competencies of maintaining infrastructure beyond reading meters and customer service requests generated from meter reading tasks. Touch pad meters can be easily retrofitted with a radio signal indicator that reports to a hardware platform that can be accessed by utility billing staff, customers, and operations staff. The cost-benefit-analysis conducted internally indicates that the capital investment in technology infrastructure will take five years to recoup initial investment but does not take into consideration the additional maintenance and repair staff is able to accomplish being removed from meter reading and service requests associated with customer
service. In an environment where additional staff capacity (hiring FTE’s) is not a reality, advancing technology opportunities that make fiscal sense will be crucial to redeploy existing staff capacity to focus on maintenance and repair of infrastructure.

The current revenue bond obligated by the governing body in 2010 for utility capital improvements has capacity to make this important technology improvement with projects being constructed well below engineer estimates. With the governing body voting down the Public-Private-Partnership and admonishing staff to pursue further efficiencies with current resources, I believe this project will be strongly supported by council, especially if it is accompanied by further robust data to justify the investment and gain alignment with the overarching strategic plan of the community and agency.

The cost-of-service study will provide a utility account audit for all customers that fall outside of the single family residential classification. This task is only a starting point in identifying discrepancies in the utility billing software and should be pursued further in regards to the efficiency and cost effectiveness of the utility billing department. The original initiative of administration in pursuing efficiencies within the utilities was to critically review utility billing and operations and maintenance of the utilities, the CEO removed utility billing from the project and the feasibility report offered by SAIC on public-private-partnership scenarios focused on operation and maintenance.

The cost of service study requires the consultant to review and analyze the labor hours and materials associated with producing utility bills on monthly basis. Currently the utility billing department splits the customers in half (east and west side) and customers receive a utility bill every other month. Referencing private sector industry standards for labor needs and automation considerations, the consultant will make a final recommendation based on robust
analysis to pursue outsourcing utility billing and or identify efficiency enhancements with current human resources available within the utility billing department. Notification technologies for delinquent utility bills and works order requests should be strongly considered (email notification, automated phone notification system, tweets, RSS feeds) and enhanced payment options for utility customers for ease of use. This project is also supported by the strategic plan’s emphasis on improving core services through continuous improvement of cost effective delivery of services. The utility billing audit and efficiency review also addresses the strategic plan’s communication pillar, which calls for enhanced citizen and businesses communication methods. Enhanced communication methods will provide information on city of Washougal news and issues to the widest possible audience by leveraging the city’s website, social media and other technologies to continue to improve public service.

The organization has experienced augmentation to its deep structure by means of regulatory requirements, adding human resources to the department (city engineer) and implementing basic technology resources into the workplace. Incremental adjustments are made to compensate for internal and external issues without changing the deep structure core. The activities and patterns within the organization have basically stayed the same with minor adjustments periodically intended to maintain equilibrium over time. This strategy is not likely to be adequate in the future and is most likely to be seriously called into question by the cost of service study.

The researcher proposes to challenge the deep structure of the utility department by making a significant change to the organizational chart within the water and wastewater division. Prior to addition of a city engineer position in July 2010, the water/wastewater manager had been operating as a quasi-engineering technician, which contributed to the drift of the organization
away from managing the operation and maintenance of infrastructure. Constrained resources within the organization has reinforced this neglect of infrastructure maintenance as supervisors have taken on additional managerial duties. No one is clearly in charge of infrastructure strategic management. This issue needs to be addressed as part of the other work described in the previous paragraphs.

To summarize, the intent of the primer survey was to identify immediate strategies to become a more effective utility in delivering public services and start the process of aligning utility attributes that needed immediate attention. In pursuing utility billing efficiency improvements, technology upgrades, and proposed revisions to the organizational framework the agency is poised for immediate success and can anticipate further revisions on how to deliver services at the conclusion of the cost-of-service study in September 2013. At the conclusion of the cost-of-service study and implementation of the three strategies described above, the researcher proposes to revisit the primer survey to update our priorities as a public utility and continue to pursue misalignments that hinder our ability to manage the utilities in an efficient and cost-effective manner. This phase will involve more long-term and strategic changes in the organizational structure of Washougal’s utility systems.

“Leaders must be strategic thinkers, politically savvy and have the guts to make decisions” (Dr. John C. Gordon, September 6, 2008).