

**COMPREHENSIVE MANAGEMENT AUDIT
OF
NEW JERSEY AMERICAN WATER
COMPANY**

**PURSUANT TO N.J.S.A. 48:2-16.4 & N.J.A.C. 14:3-12.1 – 12.4
DOCKET No. WA09070510**

**FOR THE
DIVISION OF AUDITS
NEW JERSEY BOARD OF PUBLIC
UTILITIES**

REQUEST FOR PROPOSAL 08-X-39185

FINAL AUDIT REPORT

DECEMBER 20, 2010



NORTHSTAR CONSULTING GROUP

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I. INTRODUCTION

A. Background

American Water Works Company, Inc. (AWK), a Delaware Corporation, was founded in 1886 as the American Water Works & Guarantee Company for the purposes of building and purchasing water systems in McKeesport, Pennsylvania. In 1935, AWK was reorganized under its current name, and in 1947 it became publicly traded on the New York Stock Exchange (NYSE). Prior to its acquisition in 2003 by RWE Aktiengesellschaft (RWE), a corporation incorporated in the Federal Republic of Germany, AWK was the largest publicly-traded water utility company in the United States – as measured by both operating revenue and population served. Prior to its initial public offering in April 2008, AWK was wholly-owned and controlled by RWE, which continued to own a majority of its shares until the completion of a subsequent public offering in June 2009. In November 2009, RWE sold all remaining shares of AWK's common stock that it held. AWK is geographically diversified as well as the largest investor-owned US water and wastewater utility company. More than 7,000 AWK employees provide approximately 16 million people with drinking water, waste water and other water-related services in 35 states and two Canadian provinces.

AWK's two operating segments are also its two NYSE reportable segments, and are referred to as the Regulated Businesses and Non-Regulated Businesses. New Jersey American Water Company, Inc. (NJAW) is a significant organizational element of AWK's Regulated Businesses. For 2009, AWK Regulated Businesses generated \$2.2 billion in operating revenue, which accounted for 89.5 percent of total operating revenue. NJAW operating revenue for 2009 was \$560.9 million, or approximately one-quarter of the AWK Regulated Business revenue. For the same period, Non-Regulated Businesses generated \$257.7 million in operating revenue, which accounted for 10.5 percent of total consolidated operating revenue. NJAW, the largest water utility in New Jersey, has 912 employees and serves about 610,000 customers in New Jersey

B. Approach

The objectives of the Comprehensive Management Audit of NJAW were to assist the Board of Public Utilities (BPU or Board) in determining if the management practices, functions, operations procedures, and other internal workings of NJAW are cost-effective. NorthStar fulfilled these objectives by assessing the effectiveness of the utility's organization, general management functions, policies, procedures, and practices and identifying opportunities for improvement.

The audit concentrated on areas of management functions and processes, finance and accounting procedures and systems, employment policies, and management of outside services. The RFP identified twelve focus areas. The twelve areas are as follows:

- Executive Management & Corporate Governance
- Organizational Structure
- Human Resources
- Strategic Planning
- System Operations
- Customer Service
- External Relations
- Support Services
- Finance & Cash Management
- Accounting, Property Records & Budgeting
- Affiliate Cost Allocations & Relationships
- Company Contractor Performance

The audit which began on January 12, 2010 was conducted in three phases, as described below:

Phase I. Orientation and Planning

During the first phase of the audit, the NorthStar project team performed the following activities:

- Confirmed our understanding of the audit objectives and scope and the BPU's expectations from the audit.
- Finalized the contract, establishing project management protocols and other administrative matters.
- Developed an understanding of the operations, organization, and key management processes of NJAW, principally through a session where NJAW provided a detailed overview of company organization and operations as they related to the audit scope, followed by interviews with key personnel.
- Performed a risk assessment of audit task areas to prioritize our audit activities.
- Finalized and received approval of our detailed work plan that would guide activities for the remainder of the audit.

Phase II. Technical Review

In this phase, the audit team conducted its principal investigation, data collection and other technical review activities for each of the twelve audit areas. Each audit area was reviewed independently and as it related to the whole process. NorthStar project team members conducted 117 interviews with company personnel and reviewed 434 data requests. NJAW's management practices were evaluated against generally accepted business practices. The NorthStar project team focused on substantive issues in identifying findings and conclusions, and formulating recommendations in areas of weakness.

Phase III. Report Development

Task reports on each of the twelve audit areas were prepared and provided to the BPU Staff for their review. The task reports were then aggregated into a comprehensive audit report. Each chapter of the report is organized into the following sections:

- RFP Objectives
- Evaluative Criteria
- Audit Tasks
- Findings and Conclusions
- Recommendations

The findings and conclusions and the recommendations are summarized in Chapter II – Executive Summary. After receiving comments from the BPU Staff and from NJAW, NorthStar issued this final report.

C. Audit Standards

NorthStar prides itself on maintaining a high level of quality audit standards on all its work. All our work was performed in accordance with Government Auditing Standards July 2007 revision GAO-07 731G (also known as the Yellow Book). NorthStar also adhered to the American Institute of Certified Public Accountants' (AICPA) Code of Professional Conduct; and the National Association of Regulatory Commissioners' Consultant Standards and Ethics for the Performance of Management Analysis. Adherence to these standards provided the project controls and reporting standards necessary to perform the audit effectively and provide sufficient justification for all recommendations.

NorthStar documented all our report findings and conclusions to ensure that our work is factually based, that our findings and conclusions are supported by relevant data, that our professional judgment, where applied, is differentiated from analytic results, and that the results of our audit are easily traceable to specific consultant efforts, documents and interviews. In accordance with generally accepted auditing standards (GAAS), our work papers are complete, accurate, clear and easily understood, legible and neat, and relevant, that is, restricted to matters that are materially important and relevant to the objectives of the assignment.

II. EXECUTIVE SUMMARY

This executive summary is organized into the following sections as follows:

- A. Summary of Findings and Conclusions – summarizes the detailed findings and conclusions that are provided in subsequent chapters.
- B. Summary of Recommendations – summarizes the recommendations that are provided in subsequent chapters.

A. Summary of Findings and Conclusions

This section summarizes our findings and conclusions by audit subject area. These findings are discussed in greater detail in the related chapters. The findings, conclusions and recommendations contained in the audit report and here in the executive summary, should not be considered a condemnation of the company in whole or on any particular issue. Rather, NorthStar's report is intended as a set of specific recommendations to consider, with the goal of improving various aspects of the company's management structure and overall performance.

Executive Management & Corporate Governance

American Water Works Company, Inc.'s (AWK) and New Jersey American Water Company, Inc.'s (NJAW) long-term corporate objectives and strategies could be more explicit relative to their responsibilities to meet the future needs of NJAW ratepayers relative to the cost of water. AWK has appropriately separated the roles of the Chairman of the Board of Directors (BOD) and Chief Executive Officer (CEO). AWK's BOD and senior management are able to anticipate and respond to strategic issues on an ongoing basis to ensure that NJAW ratepayers are insulated as much as possible from financial harm. Members of AWK's BOD have significant utility operations, financial and regulatory experience. AWK's BOD has an appropriate committee structure. While AWK has an appropriate process for selecting members of its BOD, its BOD does not currently have a member who is a strong advocate for NJAW and it has only one member of AWK senior management – the chief executive officer (CEO). While no member of AWK's BOD director has any material conflicts of interest, self-interest, or unreasonable influence, three of the current independent directors have no beneficial ownership of AWK stock.

NJAW's BOD has two independent non-executive members, a practice which provides limited value to NJAW's ratepayers. NJAW's senior management does not have sufficient independence relative to its own performance and the best interests of its ratepayers. NJAW's Key Performance Indicators (KPIs) are primarily financial measures and do not address all corporate goals. AWK uses a unique benchmark for evaluating compensation for both utility and non-utility executives. NJAW's executive compensation program is

reasonable, competitive and links compensation with performance. Lawsuits pertaining to NJAW are unlikely to have an adverse effect on NJAW.

Organizational Structure

AWK does not have a clear and consistent policy for defining the administrative and functional responsibilities of NJAW and AWWSC officers and senior management. NJAW does not have sufficient policies or procedures that address the necessity, legal entitlement or relationships with its affiliates. Numerous services performed by AWWSC are not specifically identified within the NJAW/AWWSC affiliate contract. NJAW does not obtain competitive bids for services provided by AWWSC and NJAW does not make effective challenges to AWWSC budgets or charges for services. The services provided via the AWWSC agreements are not competitive in terms of “market conditions” and a potential for “cross-subsidization” between NJAW and its affiliates exists. NJAW affiliate relations policies and procedures are ineffective and relatively non-existent.

AWK’s BOD has overall responsibility for the company’s system of internal control and its CEO is responsible for implementing and operating that system and for reporting on its operation to the BOD. The administrative reporting relationship of the Internal Audit (IA) director to AWK’s chief financial officer (CFO) is not appropriate. Recent management of the IA function has suffered from turnover and late completion of the 2010 audit plan. During 2008 and 2009, AWK used IA resources to address SOX compliance issues thereby keeping IA from performing its primary function. AWK complies with NYSE Section 303A Corporate Governance Standards. AWK completed its first year-end SOX certification and had no material weaknesses in its internal controls related to financial reporting. NJAW ratepayers may have paid for SOX compliance and testing that was disallowed as a condition of RWE rate order. AWK has a comprehensive program to ensure SOX compliance.

Human Resources

While AWK has an appropriate human resource (HR) function, there is no service level agreement (SLA) between AWWSC and NJAW for performing these services. Existing HR processes are extremely manual and paper intensive which contributes to inefficiencies and higher costs. AWK has an effective employee compensation program. AWK's exempt employees are eligible for participation in the Annual Incentive Plan (AIP) which links pay and performance. While AWK's gross medical benefits cost is comparable to other utilities, the AWK employee contribution is relatively low. AWK has undertaken a number of initiatives to reduce employee benefit costs. NJAW has not had a comprehensive short-term disability program.

AWK has a performance evaluation process for non-union employees which is tied to AWK’s corporate goals, provides feedback to the employee, and includes the employee in the goal-setting process. Succession planning and professional development processes are under development. While AWK recently modified its performance review process to increase the focus on employee development, additional improvement is possible. AWK does not have a formal process for monitoring spans of control, layers of management or

determining staff levels. NJAW complies with federal Equal Opportunity Employer (EOE) requirements and has an effective affirmative action program. NJAW's work management applications are not integrated. While NJAW has a great deal of information to help it manage work, it has little if any information on the productivity of those doing the work. AWK and NJAW have a good labor relations history.

Strategic Planning

While NJAW prepares five-year budgets which it calls "business plans", it does not have a structured strategic planning process. The process to develop NJAW's financial "business plan" is controlled and driven by AWK. AWK has a clear mission/vision which provides little guidance to operating subsidiaries, especially relative to the cost of service to customers. AWK has not driven a strategic planning process down to the NJAW operating unit level.

NJAW is implementing a "Value Delivery Strategy" (VDS) strategic planning process at NJAW that should result in significant improvement in focus, monitoring, integration and control. NJAW's VDS process does not, however, give adequate consideration to providing low-cost service to ratepayers. The effect on ratepayers (and by extension the timing and frequency of rate cases) may not be fully incorporated into NJAW's decision-making process. The links between the VDS "Key Elements" and the resources and commitment necessary to implement them are not yet developed. The VDS process identified customer service, public education, and low-income customer assistance as key elements that need to be developed for the successful execution of NJAW's new strategic focus. The "employee engagement and development" element in VDS is not well-developed. AWK business development (BD) efforts are of minimal value to NJAW ratepayers.

While NJAW has Key Performance Indicators (KPIs) against which its management and AWK measure the company's success, it does not have any action plans to support how to move from its current state to the desired goal levels. NJAW department-level performance goals are weak and not measureable. NJAW senior management, AWK executive management, and the AWK BOD are involved in the development, review, and approval of the financial "business plans" developed by NJAW. NJAW senior management regularly reviews performance against the financial business plans and other KPIs for both NJAW and AWWSC. The Business Transformation (BT) project represents a major initiative for AWK, with the potential for both major improvements in process efficiencies and customer services, and the risk of cost overruns and over-selling of benefits. The focus of NJAW's senior management and expertise is appropriately on NJAW operations. SSC and AWWSC personnel assigned full time to support NJAW generally have an appropriate focus on NJAW issues.

System Operations

NJAW's systems planning process is not well-coordinated. The capital planning and budgeting models which NJAW's uses to evaluate and prioritize projects and programs should give additional consideration to asset condition. The NJAW design process requires a significant amount of manual intervention. NJAW does not have fully-integrated work

management systems or tools in place to measure the efficiency of its work force. NJAW's current information systems shortcomings prevent it from providing optimal service and promoting efficiency in many operating areas. NJAW does not benchmark its systems operations in detail against other water utilities or other AWK regulated utilities.

NJAW maintains high levels of customer service and response. NJAW has controls and procedures in place that enable it to comply with the Safe Water Drinking Act (SWDA) and other water quality regulations. NJAW has proposed an extensive conservation plan to the BPU. NJAW has a comprehensive Emergency Response Plan.

Customer Service

NJAW has effective procedures for measuring the quality of service it provides to customers. Although customers are dissatisfied with the rates, they are generally satisfied with the service provided by NJAW. NJAW handles customer complaints in compliance with Title 14 Chapter 3 of the NJAC and in a timely manner. Customer service system deficiencies result in inaccuracies and inefficiencies. NJAW expects that the Business Transformation (BT) program will address a number of the customer service systems and process inefficiencies. The AWWSC call centers may not provide the most cost-effective solution for NJAW ratepayers and operation of the call center 24 hours per day, seven days per week is unnecessary. Although the Alton Customer Service Center (CSC) operates with a reduced staff during non-business hours and on weekends, call volumes are low during these periods and the number of calls per staff is relatively high. CSC staffing related service level standards may be high, contributing to a higher cost of call center operations.

While meter reading and billing performance meets or exceeds targets, both involve a number of manual processes, resulting in inefficiencies, rework, and a greater potential for errors. AWK and NJAW perform a number of checks to ensure the accuracy of meter reads and customer bills. The window between meter read and billing is too long. NJAW's implementation of AMR is driven by regulatory replacement requirements and employee attrition. BPU requirements result in the testing of a significant number of meters. In 2009, NJAW refunded about \$175,000 to customers due to 3,500 fast meters. Advantex provides an appropriate tool for the scheduling, monitoring and performance of short-cycle work, i.e., re-reads and meter change-outs. NJAW does not have an integrated tool for the scheduling, monitoring and performance of long-cycle work (e.g., new service).

While NJAW lacks a sophisticated or aggressive collections process, its bad debt levels are low. Collections activities are performed based on collections thresholds which are the same for all customers regardless of prior payment history. Special account collection activities are performed by NJAW's customer relations organization. NJAW is not able to work all non-pay disconnect orders due to resource limitations and the expiration of the service orders.

NJAW does not perform traditional marketing. While NJAW has an adequate program for detecting theft of service, it does not evaluate its theft of service program performance in terms of revenue recovery. NJAW customers can contract with the unregulated affiliate, American Water Resources (AWR), for service-line protection warranty programs.

External Relations

NJAW's state external affairs are managed administratively by the AWK senior vice-president despite doing all its work for the NJAW president. NJAW could make more effective use of bill inserts to communicate with its customers. AWK interfaces with its investors in an effective manner. NJAW keeps local media and local government officials informed about its activities and AWK actively interfaces with officials at the Federal level. NJAW has a good history of working with the BPU, its economic regulator, despite its high rates.

Support Services

Service level agreements (SLAs) do not exist or are lacking in necessary detail for most support services being provided to NJAW by AWWSC. NJAW carries appropriate categories of insurance and controls its insurance premium costs. While NJAW has had an unusually high number of OSHA reportable incidents, it has a comprehensive plan to reduce safety-related incidents and reduce losses. AWWSC allocates a reasonable portion of its legal costs to NJAW and NJAW's costs for legal services also appear reasonable. NJAW holds a minimum amount of property in anticipation of future facility requirements.

The supply chain process is hindered by the lack of a Materials Resource Planning System (MRP). NJAW reduced its inventory levels by over \$10.5 million or 41.7 percent from January 2009 to January 2010. NJAW holds a minimum of materials inventory at its operating and production locations. NJAW benefits from AWK's national purchasing agreements. AWK uses two outsourcing firms to manage its fleet.

AWK has undertaken a comprehensive business transformation (BT) process program to address its IT needs. AWK does not have a formal process for comparing its IT costs to other utilities. While the IT organization does not have a written disaster recovery plan, it performs a disaster recovery test annually. Although NJAW has a robust records retention policy, NJAW has not conducted any reviews or audits to ensure that the policy and schedule is actually followed. NJAW has the organization, policy and practices to ensure a reasonably secure working environment. NJAW has recently developed and monitors metrics for security management.

Finance & Cash Management

NJAW is not adversely affected by the centralization of finance and cash management activities within AWWSC. The capital structure and the resulting weighted average cost of capital in place at NJAW are within the ranges typical for regulated utilities and regulated subsidiaries of diversified corporations. Over the past seven years, NJAW has paid \$171million more to AWK in dividends than it received in equity infusions. NJAW finances its capital program using a combination of cash from operations and non-cash benefits of depreciation and amortization. NJAW's bond issuer ratings are currently identical to those of AWK and AWCC. NJAW has the advantage of multiple sources of long-term debt financing, and is able to select the lowest cost financing source that meets its financing needs. NJAW has appropriate access to short-term borrowing through AWCC intra-

company loans and a corporate outside line of credit (LOC). NJAW's financing is not adversely affected by the activities of its affiliate companies, either regulated or non-regulated. Over the past three years, NJAW was only minimally affected by write-offs by affiliates of capital projects.

The processes used by NJAW for receiving and securing payments by customers are appropriate. NJAW's cash management for NJAW is handled by AWK Treasury under a BPU-approved in-house banking arrangement which does not harm NJAW ratepayers. AWK's use of prime money market funds and bank overnight sweep investments for excess cash is appropriate.

The methods used by AWK to calculate federal income tax liabilities and refunds due to NJAW and other affiliated companies provide neither an advantage nor a disadvantage to New Jersey ratepayers. In four of the past five years, NJAW reported taxable income and was able to use taxable losses from its affiliates in lieu of paying income taxes to the Federal government. AWK has pursued alternative tax treatments allowed by the IRS to the benefit of NJAW. Rate treatment of income taxes has no effect on the calculation and payment of income taxes for NJAW. Diversified, non-regulated activities undertaken by AWK have received no apparent benefit from NJAW taxable income, nor has NJAW been disadvantaged by non-regulated income or losses for tax purposes. AWK is responding appropriately to the finding of "significant deficiency" in the area of income tax accounting, accruals and reporting. AWK has not formally adopted the policies for calculating federal income taxes and the sharing of tax liabilities and credits.

NJAW's residential rates are higher than the other Class A Water Companies in New Jersey. NJAW attributes its higher rates to historical investments in infrastructure mandated as a result of its role as regional water supplier and lower customer density per mile compared to its peer utilities. NJAW's role as the regional water supplier and associated investments in infrastructure to benefit numerous New Jersey water utilities during the 1980s and 1990s has had a significant effect on the company's capital investments. NJAW has invested more than \$264 million in Critical Area 1 and 2 facilities and continues to incur capital costs and incremental O&M costs associated with the maintenance and upkeep of these facilities. NJAW's lower customer density contributes to higher rates, as the lower density requires more pipes and other equipment. NJAW's rate structure and design are typical for regulated utilities. NJAW's recent efforts to move its remaining customers from quarterly billing to monthly billing should benefit customers.

Accounting, Property Records & Budgeting

The roles and relationships between NJAW finance and the SSC accounting functions are appropriate. NJAW's accounting procedures are in compliance with Generally Accepted Accounting Principles ("GAAP"). However, AWK's budgeting, accounting, and financial reporting processes are inefficient and require a large accounting staff. AWK took effective action to remediate a significant deficiency in its internal controls over its financial reporting processes in its preparation for SOX compliance. The payroll functions are appropriately placed within AWK's organization and payroll processing costs are reasonable. AWK payroll processes have appropriate oversight, review and controls.

While the AWK and NJAW process for developing the five-year financial plan is not documented, the financial plan has appropriate components and sources. AWK and NJAW have an appropriate process for developing the five-year financial plan. The roles and relationships between the NJAW and AWK financial planning functions are appropriate. The financial plans for NJAW and AWK are approved by their respective boards of directors. NJAW's annual operating and capital budgets are based on the five-year business plan. The FRP monthly financial report, prepared by NJAW's FP&A group, is an appropriate tool for reporting financial results to the NJAW VP Finance and the AWK CFO and Controller. The BPR monthly report is an appropriate tool for monitoring progress on Key Performance Indicators (KPIs) and reporting operating events to the NJAW senior management team, and the AWK CEO, CFO and the executive management team, and the President of Regulated Operations. The BPR and FRP reports are used for different purposes, and by different organizations. NJAW has adequate information about operating expense variances and potential overspending.

NJAW does not control the scope and cost of services provided it by AWWSC. NJAW and AWWSC have appropriate processes to manage and account for NJAW's fixed assets, including work order processes related to utility plant accounting. The roles and responsibilities of the NJAW project managers and the SSC utility plant accounting group are appropriate. The roles and relationships between organizations responsible for capital planning are appropriate. The process to develop and approve the capital plan is appropriate. AWK's practice of allocating capital to its regulated companies does not result in significant changes to NJAW's capital plan. NJAW and AWK have an appropriate process to review and control capital expenditures.

Affiliate Cost Allocations & Relationships

NJAW does not prepare affiliate transactions reports. AWWSC does not direct charge NJAW for its services to the extent possible. Less than seven percent of all hours charged to NJAW were direct charges in 2009. AWWSC utilizes two levels of cost allocation and its cost allocations are not entirely based on direct causal factors. AWWSC utilizes one set of drivers at the Tier 1 level and then switches to customer count as the driver at the Tier 2 allocation level. Tier 1 and Tier 2 allocation percentages are correctly calculated and applied to hours charged to NJAW by AWWSC. AWWSC may double count some of the customers when it determines its cost allocations based on customer counts.

NJAW has little control over service company costs, or budget overruns, or a method of determining the value of services received from AWWSC. NJAW does not have independent business relationships with its affiliates. NJAW is not always in compliance with its own procurement policy which is to obtain services through a competitive bidding process. NJAW receives some AWWSC services at a reasonable cost. While NJAW does not lease facilities from its affiliates, it is unclear whether NJAW has a lease with AWWSC for its use of space at the Delran Water Treatment Plant. AWWSC employees' time directly charged to NJAW in 2009 was appropriate. There is no evidence that illegal improper, irregular, or illegal transactions have occurred between NJAW and its affiliates. AWWSC's time reporting practices are generally appropriate. NJAW affiliate contract files lack key documents.

Company Contractor Performance

NJAW does not comply with certain provisions of the New Jersey one-call regulations. NJAW has not performed an analysis to support its use of contractors or in-house resources for mark-outs. While NJAW's mark-out contractor has a quality control program, NJAW does not routinely inspect the work of the contractor. NJAW has inadequate information on its mark-out program to make informed decisions regarding its ability to comply with regulations. NJAW does not track the division of main or service work that is performed by contractors. NJAW does not compare T&D contractor performance and productivity against other contractors or against in-house crews. NJAW does not have a quality control or inspection process for its main and service contractors.

B. Summary of Recommendations

This report contains a total of fifty-five recommendations. Detailed findings and conclusions supporting the recommendations are provided in each of the related chapters. **Exhibit II-1** provides a consolidated listing of the recommendations and a priority ranking for each one. NorthStar has assigned a priority ranking of "A", "B", and "C" to each recommendation based on our judgment of their importance for NJAW ratepayers. For example "A" recommendations, when implemented, should provide significant benefits to ratepayers in terms of reduced costs and/or improved service and therefore should be addressed by NJAW as soon as practical. "C" recommendations, while important, are unlikely to provide immediate or verifiable benefits when implemented and therefore should be considered far less important by NJAW than either "A" or "B" rated recommendations. The exhibit also provides a brief assessment of the primary benefit and a general ranking of the level of effort required to implement each recommendation. The primary benefit classifications include:

- Protect ratepayer interests
- Improve performance monitoring
- Improve customer service
- Improve controls
- Improve use of resources

NorthStar has classified the level of effort required as either "nominal", "moderate" or "significant" based on our judgment of the effort that would likely be required to implement the recommendations. The incremental cost is classified as "nominal", "moderate" or significant once again, based on our judgment of the incremental dollars that might be needed to achieve the recommendation. The "nominal" category is for those recommendations that would require a re-assignment of existing internal resources, but should be achievable with current staffing. The "moderate" or significant categories are for those items that would require NJAW to incur additional costs.

**Exhibit II-1
Summary of Recommendations**

Rec. Number	Recommendations	Priority	Benefits	Level of Effort	Incremental Cost
III-1	Revise AWK's and NJAW's long-term corporate objectives and strategies to make them more explicit relative to their responsibilities to meet the future needs of NJAW ratepayers relative to the cost of water. (Refers to Findings III-1, VI-3, VI-6 and VI-7)	A	Protect ratepayer interests	Nominal	Nominal
III-2	Expand the number of KPIs to track performance and to address all NJAW corporate goals. (Refers to Finding III-2)	B	Improve performance monitoring	Nominal	Nominal
III-3	Expedite the requirement that all independent AWK BOD members own a minimal number of AWK shares within a reasonable period of their joining the BOD. (Refers to Finding III-5)	B	Protect ratepayer interests	Nominal	Nominal
III-4	Add a member to AWK's BOD who has extensive experience in operating a utility in New Jersey or extensive experience in New Jersey utility regulation who would represent the interests of NJAW ratepayers. (Refers to Finding III-6)	B	Protect ratepayer interests	Nominal	Nominal
III-5	Consider adding a second member of senior management to the AWK BOD. (Refers to Finding III-6)	C	Protect ratepayer interests	Nominal	Nominal

Rec. Number	Recommendations	Priority	Benefits	Level of Effort	Incremental Cost
III-6	Conduct the quarterly Business Performance Report meeting and the NJAW quarterly BOD Meeting simultaneously. (Refers to Finding III-8)	B	Improve use of resources	Nominal	Nominal
III-7	Develop effective service level agreements to cover services provided by affiliates to NJAW. (Refers to Findings III-9, IV-7, V-1, X-1 and XIII-16)	A	Protect ratepayer interests	Moderate	Nominal
IV-1	Develop a clear and consistent policy for defining the administrative and functional responsibilities of NJAW and AWWSC officers and senior management. (Refers to Finding IV-2)	A	Improve use of resources	Moderate	Nominal
IV-2	<p>Develop policies and procedures that address affiliate relationships covering topics that include:</p> <ul style="list-style-type: none"> • Compliance with regulatory requirements. • Tariff transactions between affiliates. • Discriminatory practices among affiliated and non-affiliated companies. • Confidential information transfers between NJAW and its affiliates. • Contracts for products and services between NJAW and its affiliates. (Refers to Findings IV-3 and VIII-17) 	A	Protect ratepayer interests	Moderate	Nominal

Rec. Number	Recommendations	Priority	Benefits	Level of Effort	Incremental Cost
IV-3	Obtain any required BPU approval of all contract agreements between NJAW and affiliate entities. (Refers to Finding IV-4)	C	Protect ratepayer interests.	Nominal	Nominal
IV-4	Obtain competitive bids for services provided by AWWSC. (Refers to Findings IV-5, IV-6 and XIII-7)	A	Improve use of resources	Moderate	Nominal
IV-5	Have the Internal Audit director report administratively to a senior officer other than the CFO and strengthen the Internal Audit function. (Refers to Findings IV-8, IV-9 and IV-10)	B	Improve controls	Nominal	Nominal
IV-6	Determine if NJAW ratepayers have paid for SOX compliance and testing that was disallowed as a condition of the RWE Rate Order. (Refers to Finding IV-13)	B	Protect ratepayer interests	Nominal	Nominal
V-1	Continue attempts to negotiate the elimination of the substantial sick banks which have accrued under prior union employee benefits programs and replace them with short-term disability insurance. (Refers to Finding V- 7)	B	Improve use of resources	Moderate	Nominal
V-2	Continue steps to improve succession planning, professional development and performance review processes. (Refers to Findings V-9 and V-10)	C	Improve performance monitoring	Nominal	Nominal

Rec. Number	Recommendations	Priority	Benefits	Level of Effort	Incremental Cost
V-3	Develop and implement processes for determining appropriate staffing requirements, spans of control and layers of management and quantify estimated savings resulting from BT. (Refers to Finding V-11)	A	Improve use of resources	Moderate	Nominal
VI-1	Continue the implementation of the VDS process, including completing the risk and gap analysis, developing a prioritization process, building action plans and fully linking the VDS to the budgeting process, KPIs and performance goals for NJAW. (Refers to Findings VI-1, VI-4, VI-5 and VI-8)	A	Improve performance monitoring	Moderate	Nominal
VI-2	Link New Jersey consumer and public education messages to align with VDS goals. (Refers to Finding VI-9)	B	Improve customer service	Nominal	Nominal
VI-3	Link employee engagement and training, and other human resources activities with the VDS goals. (Refers to Finding VI-10)	B	Improve performance monitoring	Moderate	Nominal
VI-4	Revise the AWK treatment of Business Development (BD) costs to an “as requested/fee” basis, and consider using non-AWK providers of training and other Business Development services. (Refers to Finding VI-11)	B	Improve use of resources	Nominal	Nominal

Rec. Number	Recommendations	Priority	Benefits	Level of Effort	Incremental Cost
VI-5	Modify the KPIs for NJAW to reduce redundancies, focus on controllable activities and clearly link with the VDS process and develop action plans for achieving performance improvements. (Refers to Findings VI-12 and VI-13)	B	Improve performance monitoring	Nominal	Nominal
VI-6	Install a process to ensure that SSC provides low-cost, efficient, competitive, and valuable support services to NJAW. (Refers to Finding VI-15)	A	Improve use of resources	Moderate	Nominal
VI-7	Implement the Business Transformation project within budget and on schedule. (Refers to Findings VI-16, V-2, VI-8, VIII-5, VIII-10, VIII-24, X-10 and XII-3)	A	Improve use of resources	Significant	Significant
VII-1	Take steps to improve the asset management systems, tools and processes. (Refers to Findings VII-1)	B	Improve use of resources	Moderate	Moderate
VII-2	Revise the models which NJAW's uses to evaluate and prioritize projects and programs to give additional consideration to asset condition. (Refers to Finding VII-2)	B	Improve use of resources	Moderate	Moderate

Rec. Number	Recommendations	Priority	Benefits	Level of Effort	Incremental Cost
VII-3	Implement a computerized design tool that includes at a minimum: a compatible units feature; and interfaces with materials, PowerPlant and graphical design and mapping software. (Refers to Finding VII- 3)	B	Improve use of resources	Moderate	Moderate
VII-4	Implement systems to enable NJAW to capture and compare actual work units completed to those designed and budgeted. (Refers to Finding VII-4)	B	Improve use of resources	Moderate	Moderate
VII-5	Benchmark detailed work performance metrics against other AWK companies and other water companies. (Refers to Finding VII-5)	B	Improve performance monitoring	Moderate	Moderate
VIII-1	Perform an analysis of the relative costs of in-house versus outsourced call center operations for NJAW. (Refers to Finding VIII-6)	B	Improve use of resources	Moderate	Moderate
VIII-2	Discontinue 24/7 operation of the call center. Determine the systems/staff necessary to transition after hours' emergency calls to the local level. (Refers to Finding VIII-7)	B	Improves use of resources	Moderate	Nominal
VIII-3	Determine whether call center staffing levels could be reduced while maintaining the overall average speed of answer (ASA) target and consider changing the ASA target. (Refers to Findings VIII-8 and VIII-9)	B	Improve use of resources	Moderate	Nominal

Rec. Number	Recommendations	Priority	Benefits	Level of Effort	Incremental Cost
VIII-4	Shorten the window between meter read and billing. (Refers to Finding VIII-12)	B	Improve use of resources	Moderate	Moderate
VIII-5	Implement a system that integrates the customer information system with the scheduling, monitoring and performance of new service work. (Refers to Finding VIII-16)	B	Improve use of resources	Moderate	Moderate
VIII-6	Take steps to improve non-pay disconnect performance. (Refers to Finding VIII-20)	C	Improve use of resources	Nominal	Nominal
VIII-7	Implement programs to track and increase the theft of service revenue recovered. (Refers to Finding VIII-23)	C	Better use of capital dollars	Nominal	Nominal
IX-1	Assign administrative responsibility for the NJAW state external relations to the NJAW president. (Refers to Finding IX-1)	B	Improve use of resources	Nominal	Nominal
IX-2	Take steps to improve communicating with customers including making better use of bill inserts. (Refers to Finding IX-2)	B	Improve customer service	Nominal	Nominal
X-1	Periodically, benchmark IT costs against similar utilities. (Refers to Finding X-16)	B	Improve performance monitoring	Nominal	Nominal
X-2	Formalize the IT disaster recovery plan. (Refers to Finding X-17)	B	Improve controls	Nominal	Nominal

Rec. Number	Recommendations	Priority	Benefits	Level of Effort	Incremental Cost
X-3	Conduct periodic reviews of records retention practices to ensure that policies are being adhered to. (Refers to Finding X-18)	C	Improve controls	Nominal	Nominal
XI-1	Update the tax sharing agreement policies and procedures. (Refer to Finding XI-19)	C	Improve controls	Nominal	Nominal
XII-1	Document the process for developing the five-year business plan. (Refers to Finding XII-8)	C	Improve controls	Nominal	Nominal
XII-2	Take steps to improve controls over the scope and cost of support provided NJAW by AWWSC. (Refers to Finding XII-18)	A	Improve use of resources	Moderate	Moderate
XIII-1	Develop a monthly affiliate transaction financial report which lists and totals NJAW intercompany and affiliate transactions throughout AWK. The report should include product or service, cost quantity, and associate contract numbers as necessary. (Refers to Finding XIII-1)	B	Protect ratepayer interests	Nominal	Nominal
XIII-2	Expand the use of direct charging of AWWSC employee time where feasible. Use causal factors to justify cost allocations. (Refers to Findings XIII-2, XIII-3and XIII-5)	A	Protect ratepayer interests	Moderate	Moderate
XIII-3	Assess the practice of applying two allocation factors for a single cost. (Refers to Finding XIII-6)	C	Protect ratepayer interests	Nominal	Nominal

Rec. Number	Recommendations	Priority	Benefits	Level of Effort	Incremental Cost
XIII-4	Execute a lease for AWWSC's use of space at the Delran Water Treatment Plant. (Refers to Finding XIII-9)	C	Improve controls	Nominal	Nominal
XIII-5	Discontinue counting customers that receive both water and wastewater service as two customers when determining allocation factors. (Refers to Finding XIII-10)	B	Protect ratepayer interests	Nominal	Nominal
XIII-6	Complete documentation of affiliate contract files. (Refers to Finding XIII-14)	B	Improve controls	Moderate	Nominal
XIV-1	Modify the mark-out process and practices to ensure compliance with NJ regulations. (Refers to Finding XIV-1)	A	Protect ratepayer interests	Moderate	Moderate
XIV-2	Evaluate the actual costs of using the mark-out contractor versus using in-house resources. (Refers to Finding XIV-2)	B	Improve use of resources	Nominal	Nominal
XIV-3	Develop a program for inspecting mark-out work rather than relying on contractor self-inspection. (Refers to Finding XIV-3)	C	Improve use of resources	Moderate	Moderate
XIV-4	Collect and retain appropriate information on the mark-out process whether performed by contract or in-house crews. (Refers to Finding XIV 4)	B	Protect ratepayer interests	Moderate	Moderate

Rec. Number	Recommendations	Priority	Benefits	Level of Effort	Incremental Cost
XIV-5	Incorporate contractor work into the work management systems to identify the actual costs and resources required to do individual tasks. (Refers to Findings XIV-5 and XIV-6)	B	Improve use of resources	Moderate	Nominal
XIV-6	Develop a quality control and inspection process for main and service contractors. (Refers to Finding XIV-7)	B	Improve use of resources	Moderate	Nominal

III. EXECUTIVE MANAGEMENT & CORPORATE GOVERNANCE (3.1)

This task area covers the corporate structure and function of the New Jersey American Water Company, Inc.'s (NJAW) senior management and the Boards of Directors (BOD) of American Water Works Company, Inc. (AWK) and NJAW. It evaluates senior management's ability to anticipate and respond to opportunities and problems. Effective executive management and governance has the following attributes:

- An experienced and knowledgeable BOD with appropriate committees to provide effective oversight and direction.
- Top management with the right number of people with the right skills.
- A proper organizational focus and direction supported by effective corporate planning.
- Effective communications among executives on important business, legal and regulatory issues and comprehensive reports on cost and performance results.
- A process for developing management talent and filling key positions with highly-qualified individuals.

In reviewing NJAW's executive management and governance, NorthStar focused on the utility's structure and management processes. The intent was to determine whether NJAW has the management foundation that is necessary to achieve its strategic goals and objectives, while maintaining compliance with various regulatory requirements.

AWK, the parent of NJAW, has an eight member BOD and has a non-executive chairman. NJAW has its own BOD which has seven members including two independent outside members.

A. RFP Objectives

In its RFP for this audit, the BPU identified the following objectives for the review of NJAW's executive management and corporate governance.

- Evaluate NJAW's corporate structure and determine whether the BOD and senior management are able to anticipate and respond to strategic issues on an ongoing basis by ensuring that the ratepayers are insulated as much as possible from financial harm.
- Determine whether the BOD has the experience and knowledge to fulfill the corporate goals and objectives and ensure that no director has any conflicts of interest, self-interest, or unreasonable influence while sitting on the BOD.

- Evaluate the selection of directors for NJAW.
- Examine the separation of the Chairman of the BOD (Chairman) and Chief Executive Officer (CEO) titles.
- Review NJAW’s executive compensation, including a comparison with other comparable utilities.
- Assess the independence of NJAW’s senior management, relative to its own performance and the best interests of its ratepayers.
- Evaluate the appropriateness of BOD committee structures.
- Evaluate lawsuits brought before NJAW’s BOD and/or officers, determining if they relate to executive management or corporate governance issues, and their potential impact upon NJAW.

B. Evaluative Criteria

In conducting our review of NJAW's executive management and corporate governance, NorthStar used the following criteria:

- Does the AWK BOD have the experience and knowledge to fulfill the corporate goals and objectives?
- Does AWK have an effective process for selecting directors for its BOD?
- Is NJAW’s executive compensation program reasonable and in-line with that offered by comparable utilities?
- Are management performance and compensation programs aligned with the corporate mission, objectives and goals at all organizational levels?
- Do members of AWK’s BOD have an in-depth understanding of NJAW’s service territory and its unique characteristics?
- Are New Jersey ratepayers’ interests enhanced by NJAW having independent directors on its BOD?

C. Audit Tasks

To complete the review in this area, NorthStar performed the following tasks:

1. Evaluated the corporate structure and determined whether the AWK’s BOD and senior management are able to anticipate and respond to strategic issues on an ongoing basis by ensuring that NJAW ratepayers are insulated as much as possible from financial harm.

2. Evaluated AWK's BOD and senior management's anticipation of and actions directly related to NJAW strategic issues in recent years, as well as the results of these actions.
3. Assessed the independence of the NJAW's senior management relative to its own performance and the best interests of its rate payers.
4. Determined whether the AWK's BOD has the experience and knowledge to fulfill the corporate goals and objectives and ensure that no director has any conflicts of interest, self-interest, or unreasonable influence while sitting on the Board.
5. Reviewed processes used to identify potential conflicts upon selection of AWK BOD members.
6. Evaluated the selection process for members of the BOD of AWK.
7. Examined the separation of the AWK chairman and chief executive officer roles.
8. Reviewed NJAW's executive compensation, including a comparison with other comparable utilities.
9. Evaluated the appropriateness of the AWK BOD committee structures.
10. Evaluated lawsuits brought before AWK's BOD or officers to determine whether they relate to executive management or corporate governance issues and their potential effect on NJAW.
11. Determined the need and value of NJAW having independent members on its BOD.
12. Evaluated the development and articulation of corporate goals and objectives, strategic orientation, relationship and dissemination to the utility organization, tracking and feedback directly to the AWK BOD.

D. Findings and Conclusions

1. **AWK's and NJAW's long-term corporate objectives and strategies could be more explicit relative to their responsibilities to meet the future needs of NJAW ratepayers relative to the cost of water.**
 - AWK's mission is "to deliver value for our customers, investors and employees while enhancing the quality of life in our communities by managing the most basic resource of life – water.
 - AWK's 2009 goals were in the areas of finance, customer service/satisfaction, process and employee. In 2010, AWK modified the wording of the original four categories/perspectives and broke out the following three: diversity, environmental and health/safety.

- In 2010, NJAW developed departmental goals in alignment with the corporate and NJAW goals. The 2010 NJAW goals are to:
 - Deliver shareholder return and enhance long-term value (financial).
 - Deliver a positive and high quality customer and stakeholder experience (customer service/satisfaction).
 - Expand collaborative relationships with community and business leaders, regulatory agencies and other key stakeholders (customer service/satisfaction).
 - Provide and sustain integrated processes that effectively and efficiently deliver high quality customer and stakeholder experiences and meet necessary governance requirements (process improvement/business transformation (BT)).
 - Create and sustain a culture that is focused on health, wellness, safety and an injury free environment (health/safety).
 - Create, implement and support sustainable and responsible programs, practices and partnerships to become New Jersey's environmental leader in the water/wastewater industry (environmental).
 - Foster and promote a culture and work environment where employees: are engaged in and contribute to the success of NJAW/AWK; work in high performing teams; respect and learn from each other; are recognized for their contribution; seek out and are provided opportunities for learning and development; are prepared to meet future challenges and opportunities.
- The NJAW 2010 departmental goals added “delivering high-quality and cost effective water and wastewater services to our customers” to the financial goals for selected departments.

2. NJAW’s KPIs are primarily financial measures and do not address all corporate goals.

- Financial measures include: operating revenues, sales, customer connections, growth, operating income and margin, expenses, net income to common stock, construction expenditures and cash flow from operation.
- Customer service measures include: customer satisfaction survey and service quality survey ratings.
- The safety KPI is the OSHA recordable injury rate
- The environmental KPI is the number of Notice of Violations (NOV).
- The BPR overall KPIs do not address employee development, environmental leadership or external relations.

3. AWK's BOD and senior management are able to anticipate and respond to strategic issues on an ongoing basis to ensure that NJAW ratepayers are insulated as much as possible from financial harm.

- AWK has established and typically maintains a target capital structure for its regulated subsidiaries, including NJAW, of 50 percent equity and 50 percent debt. Typical capital structures for regulated utilities range from 40 percent to 60 percent equity.
- AWK has appropriately identified the need for a business transformation (BT) program as its key strategic initiative to improve the existing information technology infrastructure and out-dated application systems. The AWK BOD and senior management understand the risks and high costs involved in the effort and are carefully monitoring its progress.
- NJAW senior management, AWK executive management, and the AWK BOD are involved in the development, review and approval of NJAW's financial "business plans".
- NJAW senior management regularly reviews performance against its financial business plans and other KPIs.

4. Members of AWK's BOD have significant utility operations, financial and regulatory experience to ensure that AWK attains its corporate goals and objectives.

- Three of the seven independent directors have served as senior officers of investor-owned utilities and one director has served as chairwoman of the Florida Public Service Commission.
- Four of the seven independent directors of AWK's BOD either sit on or previously were board members of other investor-owned utilities.
- One independent AWK BOD member has significant water utility experience having served as the Commissioner for Philadelphia Water Department for eighteen years.
- Three of AWK's independent directors have served as chief financial officers (CFO) of investor-owned companies including one who was the CFO of a major multi-state investor-owned utility.

5. While no member of AWK's BOD director has any material conflicts of interest, self-interest, or unreasonable influence, three of the current independent directors have no beneficial ownership of AWK stock.

- No independent member of the AWK BOD owns more than 0.1 percent of AWK stock, and the CEO owns less than 0.2 of the stock.
- Three of the independent AWK BOD members do not hold any stock which suggests that they may not have sufficient interest in the company or confidence in its future.

Most directors of investor-owned companies own stock in the companies on whose board they sit.

- AWK has a written procedure for approval of related-person transactions. Such transactions require approval in advance by the BOD “which will be granted only if it is determined that, under all of the circumstances, the transaction is in the best interests of American Water and only as long as those interests outweigh any negative effects that may arise from permitting it to occur”.
- AWK directors are required to hold shares equaling four times their annual cash retainer, by the later of February 2015, or the fifth anniversary of the commencement of service as a Director.

6. While AWK has an appropriate process for selecting members of its BOD, its BOD does not currently have a member who is a strong advocate for NJAW and it has only one member of AWK senior management – the CEO.

- Over the last two years, AWK has added two new members to its BOD each year and has used an executive recruiting firm to assist its efforts. As a group, the four new members all bring extensive utility, regulatory and director experience to AWK's BOD.
- None of the members of AWK's BOD has extensive utility regulatory or utility operations experience in New Jersey. Since NJAW provides about 25 percent of AWK's operating revenues, NJAW ratepayers should have at least one member of the AWK BOD who is knowledgeable about operating a utility in New Jersey and can serve as their advocate.
- The CEO is the only member of senior management on the AWK BOD. The BOD may benefit from having a second member of senior management in its membership to assure that it has the input from two members of senior management on strategic issues. The presence of a second member can be useful in the planning for management succession.

7. AWK has appropriately separated the roles of the Chairman of the BOD (Chairman) and Chief Executive Officer (CEO).

- The Chairman is an independent member of the Board and runs the BOD meetings. He also serves as the chairman of the nominating and governance committee.
- The CEO who is also the President of AWK prepares the agenda for BOD meetings which is approved by the Chairman.
- The roles of the two individuals are clearly defined and understood with the Chairman being responsible for managing the BOD and the CEO managing the company.

8. NJAW's BOD has two independent non-executive members, a practice which provides limited value to NJAW's ratepayers.

- The NJAW BOD consists of seven members including five members of management and two independent members. The five members of senior management on the BOD have a clear majority and control the decision-making process. In reality, the two independent members can have little effect on management decisions. The BPU does not require NJAW to have independent members on its BOD.
- NJAW senior management holds two meetings quarterly. It has a quarterly Business Performance Report (BPR) meeting which is attended by the AWK CEO, the AWK CFO, and the President of Regulated Operations and NJAW senior officers. Similarly, there is a quarterly NJAW BOD meeting which covers the same issues as the BPR meeting. The NJAW BOD meeting also discusses strategic issues affecting NJAW which are under the direction and control of AWK management.
- The AWK CEO is not on the NJAW BOD and does not attend its meetings. NJAW does not have a CEO or CFO.
- The two independent members of NJAW's BOD are active in New Jersey civic and regulatory affairs. They consider themselves ambassadors for NJAW and AWK and provide valuable feedback to NJAW and AWK senior management about issues in New Jersey that might affect the companies.

9. NJAW's senior management does not have sufficient independence relative to its own performance and the best interests of its ratepayers.

- In 2009, NJAW paid \$37.1 million to AWWSC for services for central shared services, customer call centers, central lab services, procurement, information systems, human resources, water quality and environmental, security, engineering, risk management finance, building/property management, investor relations, business development, internal audit and regulatory programs. The total paid to AWWSC in 2009 included an additional \$2.9 million for capital expenses. It also paid \$17.7 million to American Water Capital Corp. (AWCC) for cash management and financing services.
- NJAW does not have effective service level agreements to ensure that it has control of the costs and quality of services it receives from affiliates like American Water Works Service Company (AWWSC) and AWK. For example, the NJAW President is only one of 16 members on the AWWSC BOD. However, AWWSC Board meetings do not serve as an effective forum for NJAW to have meaningful input regarding the scope or cost of services provided it by AWWSC.
- AWK's practice of allocating capital to its regulated companies does not result in significant changes to NJAW's capital plan.
- NJAW is not always in compliance with its own procurement policy which is to obtain services through a competitive bidding process.

10. AWK's BOD has an appropriate committee structure.

- The AWK BOD has four committees: finance, nominating and governance, audit and compensation.
- The committees meet regularly and have detailed and appropriate charters.
- Membership of the committees is appropriate. Committees meet at separate times and all members of the BOD are encouraged to attend committee meetings whether or not they are members.

11. AWK uses a unique benchmark for evaluating compensation for both utility and non-utility executives.

- Compensation levels for the top sixteen AWK executives including the NJAW president are evaluated against two peer sub-groups developed by Towers-Watson: a core industry sub-group and a utility industry sub-group. The core industry subgroup is weighted 40 percent and the utility industry sub-group weighted 60 percent.
- The peer group evaluation does not distinguish between distribution utilities and more vertically-integrated utilities.
- In 2009, to validate the use of the blended peer group, the Compensation Committee of the AWK BOD retained its own consultant, DolmatConnell, to perform a comparison. The DolmatConnell peer group consisted of sixteen utilities, including one other water utility, with similar market capitalization and sizes ranging from one-half to two times the size of AWK. The survey compared the compensation for the top four AWK executives. The DolmatConnell peer group average compensation was over 20 percent higher than the blended group used by Towers Watson.

12. NJAW's executive compensation program is reasonable, competitive and links compensation with performance.

- Executive compensation is appropriately performance-based and consists of three components: base salary, annual short-term incentives (AIP), and long-term incentives (stock and stock options). Each of the three components is compared against the peer group, both in terms of dollars and relative weightings. Each component is targeted at 50 percent of the industry average. No AIP compensation is paid to any executive if AWK does not meet its earnings per share goal.
- Executive compensation is appropriately linked to the achievement of corporate financial targets and individual goals. Individual goals are linked to the corporate goals and achievement of milestones. As an example, **Exhibit III-1** provides the 2009 goals for the NJAW President.
- Executive compensation levels in 2008 were artificially high as a result of two incentives implemented by RWE - a retention bonus and a bonus for successful completion of the IPO. Levels are consistent with industry benchmarks in 2009.

**Exhibit III-1
NJAW President's 2009 Goals**

Category	Goal
Financial	Meet or exceed business plan
Customer Satisfaction	Deliver superior customer experience
Process Improvement/BT	Foster a culture of continuous improvement of operational efficiency and effectiveness
Health/Safety	Create a safe and productive environment
People Development	Make NJAW the employer of choice

13. Lawsuits pertaining to NJAW are unlikely to have an adverse effect on NJAW.

- In February 2004, the New Jersey Department of Environmental Protection (DEP), issued to NJAW, a notice of violation alleging that NJAW had exceeded annual diversion limits contained in NJAW's water allocation permits for certain wells in its Lakewood system during the years 2001 through 2003. DEP initially assessed a penalty of \$0.6 million. NJAW subsequently submitted a voluntary statewide Self Disclosure Report identifying all such exceedances for the period of 1999 through 2003.
- In December 2007, NJAW finalized an administrative consent order with DEP to resolve the above violations under which NJAW has paid a civil fine of \$0.1 million and has undertaken a \$0.4 million environmental project. The project report is the lone aspect of the project remaining and NJAW expects that aspect to be completed before the end of 2010. NJAW believes that it is operating in compliance with the applicable diversion limits in its water allocation permits.
- AWK believes that there are no other proceedings or litigation related to NJAW that will materially affect NJAW's financial position or results in operation.

E. Recommendations

1. Revise AWK's and NJAW's long-term corporate objectives and strategies to make them more explicit relative to their responsibilities to meet the future needs of NJAW ratepayers relative to the cost of water. (Refers to Findings III-1, VI-3, VI-6 and VI-7)
2. Expand the number of KPIs to track performance and to address all NJAW corporate goals. (Refers to Finding III-2)
3. Expedite the requirement that all independent AWK BOD members own a minimal number of AWK shares within a reasonable period of their joining the BOD. (Refers to Finding III-5)

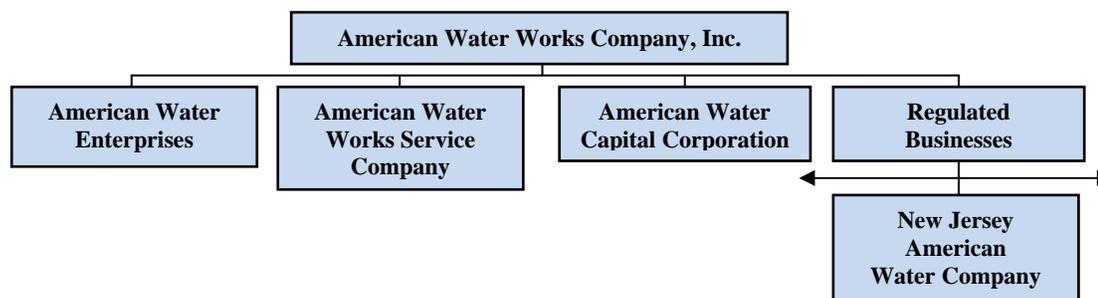
4. Add a member to AWK's BOD who has extensive experience in operating a utility in New Jersey or extensive experience in New Jersey utility regulation who would represent the interests of NJAW ratepayers. (Refers to Finding III-6)
5. Consider adding a second member of senior management to the AWK BOD. (Refers to Finding III-6)
6. Conduct the quarterly Business Performance Report meeting and the NJAW quarterly BOD Meeting simultaneously. (Refers to Finding III-8)
7. Develop effective service level agreements to cover services provided by affiliates to NJAW. (Refers to Findings III-9, IV-7, V-1, X-1 and XIII-16)

IV. ORGANIZATIONAL STRUCTURE (3.2)

American Water Works Company, Inc. (AWK), a Delaware Corporation, was founded in 1886 as the American Water Works & Guarantee Company for the purposes of building and purchasing water systems in McKeesport, Pennsylvania. In 1935, AWK was reorganized under its current name, and in 1947 it became publicly traded on the New York Stock Exchange (NYSE). Prior to its acquisition in 2003 by RWE Aktiengesellschaft (RWE), a corporation incorporated in the Federal Republic of Germany, AWK was the largest publicly traded water utility company in the United States – as measured by both operating revenue and population served. Prior to its initial public offering in April 2008, AWK was wholly-owned and controlled by RWE, which continued to own a majority of its shares until the completion of a subsequent public offering in June 2009. In November 2009, RWE sold all remaining shares of AWK’s common stock that it held. AWK is geographically diversified as well as the largest investor-owned United States water and wastewater utility company. More than 7,000 AWK employees provide approximately 16 million people with drinking water, wastewater and other water-related services in 35 states and two Canadian provinces.

AWK’s two operating segments are also the Company’s two NYSE reportable segments, and are referred to as the Regulated Businesses and Non-Regulated Businesses. New Jersey American Water (NJAW) is a significant organizational element of AWK’s Regulated Businesses. An organization chart illustrating the AWK organization structure is shown in **Exhibit IV-1**. For 2009, AWK Regulated Businesses generated \$2.2 billion in operating revenue, which accounted for 89.5 percent of total operating revenue. NJAW operating revenue for 2009 was \$560.9 million, or approximately one-quarter of the AWK Regulated Business revenue. For the same period, Non-Regulated Businesses generated \$257.7 million in operating revenue, which accounted for 10.5 percent of total consolidated operating revenue.

Exhibit IV-1
AWK Organization Structure



NorthStar’s organization analysis assessed whether AWK and NJAW’s structures provide an efficient and valuable service to NJAW’s ratepayers. One key aspect in evaluating efficiency and value is the financial relationships between NJAW, American Water Works Service Company, Inc. (AWWSC), other regulated water utility affiliates, and unregulated water and wastewater industry focused affiliates. NorthStar’s examination also

evaluated the extent to which ratepayers are insulated from the activities of the utility's non-regulated affiliates.

From 2003 until the completion of its IPO in April 2008, AWK, as an indirect wholly-owned subsidiary of RWE, was not required to comply with the requirements of the Securities Exchange Commission (SEC) and the Sarbanes-Oxley Act (SOX), or to prepare consolidated financial statements. AWK was required to comply with Section 404 of the SOX for the first time covering the year ended December 31, 2009. This system and process evaluation and testing of internal controls required management and external auditors to report on the effectiveness of internal control over financial reporting.

A. RFP Objectives

In its RFP for this audit, the BPU identified the following objectives for the review of organization structure:

- Evaluate the policies and procedures that define the necessity, legal entitlement, and the nature of the relationship among affiliates including the service company.
- Assess the resources allocated to NJAW's regulated activities, versus the non-regulated activities of any affiliates.
- Identify and evaluate NJAW and any affiliates' policies and procedures for effectiveness, dependence and adherence to legal, regulatory, and contractual requirements.
- Review and assess affiliated interest contracts to determine if they are executed at arm's-length and are industry-appropriate, in light of current market conditions, without cross-subsidization.
- Review compliance of policies and procedures with legal, regulatory, and contractual requirements.
- Review and assess internal controls to determine their effectiveness and independence.
- Assess the independence of NJAW's auditors, i.e., that they do not have conflicts of interest. (From 3.1 Executive Management & Corporate Governance)
- Determine if NJAW is in compliance with New York Stock Exchange (NYSE) requirements and SOX. (From 3.1 Executive Management & Corporate Governance)
- Determine the effectiveness of NJAW's internal auditing in ensuring continued compliance with applicable accounting rules and regulations. (From 3.9 Finance)

B. Evaluative Criteria

In conducting our review of NJAW's organization structure, NorthStar used the following criteria:

- Are the purpose, role and goals of AWWSC clearly articulated?
- Does NJAW's organizational structure promote and protect its ratepayer interests?
- Is AWK's approach to business development opportunities in the best interests of its New Jersey ratepayers?
- Does NJAW have an appropriate system of internal control?
- Are NJAW's and AWK's auditors sufficiently independent?
- Does the Internal Audit function provide appropriate oversight for NJAW activities, particularly those related to finance and accounting?

C. Audit Tasks

To complete the review in this area, NorthStar performed the following tasks:

1. Assessed the purpose, role and goals of AWWSC.
2. Assessed the resources allocated to NJAW's regulated activities versus the non-regulated activities of any affiliates.
3. Evaluated the policies and procedures that define the necessity, legal entitlement, and the nature of the relationship among affiliates including AWWSC.
4. Identified and evaluated NJAW and any affiliates' policies and procedures for effectiveness, dependence and adherence to legal, regulatory and contractual requirements.
5. Reviewed and assessed affiliated interest contracts to determine if they are executed "at arm's length" and are industry appropriate in light of current market conditions, without cross-subsidization.
6. Reviewed compliance of policies and procedures with legal, regulatory, and contractual requirements.
7. Examined executive management responsibilities, reporting relationships and approval levels for activities that are shared or commonly performed for the utility and its affiliates.

8. Reviewed formal agreements between the utility and its affiliates covering support services.
9. Assessed AWK's approach to business development opportunities.
10. Assessed the system of internal controls to determine their effectiveness and independence.
11. Assessed the independence of AWK's and NJAW's auditors, and the potential for conflicts of interest.
12. Evaluated NJAW's compliance with NYSE and SOX requirements.
13. Reviewed the processes used to develop the annual list of topics for Internal Audit topics to ascertain the role of overall risk assessment and appropriate mix of focus areas.
14. Reviewed a sample of recent Internal Audit reports to determine scope and depth of investigation and management activities to implement recommended/required changes.
15. Assured that NJAW activities, and activities that support NJAW executed by AWWSC and AWK are appropriately represented in recent and proposed Internal Audit topic lists.
16. Determined if the location of Internal Audit in the AWK organization appropriately protects the interests of NJAW ratepayers.

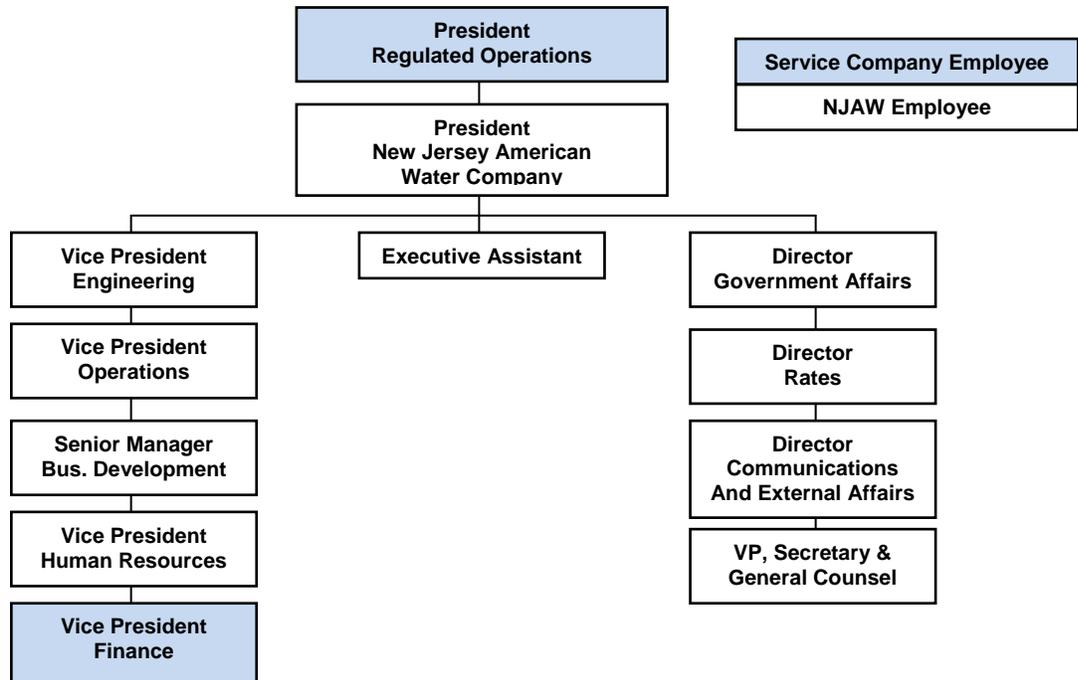
D. Findings and Conclusions

- 1. AWK's BOD has overall responsibility for the company's system of internal control and its CEO is responsible for implementing and operating that system and for reporting on its operation to the BOD.**
 - The AWK BOD discharges its responsibility by seeking ongoing assurance about internal control effectiveness and performing an annual review of internal control effectiveness.
 - AWK has appropriate Codes of Ethics and policy statements, which are supported by procedures and statements of delegations of authority that clearly define the processes and responsibilities for decision-making.
 - The BOD and board committees (principally the Audit Committee) receive regular reports from executive management on the operation of internal controls, including compliance with legal and other obligations and the operation of operational and financial controls.
 - The General Counsel, the Internal Audit Director and external auditors have direct access to the BOD, board committees and to independent members of the BOD.

2. AWK does not have a clear and consistent policy for defining the administrative and functional responsibilities of NJAW and AWWSC officers and senior management.

- AWK has 22 regulated companies and 48 unregulated entities. While NJAW is a separate legal entity, certain of its organizational resources and managerial positions of responsibility are integrated with AWWSC. The NJAW organization is shown in **Exhibit IV-2**.
- AWK uses a “matrix” organizational structure. In this connection, NJAW and AWWSC share numerous key management positions and functional resources. While most members of NJAW senior management report administratively and functionally to the NJAW president, some report only functionally to him and administratively to an AWWSC officer.
- Effective use of a matrix organization requires clear and logical definitions of responsibilities. In such an organization, the corporate or service company role is to establish policies and procedures and to provide functional direction to the operating companies which are responsible for executing the policies. Additionally, transactional activities are often centralized in a service company to attain economies of scale for the overall operation.

**Exhibit IV-2
NJAW Organization**



- AWK has not clearly defined the respective roles and responsibilities of the AWWSC and NJAW. For example, the Corporate Communications & External Affairs organization performs customer internal communications functions which are

appropriately centralized to attain economies of scale. However, state external affairs are managed administratively and functionally by the corporate senior vice-president when all the work is actually performed for the NJAW president, and government affairs reports administratively to the NJAW president and functionally to the corporate senior vice president. The state external affairs and government affairs functions are similar in nature and both should report administratively to the NJAW president and receive functional direction from the corporate senior vice president.

3. NJAW does not have sufficient policies or procedures that address the necessity, legal entitlement or relationships with its affiliates.

- NJAW does not have policies and procedures that deal with all affiliate relationships or transactions. The few specific NJAW policies related to affiliates are:
 - American Water Subsidiary Dividend Policy
 - American Water Financing Policy
 - American Water Related Person Transaction Policy
- The legal entitlement and nature of NJAW's affiliate relationships are defined by New Jersey statutes. NJSA 48:3-7.1 in part provides that:

Any management, advisory service, construction or engineering contract that in itself or in connection with another contract relating to the same work, project, transaction or service involves the expenditure of a sum exceeding twenty-five thousand dollars, made by any public utility with any person or corporation owning, holding or controlling separately, or in affiliation with another person or corporation, five percent or more of the capital stock of such public utility or with any corporation five per cent of the capital stock of which is owned, held or controlled by a person or corporation owning, holding or controlling separately, or in affiliation with another person or corporation, five percent of the capital stock of such public utility shall be submitted to the New Jersey Board of Public Utilities for approval. Any such contracts shall be reported annually to the BPU by New Jersey American Water at the time of filing of their annual reports to the BPU.

- NJAW has nine agreements with its affiliates which may require BPU approval and are identified in **Exhibit IV-3**. NJAW has actual records of approvals or dates for only two of the nine contracts.

Exhibit IV-3
Summary of NJAW Affiliate Agreements

Agreement Name	Affiliate	Date	NJBPU Approval	Comp. Bids	CY2009 (\$000)
1. Service Company Agreement	AWWSC	1-1-89	8-21-89	None	\$37,080
2. Financial Services	AW Capital	6-15-00	8-17-00	None	\$17,691
3. Support Services	AW Resources	9-1-01	n/a ¹	None	n/a
4. Residuals Removal	Applied Water Mgt.	12-15-07	n/a	5	\$230
5. Design/Build 41st Street	Applied Water Mgt.	7-21-08	n/a	2	\$12
6. Operations & Maintenance	Applied Water Mgt.	8-29-08	n/a	None	\$158
7. Consolidated GAC React.	AAET., L.P.	8-28-09	n/a	None	\$527
8. 1st Amendment Operations & Maintenance	Applied Water Mgt.	8-29-09	n/a	None	n/a
9. Master Engineering Services Agreement	AWWSC & Applied Water Mgt.	8-10-06	n/a	None	n/a

- Agreements show that AWWSC performs the planning, budgeting, monitoring and functional management for most of the major functions noted above and bills NJAW for its activities.
- In the agreement dated January 1, 1989, between AWWSC and NJAW, Article 1.1 stated: During the term of this agreement and upon the terms and conditions hereinafter set forth, Service Company shall provide corporate guidance for Water Company. In addition to the guidance provided by the officers and employees of Service Company through the coordination of functional activities for all subsidiaries of American, the officers and employees of Service Company shall furnish and Water Company shall purchase from Service Company, the following services: Accounting, Administration, Communication, Corporate Secretarial, Engineering, Financial, Human Resources, Information Systems, Operation, Rates and Revenue, Risk Management and Water Quality, together with such other services as Water Company and Service Company may agree.
- Each month, AWWSC bills NJAW for amounts due for the previous month and the estimated cost of services and expenses for the current month. The amounts reflect credits for payments made on the estimated portion of the bill. AWWSC general overhead expenses are charged to NJAW monthly.

¹ Not Available – n/a

4. Numerous services performed by AWWSC are not specifically identified within the NJAW/AWWSC affiliate contract.

- A number of functions performed by AWWSC for the regulated business segments are not specifically identified within the contract agreement. These services are charged to NJAW monthly by functional area and for 2009 the amounts charged were as follows:

- Business Development	\$ 220,811
- Customer Service Center	\$ 9,211,814
- Legal	\$ 1,029,865
- Property	\$ 1,883,462
- Regulated Operations	\$ 900,244

- As these services are not specifically identified in the NJAW/AWWSC contract and are provided as “such other services as Water Company and Service Company may agree,” the BPU has not approved these services.

5. NJAW does not obtain competitive bids for services provided by AWWSC and NJAW does not make effective challenges to AWWSC budgets or charges for services.

- Affiliate contracts are long-standing arrangements – not independent in any respect – as the corporate entities, managers executing agreements and resources performing the services are all organizationally interrelated. The main affiliate agreement between NJAW and AWWSC is over 20 years old.
- Services obtained from NJAW affiliates are not the result of competitive evaluations. The agreements are for the most part non-competitive as shown in Exhibit IV-3.
- Most of the service contracts between NJAW and its affiliates do not have termination dates and no term limit is indicated. These “evergreen” contracts would not generally be considered industry appropriate contracts.
- The AWWSC services agreement is the same for all AWK regulated utilities including NJAW. The cost of services provided to NJAW by affiliates is covered in Chapter XIII – Affiliate Cost Allocations & Relationships.

6. The services provided via the AWWSC agreements are not competitive in terms of “market conditions” and a potential for “cross-subsidization” between NJAW and its affiliates exists.

- NJAW presented two studies that attempt to demonstrate that AWWSC services are cost-competitive and that AWWSC charges the company less than what they might have cost if received from other sources. Neither of these studies demonstrates that AWWSC provides services at a competitive advantage.

- Analyses that show that services might have cost more do not make them cost-effective.
 - Both studies compared AWWSC hourly rates against analytically derived hourly rates and not service-by-service competitive offers.
 - The quantity, quality and effectiveness of products and services are not measured and cannot be compared to a hypothetical service scenario.
 - AWWSC service charges are allocated to NJAW without regard to individual needs or unique operating requirements.
 - AWWSC charges are allocated and charged regardless of the level of quality needed, productivity, timeliness or value received.
- The potential for cross-subsidization is significant because allocated charges represent over 90 percent of charges from AWWSC. For the portfolio of allocated charges from AWWSC, approximately 90 percent are charged to regulated entities of which NJAW is a prominent member while approximately ten percent are charged to unregulated entities. For example, the New Jersey ratepayer receives questionable value from AWK business development activities but is charged for these activities on a regular monthly basis.

7. NJAW affiliate relations policies and procedures are ineffective and relatively non-existent.

- AWK’s organization structure does not protect the NJAW ratepayer interests as AWWSC managers actually make planning, budgeting, provisioning and management decisions affecting NJAW.
- The only training related to affiliate transactions and relationships for employees are time reporting practices provided to new hires.
- AWWSC’s monthly billings to NJAW do not provide the number and dollar value of transactions between NJAW and AWWSC.
- Service level agreements between NJAW and AWWSC do not contain service by service unit cost, units of measure, units provided to NJAW per time period, measured performance, and value.²

8. The administrative reporting relationship of the Internal Audit director to AWK’s chief financial officer (CFO) is not appropriate.

- The Internal Audit function reports administratively to AWK’s chief financial officer (CFO) who performs the annual performance review of the Internal Audit director. The Internal Audit function is therefore not independent of its major audit focus areas: finance and accounting.

² See Recommendation III-7.

- A potential conflict of interest exists because the Internal Audit director cannot be expected to perform independent reviews of operations that report to the person responsible for performing his performance review.
- The Internal Audit's functional reporting relationship to the Audit Committee of the AWK BOD is appropriate.

9. Recent management of the Internal Audit function has suffered from turnover and late completion of the 2010 audit plan.

- AWK has had three different Internal Audit directors and one interim director in the last five years.
- The Audit Committee was unable to approve the 2010 audit plan until its March 26, 2010 meeting due to the delay in its preparation.

10. During 2008 and 2009, AWK used Internal Audit resources to address SOX compliance issues thereby keeping Internal Audit from performing its primary function.

- Numerous factors resulted in a high level of urgency during 2009 for AWK to verify the reliability and operational effectiveness of Internal Controls over Financial Reporting (ICFR) and to achieve year-one compliance with SOX Section 404.
- The 2008 and 2009 audit plans dedicated 20 percent of Internal Audit resources to SOX implementation and testing. In 2009, these SOX initiatives expanded significantly and consumed over half of the entire Internal Audit work force.
- While the 2009 Audit Plan was largely redirected to perform SOX testing requirements, AWK has not reflected audit work that was displaced or identified how the displaced work will be performed in the future. The displaced work is not included in the 2010 Audit Plan.
- SOX testing and reporting is projected to consume approximately ten percent of Internal Audit resources in 2010 even though AWWSC has another organizational unit dedicated to SOX compliance.

11. AWK complies with NYSE Section 303A Corporate Governance Standards.

- Seven of eight of the AWK BOD members are independent, and AWK's non-management directors meet at regularly scheduled executive sessions without management.
- The AWK BOD's Nominating and Governance and Compensation committees are composed entirely of independent directors and have written charters.
- The AWK BOD Audit Committee is composed of four independent members who all are financially literate and has a written charter.

- AWK shareholders are given the opportunity to vote on all equity-compensation plans.
- AWK has adopted and disclosed corporate governance guidelines that address: director qualification standards, director responsibilities, director access to management, director compensation, director orientation and continuing education, management succession and the annual performance evaluation of the board.
- AWK has adopted and disclosed a Code of Ethics policy for directors, officers and employees.
- AWK's CEO certifies to the NYSE each year that he is not aware of any violation by AWK of NYSE corporate governance listing standards.

12. AWK completed its first year-end SOX certification and had no material weaknesses in its internal controls related to financial reporting.

- AWK successfully remediated the six material weaknesses identified in 2006, when it initiated its SOX compliance efforts.
- From 2003 to April 28, 2008, AWK was an indirect wholly-owned subsidiary of RWE and was not required to comply with the requirements of the SEC and SOX or to prepare consolidated financial statements.
- As a publicly-traded company, AWK is now required to maintain a system of effective internal control over financial reporting suitable to issue financial statements in a timely and accurate manner, and also to evaluate and report on its system of internal control. In particular, AWK is required to certify compliance with Section 404 of SOX.
- In connection with the preparation of consolidated financial statements as of December 31, 2006, PWC, AWK's independent auditor, identified six internal control material weaknesses, each of which could have resulted in a material misstatement of annual or interim consolidated financial statements. Of the six areas identified in 2006, none remain as weaknesses as of December 31, 2009.
- As of December 31, 2009, AWK and PWC had tested the effectiveness of controls designated to address the weaknesses. Based on the results of these tests, these control deficiencies are no longer considered to be material weaknesses.

13. NJAW ratepayers may have paid for SOX compliance and testing that was disallowed as a condition of the RWE Rate Order.

- As of December 31, 2009, AWK had incurred \$58.4 million, most of which were for contracted services, to remediate material weaknesses and to document and test financial reporting controls. As a condition to state BPU approval of the RWE Divestiture, AWK agreed that costs incurred in connection with initial internal control and remediation initiatives would not be recoverable in rates charged to customers.

- The costs associated with the initial development and implementation of the SOX compliance program were separately identified by using a discrete allocation formula for such costs to allow exclusion from rate filings. The initial development and implementation of the SOX compliance program were not a part of the revenue requirements and thereby were not funded by the ratepayers of NJAW.
- Internal Audit also performs SOX related activities and allocates charges to NJAW. NJAW could not explain how the initial internal control and remediation initiatives were determined to be complete. Given the high level of urgency during 2009 to achieve year-one compliance, these costs appear to be initial internal control and remediation activities.
- However, NJAW did request and was permitted recovery of a portion of its allocated share of ongoing SOX compliance program. The amount of SOX costs recovered in rates (proceeding WR08050210 settlement) for the period from 7-1-07 to 6-30-08 was \$737,586 or approximately 19 percent of the total PWC audit charges. Total SOX-related charges for the years 2008, 2009, and 2010 forecast amounts are not known.
- The AWWSC reporting and compliance organization continues to allocate charges to regulated businesses including NJAW. NJAW did not request rate recovery of such costs in its last base rate case.

14. AWK has a comprehensive program to ensure SOX compliance.

- The AWK compliance organization manages the SOX compliance program, performs testing, and coordinates activities related to internal and external management testing. It also supports SOX testing and other activities involving AWK's independent accountants.
- The compliance organization, which reports to the AWWSC VP-Compliance who reports to the AWK CFO, administers the quarterly internal control evaluation (ICE).
- Each quarter, the process owners of a control perform an internal control evaluation or ICE. ICE reviews identify significant issues which are forwarded to the AWK compliance organization for evaluation of corporate-wide results. The compliance organization assures compliance with Section 302 of SOX which requires the AWK CEO and CFO to certify quarterly and annually that they:
 - Are responsible for disclosure controls
 - Have designed controls to ensure that material information is known to them
 - Have evaluated the effectiveness of controls
 - Have presented their conclusions in the filing
 - Have disclosed to the audit committee and auditors significant control deficiencies and acts of fraud
 - Have indicated in the report significant changes to controls.

E. Recommendations

1. Develop a clear and consistent policy for defining the administrative and functional responsibilities of NJAW and AWWSC officers and senior management. (Refers to Finding IV-2)
2. Develop policies and procedures that address affiliate relationships covering topics that include:
 - Compliance with regulatory requirements.
 - Tariffed transactions between affiliates.
 - Discriminatory practices among affiliated and non-affiliated companies.
 - Confidential information transfer between NJAW and its affiliates.
 - Contracts for products and services between NJAW and its affiliates. (Refers to Findings IV-3 and XIII-17)
3. Obtain any required BPU approval of all contract agreements between NJAW and affiliate entities. (Refers to Finding IV-4)
4. Obtain competitive bids for services provided by AWWSC. (Refers to Findings IV-5, IV-6 and XIII-7)
5. Have the Internal Audit director report administratively to a senior officer other than the CFO and strengthen the Internal Audit function. (Refers to Findings IV-8, IV-9 and IV-10)
6. Determine if NJAW ratepayers have paid for SOX compliance and testing that was disallowed as a condition of the RWE Rate Order. (Refers to Finding IV-13)

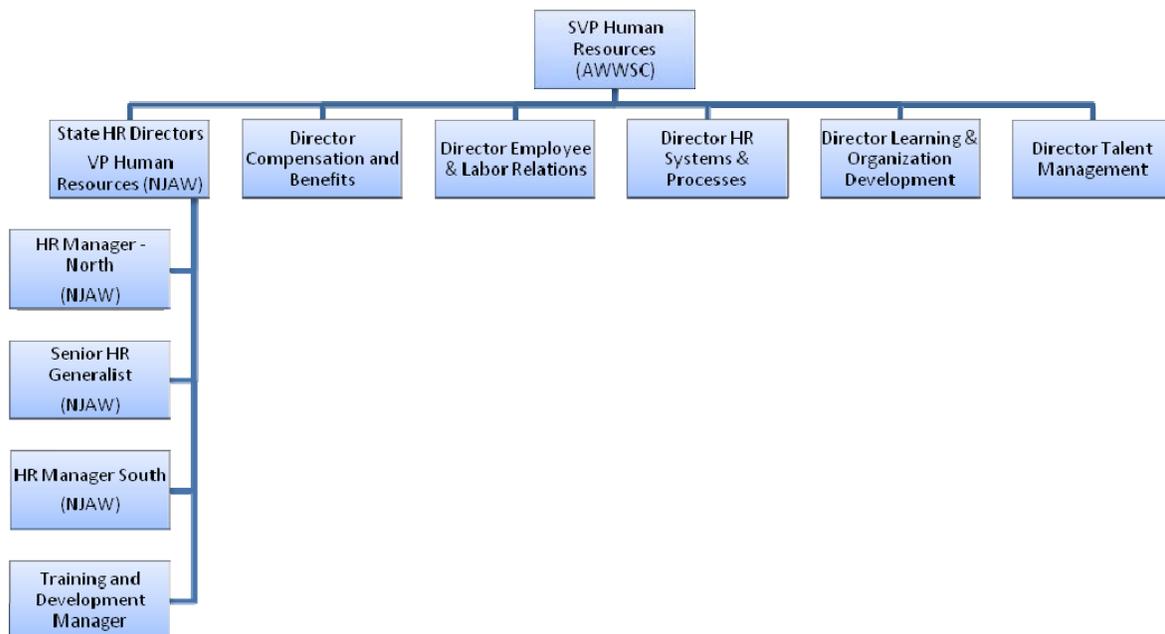
V. HUMAN RESOURCES (HR) (3.3)

HR services are delivered to American Water Works Company, Inc. (AWK) through a shared services model by the American Water Works Service Company (AWWSC). New Jersey American Water (NJAW) has 912 employees: 606 union and 306 non-union employees as of July 31, 2010. HR activities are performed by a combination of NJAW and AWWSC personnel. The HR function is responsible for delivery of all human resources services which include staffing, labor relations, employee relations, EEO/affirmative action and diversity, performance management and development, leadership development and succession planning. An organization's HR function is responsible for:

- Ensuring that management and staffing needs are met in a timely manner with highly qualified individuals
- Retaining good employees through competitive compensation and benefit programs
- Enhancing employee satisfaction and motivation by providing equitable performance appraisals, challenging training programs, and effective labor relations programs.

Exhibit V-1 provides the HR organization structure.

**Exhibit V-1
Human Resource Organization**



AWWSC is responsible for policy development and maintains a comprehensive set of HR policies addressing holidays, vacation and leave, benefits, workplace environment, employee conduct, non-discrimination, employee record maintenance and file access, work

schedule, work rules, separation of employment and other employment policies. Policies are posted on AWK's intranet site and are reviewed at a minimum every three years.

AWK provides its employees with industry average salaries, holiday and leave benefits, and a set of options for medical, insurance and retirement benefits. Union employee benefits are negotiated separately from wages and work rules, and are negotiated every five years. NJAW has 14 non-union pay ranges, one executive classification, four manager classifications (ML3 to ML7) and nine non-management classifications (L08-L16).

All non-union AWK employees are eligible for annual salary merit increases. Salaries are defined in ranges based on quartiles. Non-union, exempt employees are also eligible to participate in AWK's Annual Incentive Plan (AIP). The AIP is used to determine annual amount of "at risk" compensation related to the achievement of corporate and individual performance goals. Corporate goals are used to evaluate the performance of executive management and determine each operating company's (i.e., state's) pro-rata share of the AIP payout pool. Individual goals are tied to the AWK corporate goals. Union employees receive pay increases in accordance with the terms of the bargaining unit agreements.

A. RFP Objectives

In the RFP for this audit, the BPU identified the following objectives for the review of NJAW's HR function.

- Review NJAW's wage, salary, and compensation and benefits package practices.
- Assess the effectiveness of NJAW's development, training, and evaluation techniques.
- Review the current labor relations status and methodology.
- Assess the productivity and utilization level of NJAW's workforces.
- Assess the HR department's capability to access personnel information and perform its assigned duties.
- Assess the affirmative action and equal employment opportunity ("AA/EEO") policies, procedures, and functions.

B. Evaluative Criteria

In conducting our review of NJAW's HR, NorthStar used the following criteria:

- Does NJAW have an effective HR function?
- Does HR have a comprehensive plan to attain the projected savings from the BT in an effective manner?

- Do NJAW and AWWSC managers have appropriate spans of control and are layers of management at a minimal level?
- Do NJAW and AWWSC have an effective means to determine staffing levels for its professional and clerical work force?
- Does NJAW have an effective work management program for its systems operations personnel?

C. Audit Tasks

To complete the review in this area, NorthStar performed the following tasks:

1. Reviewed NJAW's salary, wage and compensation and benefits package practices.
2. Determined whether salary surveys are performed and the frequency and methodology by which salary levels are adjusted.
3. Examined management succession plans. Evaluated efforts by the utility to determine whether salaries and benefits are competitive.
4. Assessed the effectiveness of NJAW's development, training and evaluation techniques.
5. Determined whether a link exists between the training program and the employee evaluation process.
6. Determined whether appropriate supervisory training is provided to management personnel.
7. Assessed the clarity and completeness of the employee handbook and other information provided to employees.
8. Determined whether employees have ready access to appropriate policies and procedures and the extent to which existing training programs and handbooks address human resource policies and procedures.
9. Determined the extent to which corporate goals and performance targets are reflected in the evaluation process.
10. Reviewed the utility's procedures for addressing employee complaints.
11. Reviewed the current labor relations status and methodology.
12. Assessed the HR department's capability to access personnel information and perform their assigned duties.
13. Reviewed the "recruit to retire" component of the business transformation program.

14. Assessed the affirmative action and equal employment opportunity (AA/EEO) policies, procedures, and functions.
15. Assessed the adequacy of systems and procedures for monitoring adherence to affirmative action policies at various levels in the organization.
16. Determined if job openings are properly advertised and in compliance with AA and EEOC.
17. Reviewed disciplinary, grievance, and termination processes and procedures.
18. Assessed the productivity and utilization level of NJAW's field workforces including contractors.
19. Assessed systems and procedures for developing manpower requirements. Compare forecast and actual requirements.
20. Evaluated work management and scheduling systems.
21. Evaluated how NJAW and AWWSC determine their staffing levels for professional and clerical personnel.
22. Examined safety record and safety program.
23. Assessed HR's plans to attain projected savings from the BT program.
24. Assessed NJAW and AWWSC spans of control and layers of management.

D. Findings and Conclusions

- 1. While AWK has an appropriate HR function, there is no service level agreement (SLA) between AWWSC and NJAW for performing these services.**
 - HR activities are performed by a combination of AWWSC and NJAW personnel. In general, HR policy is the responsibility of AWWSC, with execution handled at the state level. The AWWSC HR function has an appropriate focus and understanding of key challenges and issues, both overall and at the NJ operating company level.
 - The consolidation of the HR function at AWWSC has allowed AWK to improve efficiencies. HR policies and processes are standardized across the set of AWK companies, with differences based on state law or requirements.
 - Although the NJAW Vice President Human Resources reports to the Senior Vice President of Human Resources for AWWSC with a dotted line relationship to the NJAW President, her performance is evaluated by the NJAW President. NJAW HR generalists are assigned to the various NJAW operating departments and serve as business partners.

- There is no SLA between NJAW and AWWSC for the provision of human resource services.

2. Existing HR processes are extremely manual and paper intensive which contributes to inefficiencies and higher costs.

- AWWSC and NJAW do not have a comprehensive HR information system and use a number of spreadsheets and ad hoc databases to track employee information.
- Due to system limitations and manual processes, much of the transactional HR work is time consuming and cumbersome in nature. As examples, AWK does not have online benefits enrollment capabilities. The process is handled through a paper process. Continuing education is tracked manually, through employees' paper files. Succession planning and eligibility for step increases are also performed or tracked manually. Time and attendance tracking is largely manual.
- AWK expects that Business Transformation (BT) should streamline HR operations and provide significant cost savings.
- AWK's 2008 HR spend per employee was higher than industry averages. AWWSC is targeting the industry average or better with BT improvements.

3. AWK has an effective employee compensation program.

- The compensation program is guided by the following objectives: support the attraction and retention of talent, reinforce a performance culture, promote shared accountability between HR and line management, comply with regulatory and statutory requirements and provide clear career paths for development.
- Compensation levels are consistent across the AWK companies and are targeted at the industry average (50th percentile of comparable companies) with greater earning opportunity for exceptional performance.
- Salary packages are stratified into three groups: executive, non-union and union. Executive positions are defined as ML1 through ML3. ML3b includes the presidents of the larger AWK operating companies. Non-union positions are defined as ML4 (managerial positions) and L5 through L17. Each level includes a salary range for equivalent levels of comparable positions across several disciplines (e.g., engineering, IT, accounting and chemist).
- Non-union salary levels are reviewed on a continuous basis and AWK makes reasonable attempts to group comparable positions. AWWSC subscribes to a variety of general and industry specific salary survey databases (e.g., AWWA Water Utility Compensation Survey, legal, call center and IT surveys, salary.com, and various Watson-Wyatt and Towers-Watson surveys). It also performs comprehensive salary surveys for executive and non-union positions (ML1-ML4 and L05-L17) every two years. NEO salaries are reviewed annually.

- Union salaries are determined by the bargaining unit agreements which are negotiated at each operating company. Union salaries and wages are negotiated and agreed to separately from benefits.

4. AWK's exempt employees are eligible for participation in the Annual Incentive Plan (AIP) which links pay and performance.

- About 150 of NJAW's 300 non-union employees are eligible for the AIP. AIP payouts are only made if AWK achieves its financial targets.
- An initial target payout pool for each AWK operating company is developed based on the number of eligible employees, their base salaries and target payout amounts. Target amounts range from ten percent of base salary to 100 percent for the AWK CEO. For salary grades L05-L11, targets range from five to 20 percent.
- At the end of the year, each operating company's performance is evaluated and a final payout pool amount is established. The final pool amount may be greater than the target amount. State performance is determined based on achievement of state/corporate goals (e.g., financial, customer satisfaction and safety).
- Once state allocations are determined, each employee's performance is evaluated relative to his individual goals, and payout amounts are determined.

5. While AWK's gross medical benefits cost is comparable to other utilities, the AWK employee contribution is relatively low.

- AWK offers its employees a comprehensive medical benefits package. It provides one universal health, dental and vision package nationally.
- AWK contracts with a consultant to perform annual benefit comparisons. AWK's target is to be in the 50th percentile of the comparison companies.
- AWK's contribution to healthcare is 82 percent of cost (employee share 18 percent of total gross cost) while the 50th percentile is a 68 percent company contribution (32 percent employee share). The employee share includes both the employee's paycheck contribution to the benefits cost (eleven percent) and the employee's out-of-pocket co-pay (seven percent).
- AWK's gross health care benefits cost per employee is comparable to the utility average. AWK is self-insured.
- The relative employee contribution will be addressed in the upcoming NJAW union contract renegotiation. AWK is targeting the industry average.

6. AWK has undertaken a number of initiatives to reduce employee benefit costs.

- In 2002, AWK consolidated benefits administration within AWWSC, and subsequently consolidated a number of benefits plans - eliminating significant actuarial/auditing and administrative fees.
 - Fourteen defined benefit pension plans were consolidated into one plan.
 - Over 70 different health plans were consolidated into nine health plans, and AWK changed health care providers resulting in savings for the same levels of coverage.
 - Fourteen 401k plans were consolidated into one plan.
- AWK's healthcare administrative costs have remained flat for the last three years and are lower than the employers in the consultant's database. Dental costs dropped by six percent and have remained flat for two years. Life insurance premiums were reduced 15 percent and have remained flat for the last three years.
- AWK is in the process of automating (self-service) open enrollment to improve the process and reduce costs.
- In 2007, AWWSC performed a dependent audit resulting in the removal of ineligible dependents (seven percent) from the health care plans. This was expected to reduce costs by an estimated one million to two million dollars.
- AWK obtained a \$1.5 million reimbursement for Medicare part D from the government.
- AWK eliminated the defined benefit pension plan for new hires as of December 31, 2005 and replaced it with a defined contribution plan. AWK also eliminated the retiree medical benefits for new employees (non-union in 2002 and union in 2006). AWK also eliminated its employee investment plan.

7. NJAW has not had a comprehensive short-term disability program.

- Sick time was awarded in accordance with years of service and was renewed each year.
- Union employees were awarded one week for each year of service. As a result, an employee with 20 years of service would have 20 weeks available. The following year, the employee would have weeks available, regardless of how many weeks he may have used the prior year.
- NJAW proposes eliminating the sick banks and replacing them with a combination of short-term disability and a reasonable number of sick days.
- NJAW does not have a specified number of sick days for non-union employees. Sick days are managed on a performance basis. Employees are provided with short-term disability insurance through a third-party, and receive six months with the first two weeks at full pay.

8. AWK has a performance evaluation process for non-union employees which is tied to AWK's corporate goals, provides feedback to the employee, and includes the employee in the goal-setting process.

- AWK's performance management program is designed to link the work of the employee to the broader organization, provide clear objectives, ensure that performance is reviewed throughout the year, and improve the likelihood of the employee's success.
- The performance review assesses the employee's performance against individual performance goals. The performance goals are tied to the corporate mission and goals, and the individual's job function. Goals are quantified targets or milestones as appropriate. Employees rate themselves as part of the process. Employees and supervisors each provide a rating in each goal category/target.
- For exempt employees the performance review is used to determine the employee's AIP bonus. For non-exempt employees it is used as part of the merit increase determination.
- AWK creates Performance Enhancement Plans (PEP) for those employees whose performance is not meeting expectations. Plans are tailored to the employee's specific needs, define performance expectations and provide an improvement timeline (generally 30 to 90 days). HR works with the employee and supervisor in the development of the plan. NJAW conducts new hire evaluations after six months.
- Feedback and performance reviews for union employees are limited.

9. Succession planning and professional development processes are under development.

- Each NJAW position level has associated criteria an employee must meet for promotion to the next level. The criteria include salary grade, general responsibilities, knowledge and skill requirements, work experience requirements, and education requirements.
- AWWSC is in the midst of an employee capability review and succession planning process. The process began in 2008. The Tier 1 review is complete (about 20 NJAW positions) and the second level review should be completed by the end of 2010.
- While NJAW's HR has Training and Development Manager, she has recently focused her efforts on NJAW's Value-Delivery Strategy Project, not training and development. AWWSC plans to add additional training and development staff and acquire software to assist managers in developing more detailed development plans.

10. While AWK recently modified its performance review process to increase the focus on employee development, additional improvement is possible.

- In 2009, AWK split its performance management process for exempt employees into a two-phased process: a performance review and a development review. The reviews are performed on separate cycles. The performance review is based on the employee's performance during the calendar year, January through December. The development review cycle runs from November through October.
- The development review assesses the employee's achievement of developmental goals established at the beginning of the review cycle. Employees are evaluated on a scale from one to five, or "too soon to rate" (six categories). The development review is based on five core behaviors applicable to all employees:
 - Achieves results
 - Communicates effectively
 - Demonstrates integrity
 - Embraces change
 - Fosters teamwork.
- Separation of the development review from the performance review is intended to align merit increases with development of knowledge, skills and abilities.
- While 2009 was the first year of the process, additional work is necessary to develop meaningful expectations and specific, detailed development plans. Some of the initial plans were very general in nature.

11. AWK does not have a formal process for monitoring spans of control, layers of management or determining staff levels.

- AWWSC is in the process of evaluating the organizational changes that will result from BT and managing the associated savings.
- NJAW spans of control range from two to twelve or more. Per AWWSC, seven to ten direct reports represents a reasonable target for most managerial or senior supervisory functions.
- While AWWSC is sensitive to the number of layers in the organization, it is not formally monitored.
- While AWK has not yet identified the savings that will result from BT, it expects to achieve savings in advance of BT implementation.
 - Current projections are based on normal turnover, retirements, and involuntary separations. Vacancies are being evaluated and filled with temporary or contract personnel where possible.
 - The BT blueprinting process is scheduled for August 2010 and will address organizational inefficiencies, spans of control, and delegation of authority.

- The core BT system is scheduled for implementation in the third quarter of 2012.

12. NJAW complies with federal Equal Opportunity Employer (EOE) requirements.

- NJAW's Code of Ethics is available on its website and states that the company "will not, and no employee is permitted to, take any of the following actions based on gender, marital status, race, color, national origin, religion, age, disability, veteran status, sexual orientation or any other characteristic protected by law:
 - hire or promote a person or fail to hire or promote a person,
 - treat a person differently with regard to any other employment matters, including transfer, recruitment, selection for training, discipline, layoff, or rates of pay and other compensation,
 - harass any person or permit any harassment, including verbal, nonverbal or physical attacks, and
 - segregate or sponsor any function that segregates, except where respect for privacy based on gender is concerned, or retaliate against anyone who makes a complaint about discrimination or harassment.”
- NJAW provides employee training on the requirements and NJAW’s compliance with EOE law in its Code of Ethics training.
- NJAW provides easy accessibility to job postings. Jobs postings are publicly available, segregated solely based on current employment status (employee versus non-employee), application procedures are clearly articulated, and all postings indicate that NJAW is an EOE.
- NJAW has a defined corporate policy and procedures regarding EOE compliance and an associated complaint process.

13. NJAW has an effective affirmative action program.

- NJAW has two affirmative action plans. The first plan is designed for minorities and females while the second plan is for people with disabilities or qualified veterans.
- NJAW met its corporate affirmative action goals in 2009. Attainment is supported by an encompassing outreach program that includes:
- Placing help wanted advertisements in local minority news media and women’s interest media.
 - Disseminating information on job opportunities to organizations representing minorities and women, and to employment development agencies when job opportunities occur.
 - Encouraging all employees to refer qualified applicants.
 - Actively recruiting at secondary schools, junior colleges, colleges and universities with predominantly minority or female enrollments.
 - Requesting employment agencies to refer qualified minorities and women.

- NJAW annually audits its actual attainment versus affirmative action targets.

14. NJAW's work management applications are not integrated.

- NJAW work management applications tend to focus on individual work groups such as production, operations and field services.
- The integration of systems where it exists is typically manual and inefficient.
- A number of the current work management applications are "home-grown". NJAW has developed some of the functional applications for the following activities:
 - Document management
 - Centralized T&D assets (e.g. PowerPlant and GIS)
 - Web based work flows
 - Street opening permitting
 - Mark out processing
 - Vehicle Tracking
 - Connectivity to GIS
 - Real time operations
- These systems and their functional coverage include:
 - MapCall - document storage, operations work management
 - 1CallExpress - mark out processing
 - AWWinfo. - street opening permit processing
 - ESRI - GIS
 - Trimble AVL - Vehicle Tracking
 - Advantex - field services, service orders tracking
 - Neptune- Equinox - meter reading
- BT is being looked to for integration of the various systems.

15. While NJAW has a great deal of information to help it manage work, it has little if any information on the productivity of those doing the work.

- NJAW tracks and reports on a great many operations work elements. Work details are available on hydrants, paving, inspections, valves and services. Each of these elements has a series of reports that enable management to view backlogs, completions and overdue orders. The details are available on a geographic level as well where appropriate and even to an individual level.
- These work elements are critical to a complete and quality work management program yet do not provide the critical element of productivity. NJAW can tell exactly how much work it has completed in a particular function but has no information as to how much work it should have completed.

- The lack of systems integration within NJAW as well as the lack of system integration among AW operating units make the productivity tracking and comparison very difficult and manually intensive in the current systems environment.

16. AWK and NJAW have a good labor relations history.

- AWK employs approximately 7,700 full-time employees. Of these, approximately 3,900 or 51 percent are represented by unions. NJAW has, as of July 31, 2010, 912 employees of which 606 are unionized.
- NJAW has collective bargaining agreements in place with the seven different unions representing its unionized employees. In February 2009, NJAW reached a three-year agreement with Local 423 of the Utility workers Union of America, which represents about 250 of NJAW's employees.
- AWK and NJAW maintain good relations with their unionized workforce and have no significant history of strikes or labor stoppages.
- NJAW has recently obtained a number of work rule changes to their union contracts which should provide productivity increases and other benefits.

E. Recommendations

1. Continue attempts to negotiate the elimination of the substantial sick banks which have accrued under prior union employee benefits programs and replace them with short-term disability insurance. (Refers to Finding V- 7)
2. Continue steps to improve succession planning, professional development and performance review processes. (Refers to Findings V-9, and V-10)
3. Develop and implement processes for determining appropriate staffing requirements, spans of control and layers of management and quantify estimated savings resulting from BT. (Refers to Finding V-12)

VI. STRATEGIC PLANNING (3.4)

Effective strategic planning is a necessity for all companies, including utilities and their affiliates. Senior management's ability to anticipate and respond to opportunities and problems can have a significant effect in many areas and contributes to the overall success of an organization. Strategic planning for New Jersey American Water (NJAW) is part of the overall American Water Works Company (AWK) planning process.

Strategic planning is generally defined as a process that “(1) outlines an organization's overall direction, philosophy, and purpose, (2) examines its current status in terms of its strengths, weakness, opportunities, and threats, (3) sets long-term objectives, and (4) formulates short-term tactics to reach those longer term objectives.” An audit of strategic planning includes both an assessment of the process and a review of the document(s) that record the results of process. While budgeting and financial forecasting is part of the strategic planning process, a budget or financial forecast by itself does not constitute a strategic business plan. Rather, budgeting is one aspect of the planning process that provides critical inputs into the feasibility of, and results from, the strategic planning objectives.

During its review, NorthStar examined the quality of strategic and operational plans, the ability of the organization to define goals and objectives over different time horizons, the quality of the planning process, and the overall effectiveness of planning efforts. NorthStar compared NJAW practices with NorthStar's preferred practices. The actual budgeting process (both capital and O&M) is reviewed in Chapter XII – Accounting & Property Records. In this work area, NorthStar focused on the linkages between the qualitative aspects of the strategic plan and the financial budgeting process.

NJAW business planning is integrally linked with that of its parent company, AWK, whose mission is: “to deliver value for our customers, investors and employees while enhancing the quality of life in our communities by managing the most basic resource of life – water.” At a corporate level, AWK has identified an overarching strategy as follows:

“... to consistently provide customers with safe, high quality drinking water and reliable water and wastewater services. Our business strategies include:

- Continuing to invest prudently in regulated water and wastewater infrastructure projects
- Earning an appropriate rate of return on our investments from state PUCs
- Growing our Regulated Businesses through acquisitions
- Continuing to pursue public/private partnerships...that are complementary to our Regulated Businesses.”

NJAW has not established its own separate mission or vision statement since the AWK mission applies to all subsidiaries. However, the NJAW's strategy statement reflects both a mission and strategy:

“Create sustainable water solutions for a growing number of customers and the State of New Jersey:

- Proactive collaboration among all stakeholders
- Commitment to environmental responsibility and natural resource conservation
- Promotion of superior uniform standards for reliability, service and quality
- Implementation of leading practices to ensure operational excellence and efficiency.”

Prior to the current planning period (for 2011 and beyond), NJAW’s planning focus was financial in nature. The business plans consisted of three to five year financial plans with no strategic planning processes or documentation.

Starting in mid-2009, NJAW began a more structured strategic planning initiative, based on the “Value Delivery Strategy” (VDS) approach to strategic planning. As of April 2010, the individuals leading this strategic planning initiative have conducted interviews of a wide range of NJAW stakeholders – end-users, municipal officials, and economic and environmental regulators – to identify perceptions and issues of each group relative to NJAW. The results of these interviews were used along with internal assessments to identify ten key elements that will drive the company’s strategic planning efforts going forward. The ten elements are:

- Water Quality
- Employee Engagement
- Customer Service
- Operational Excellence and Efficiency
- Environmental/Water Supply
- Underground Infrastructure Renew
- Public Education
- Growth Outside NJAW’s Service Areas
- Low-Income Customer Assistance
- Investment Value

NJAW is now in the process of identifying risks and capability gaps in each of these areas, determining goals and metrics in each area, and identifying human/financial resources needed to achieve the goals. NJAW expects that this strategic process will be fully integrated with the financial planning and budgeting process for 2011 and beyond.

NJAW receives considerable support services from the Shared Services Center (SSC) within American Water Works Service Company, Inc. (AWWSC) which has developed its own Vision/Mission Statement:

“... be the industry leader offering low cost, efficient, competitive, and valuable support services which will enable the business to provide the essential need of quality water at an affordable rate. We will accomplish this through continuous improvement driven by the integrity, knowledge, professionalism, and accountability of our employees in collaborating with our Business Partners.”

SSC has identified three strategies:

- Service: We will provide high quality services delivered in a timely manner.
- Satisfied Customers: We will provide levels of service in collaboration with our customer that achieves their expectations/desired results.
- Cost: We will provide services that are low cost, efficient, with a continuous improvement philosophy.

The primary vehicle for SSC to achieve its mission is the Business Transformation (BT) project that began in 2009, which is planned to replace the aging information technology (IT) systems with a new enterprise software system.

A. RFP Objectives

In its RFP for this audit, the BPU identified the following objectives for the review of NJAW's strategic planning:

- Review and assess how well the organization's purpose and mission is defined.
- Review the impact of the organization's purpose and mission on the need and frequency of rate increase filings.
- Define the specific short and long-term goals and objectives of each affiliate.
- Suggest improvements in NJAW's strategic planning, as needed, to adapt to the current market environment and, where it is discovered that affiliate goals are in conflict with NJAW's goals, provide recommendations for improvement.
- Evaluate and recommend, as necessary, the development and implementation of NJAW's business strategy for:
 - Customer service and rate impacts
 - Responsiveness to market conditions
 - Clarity and employee training
 - Commitment and resources for implementation
 - Financial risk
- Determine if the focus of NJAW's management and expertise is on NJAW or is being diverted elsewhere.

B. Evaluative Criteria

In conducting our review of NJAW's strategic planning, NorthStar used the following criteria:

- Does NJAW's strategic planning process meet NorthStar's preferred practices?
- Is NJAW's strategic planning process adequately linked to the capital and O&M budgeting processes?
- Does NJAW have a comprehensive enterprise risk management process?
- Does AWK have a business case that supports its business transformation (BT) program?
- Does AWK have a comprehensive implementation plan for its BT program?

C. Audit Tasks

To complete the review in this area, NorthStar performed the following tasks.

1. Reviewed copies of the current mission and vision statements and strategic plans for NJAW and its affiliates.
2. Assessed NJAW's defined purpose and mission.
3. Analyzed the completeness and suitability of NJAW's goals.
4. Defined the specific short and long term goals and objectives of each affiliate.
5. Determined if affiliate goals are in conflict with NJAW's goals and the effect that affiliate goals have on the ability of NJAW to achieve its goals.
6. Evaluated the utility's strategic planning methodology.
7. Evaluated the comprehensiveness/adequacy of the strategic planning process.
8. Evaluated the development and implementation of the NJAW's business strategy for:
 - Customer service and rate effects
 - Responsiveness to market conditions
 - Clarity and employee training
 - Commitment and resources for implementation.
 - Financial risk.
9. Determined if the focus of NJAW's management and expertise is on NJAW or is being diverted elsewhere.

10. Determined whether current concerns and issues of importance are adequately addressed in strategic plans.
11. Reviewed the planning cycle and processes, considering work forecasts, facility operational plans, customer service objectives, financial forecasts, external environmental assessments, and regulatory/legislative matters.
12. Reviewed existing action/operation plans to ensure consistency with the strategic plan.
13. Reviewed the effect of the organization's purpose and mission on the need and frequency of rate increase filings.
14. Reviewed the process for linking financial budgets (capital and O&M) to the qualitative strategic plan.
15. Reviewed existing performance measures to ensure they are appropriately aligned with strategic objectives and are being used to report progress to management and other key stakeholders.
16. Determined if the organizational structure of AWWC and its subsidiaries has an effect on the strategic planning process or resulting action plans.
17. Assessed NJAW's enterprise risk management process.
18. Assessed the business case supporting the BT program.
19. Assessed the BT program's consideration of outsourcing opportunities and correcting organizational weaknesses.
20. Evaluated the BT implementation plan.
21. Completed the strategic planning preferred practices checklist
22. Developed recommendations to protect NJAW ratepayers as appropriate.

D. Findings and Conclusions

- 1. While NJAW prepares five-year budgets which it calls "business plans", it does not have a structured strategic planning process.**
 - Because there is no strategic planning process, there is no linkage between such plans and the budgeting process. NJAW current planning situation does not score well against NorthStar's preferred practices for strategic planning (see **Exhibit VI-1**).

Exhibit VI-1
NorthStar’s Preferred Practices Checklist: Strategic Planning
NJAW Performance

Preferred Practice	Yes	No
Directed by the Executive Team and president (no CEO)	X	
Has significant senior management involvement	X	
Reviewed and approved by the Board	X	
Aligned with corporate vision/mission		X
Processes and responsibilities in the process are well understood		X
Process assures appropriate bottom-up input		X
Addresses an appropriate and wide range of issues		X
Addresses both strategic and financial issues		X
Is responsive to dynamic changes in the operating environment		X
Includes detailed functional and departmental performance goals		X
Links goal attainment to incentive compensation		X

- “NJAW does not have a strategic plan. NJAW does have a highly confidential three-year business plan.” The referenced “Business Plan” is entirely financial; there is neither a qualitative business plan document nor any evidence of qualitative planning.
- In interviews, it was noted that because this is a water company, not a lot changes from year to year, so there was no need for a strategic plan. This perspective may result in slow response on the part of the company to changes in, for example, technology or conservation.
- The “business plan” is comprised of a high level (company) income statement, balance sheet, and statement of cash flows. The “business plan” documents do not include any supporting documentation for the development of the financial values.
 - There is no explicit inclusion of customer services, rate effects, responsiveness to market conditions, or employee training in the current financially-focused business planning process.
 - The current process implicitly includes financial risk through corporate level review and modeling of capital needs.

2. The process to develop NJAW’s financial “business plan” is controlled and driven by AWK.

- The description of the process describes the budgeting process “commencing at the lowest expense tracking level.”

- The planning schedule is extensive, beginning with the development of “Business Plan Assumptions” in April, and including a kick-off meeting with senior leaders in May. The process culminates with the presentation of the business plan to the AWK Board of Directors in September.
- The same “business planning” process is used for all the states and for AWWSC, and there is no link between the financial “business plan” and any strategic direction for AWWSC. The budget provided for AWWSC includes general cost categories (e.g., labor, rents, office expenses and other) for the groups under the AWWSC umbrella: audit, business development, corporate-other, customer service center, external affairs, finance, human resources, information technology (IT), legal, operations, property, regulated operations, regulatory and shared services.
- There is no support behind any of the budget figures, nor does this budget indicate allocation/assignment of these costs to NJAW. There are limited opportunities for NJAW to “push back” on services or cost assignments from AWWSC.

3. AWK has a clear mission/vision which provides little guidance to operating subsidiaries, especially relative to the cost of service to customers.

- The AWK Mission of “deliver value for ... customers, investors and employees” and the strategies of investing in infrastructure, earning appropriate rates of return, growing the regulated business, and pursuing public/private partnerships are not inappropriate for a corporate entity operating its subsidiaries as a portfolio.
- The corporate level mission statement and associated strategies and goals are applicable to both its regulated subsidiaries and its non-regulated operations. There is no conflict between regulated and unregulated operations at the mission/vision goal level.
- This mission statement and strategies do not directly address the cost of service to customers. While the term “value” could incorporate low cost to customers, NorthStar believes customer cost should be explicit in the mission statements applied to regulated utilities.
- AWK has developed strategies that are appropriate at the corporate level to support achievement of its corporate mission/vision. While AWK’s targets are appropriate for the corporate level, they are not linked to any overall corporate mission or vision statement, nor is there any link to NJAW company-level goals or action plans.

4. AWK has not driven a strategic planning process down to the NJAW operating unit level.

- For the past few years, AWK executive management has focused its efforts on completing the Initial Public Offering and removing RWE from its ownership. This focus left little room for strategic planning beyond the near-term.

- For NJAW, this has meant limited strategic direction or guidance, and has resulted in NJAW electing to develop and drive its own strategic planning process.

5. NJAW is implementing a VDS strategic planning process at NJAW that should result in significant improvement in focus, monitoring, integration and control.

- The initiative is still in its infancy, so its effect on planning and decision-making is not yet known. **Exhibit VI-2** assesses the new process against NorthStar's Preferred Practices.
- The VDS process, initiated in 2009, has resulted in a good external scan and identification of key elements after one year of effort. Other than some initial guidance by an outside consultant, the process is being directed and executed internally, using internal resources. Rather than building a process and then executing the process, NJAW chose to conduct the planning effort while building the process.
 - The VDS process included a good assessment of external factors and included the use of surveys and interviews with customers, non-customers, municipal officials, and regulators.
 - The current state/future state assessments and recommended actions are extremely variable in their breath and components, and are not yet prioritized.
- The VDS process now requires additional steps to move from the broad strategies and key elements to a strategic plan and an embedded planning process.
 - There is no process yet in place to systematically assess and prioritize possible actions across all the elements or to link the VDS process to department goals or to the budgeting process. Thus, in its current state, the process does not link required resources to the desired outcomes and required actions.
 - At this time, the VDS process has not incorporated risk factors into its consideration and does not use the corporate risk register that could serve as the starting point for a NJAW-specific risk assessment related to the key elements.
 - Additionally, the VDS process is not yet integrated with the existing budgeting process.

Exhibit VI-2
NorthStar’s Preferred Practices Checklist: Strategic Planning
NJAW Value Driven Strategy Assessment

Preferred Practice	Yes	Partially	No
Directed by the Executive Team and CEO	X		
Has significant senior management involvement	X		
Reviewed and approved by the Board	X		
Aligned with corporate vision/mission	X		
Processes and responsibilities in the process are well understood		Unknown	
Process assures appropriate bottom-up input		Currently Weak	
Addresses an appropriate and wide range of issues	X		
Addresses both strategic and financial issues	X		
Is responsive to dynamic changes in the operating environment	X		
Includes detailed functional and departmental performance goals		Unknown	
Links goal attainment to incentive compensation		Unknown	

6. NJAW’s VDS process does not give adequate consideration to providing low-cost service to ratepayers.

- In the VDS process, NJAW’s purpose and mission are reasonably well defined and appropriately linked to the AWK mission and strategy. NJAW department heads are able to articulate the mission, and understand the links from the AWK corporate mission to the NJAW mission/vision/strategy and on to the activities of their respective departments. The NJAW mission of creating sustainable water solutions and its strategies make no mention of cost, or even value of service, to the customers.
- None of the ten “Key elements” supporting NJAW’s new strategic initiative specifically address cost to the customer. The “Low Income Customer Assistance” element does mention “protecting ... lowest-income customers from the full impact of the rate increases needed to fund needed water service improvements.” This shows that NJAW is aware that rates will be increasing, but nowhere is there evidence of a focus on consideration of rate impacts in decision making, or a drive to mitigate rate impacts.

7. The effect on ratepayers (and by extension the timing and frequency of rate cases) may not be fully incorporated into NJAW’s decision-making process.

- Technically, there is no direct link between a corporate mission/vision and the need and frequency of rate increase filings. Rate filings are driven by a company earning less than its authorized rate of return. However, investment and operating cost decisions play a part in determining net income and rate base, which in turn drive

actual return compared to authorized return. Investments and operating decisions should be closely linked to a company's strategic planning process.

- Executives and senior management at both AWK and NJAW recognize the regulatory aspect of the business and the need to consider rates and ratepayer effects in making company decisions.
- While NJAW's rates are higher than those of their peer utilities, recent rate increases have averaged less than inflation. As shown in **Exhibit VI-3**, NJAW has filed for four rate increases in the past twelve years, with an average increase in rates of less than one percent per year over that period. Both the frequency and average increase in rates is in the middle of those of peer New Jersey water utilities. Inflation over this period averaged 2.5 percent per year.

Exhibit VI-3
Summary of Rate Case Activity 1998 to 2009
New Jersey Water Utilities

	# Rate Cases	Average Rate Increase	Compound Average Increase
United Toms River	1	62.38%	4.51%
United Water	2	16.31%	1.38%
Mt. Holly *	2	11.56%	1.38%
NJAW	4	10.73%	0.93%
Middlesex	6	9.65%	0.84%
Aqua NJ	5	8.78%	0.77%
Elizabethtown *	2	8.05%	0.97%
Shorelands Water	2	7.43%	0.65%
Inflation (CPI)		31.62%	2.53%
* Note: Mt. Holly and Elizabethtown calculated over the period 1998 to 2006, when they were merged with NJAW			

- Reasons for the higher rates appear to be primarily the result of investment decisions made in the 1960s and 70s regarding water supply and treatment facilities in the two New Jersey critical water areas.
- The low rate of increase in NJAW's rates in the past twelve years would indicate appropriate level of attention to ratepayer effects, even though this aspect of decision-making is not explicitly identified in either past or on-going strategic planning documents.

8. The links between the VDS “Key Elements” and the resources and commitment necessary to implement them are not yet developed.

- Most of the key elements relate to supply and distribution issues (i.e., water quality, environmental/water supply, underground infrastructure renewal, and operational excellence and efficiency.)
- At the current point in the strategic process, NJAW has yet to determine specific activities relating to these elements, or to determine resources necessary to achieve desired end goals.
- NJAW management appear to understand the necessary next steps in this process and the need to link these elements to the five-year budgeting process currently underway for 2011 to 2015.

9. The VDS process identified customer service, public education, and low-income customer assistance as key elements that need to be developed for the successful execution of NJAW’s new strategic focus.

- The assessment of the current state recognizes weaknesses in the current customer service area, including:
 - Narrow definition of customer service
 - Hand-offs (of issue and customer) between company representatives and departments may delay issue resolution
 - Too many potential drop points between systems and representatives.
- The desired future state for customer service is “while maintaining or modestly enhancing the service experience for customers, eliminating several important flaws, especially the issue of problem-resolution.”
 - Recommended actions and desired future state show a reliance on the Business transformation (BT) project to resolve hand off and drop points.
 - Additional focus on technology (web self-service) and AMR/AMI to improve customer service.
- Public education is expected to increase customer and general public understanding of water service and water quality issues. Low-income customer assistance recognizes the critical nature of water service and will expand the company’s existing assistance programs to “protect a significant portion of NJAW’s lowest-income customer from full impact of the rate increases...”

10. The “employee engagement and development” element in VDS is not well-developed.

- There is no assessment of the current state and the recommended actions/future state, is more of an assessment of the constraints within which employee engagement must occur. Specifically, the following are identified as the recommended/future state:

- “Understanding that employee engagement is not a short term initiative or program...”
 - “Engagement must be driven from the top...”
 - “Fully engaged front line supervisory team.”
- There is no evidence of a linkage between employee training and the new strategic planning process.

11. AWK business development (BD) efforts are of minimal value to NJAW ratepayers.

- NJAW has a BD group, made up of four individuals, reporting directly to the NJAW President. This group is responsible for identifying and pursuing opportunities within the state that will be part of regulated operations. These include “tuck-in” acquisitions (small operations that fit within the current NJAW service footprint) and small to mid-size municipal acquisitions that would expand NJAW service footprint. If a potential target indicates interest in a service contract rather than an acquisition, the NJAW Business Development group passes the contact information to American Water Enterprises (AWE) for follow-up.
 - The NJAW BD group actively identifies and pursues leads, and efforts in this area are reported to management through the monthly Business Process Review (BPR) reports.
 - Potential acquisitions are pursued in alignment with the AWK Commercial Development Process, which provides for strong controls and step-wise approvals for all acquisitions. The approval levels are appropriately tiered and tie to the corporate levels of authority.
- AWWSC has a BD group which nominally is responsible for coordinating BD opportunities throughout AWK – all states, regulated and non-regulated. Recently, this group developed a list of top prospects nationwide. A number of those prospects were in New Jersey, and most of those were already being monitored or the NJAW BD group had already contacted them.
- Large prospects within New Jersey would be handled by AWWSCBD group with NJAW personnel providing targeted assistance. It is felt this is appropriate given the size of the potential investment for these larger targets.
- The AWWSC BD group provides support to state-based BD teams through: lead generation, sales research, proposal writing, training workshops and public speaking engagements.
 - In 2009, the NJAW BD group participated in some training on sales opportunity prospecting and deal closing.
 - NJAW BD received little support in lead generation (leads of which they were not already aware), research, proposal writing or any other services from the AWWSC BD group.

- Occasionally AWK requests assistance on non-regulated acquisitions within New Jersey. NJAW tracks these costs through a project code and is reimbursed by AWK for the fully-loaded cost of these activities.
- AWK BD costs are nominally charged to the benefiting state and/or project. Costs not directly charged are allocated 50/50 regulated/non-regulated, and the regulated portion is then allocated based on number of customers (AWK standard cost allocation formulas). In 2009, NJAW was charged approximately six percent (\$220,000) of the total AWK BD group costs of \$3.7M.

12. While NJAW has Key Performance Indicators (KPIs) against which its management and AWK measure the company's success, it does not have any action plans to support how to move from its current state to the desired goal levels.

- The KPIs include the following:
 - Operating Revenues *
 - Revenue Growth Percentage
 - System Delivery
 - Water Sales
 - Non-Revenue Water
 - Customer connections
 - Total O&M expense *
 - Operating Income *
 - Operating Margin
 - O&M Efficiency Ratio
 - Net Income to Common Stock *
 - Net Construction Expenditures *
 - Estimated Net Cash Flow from Operations *
 - OSHA Recordable Injury Rate
 - Service Quality Survey
 - Customer Satisfaction Rate
 - Environmental Notice of Violation.
- The goals for the KPIs with financial aspects (identified with * in the list above) are based on the current year operating budget, which in turn is based on the first year of the (financial) "business plan." Other than this, there is no support for the level of goals for the KPIs.
- Several of these KPIs seem to measure similar things (e.g., Operating Revenues and Revenue Growth; Operating Income and Income to Common Stock).
- Several of the KPIs also represent things not fully under the control of NJAW personnel (e.g., customer connections). These KPIs could be restated to measure controllable factors (e.g., customers acquired through Business Development activities).

- NJAW does not have any action plans to support how the company would move from its current state to the desired goal levels.

13. NJAW department-level performance goals are weak and not measurable.

- A matrix of Draft 2010 Consolidated Performance Goals for NJAW included the following departments: Operations, Engineering, Business Development, Government Affairs, Regulatory Programs, Finance and Internal Controls, Communications & External Affairs, Human Resources, and Legal. At the NJAW level, the goals are shown in the **Exhibit VI-4**.

**Exhibit VI-4
NJAW 2010 Draft Performance Goals**

Organization	NJAW 2010 Goals
Financial	- Deliver shareholder return and enhance long-term value.
Customer Services/ Satisfaction	- Deliver a positive and high quality customer and stakeholder experience
	- Expand collaborate relationship with community and business leaders, regulatory agencies and other key stakeholders.
Process Improvement/ Business Transformation	- Identify integrated processes that effectively and efficiently deliver high quality customer and stakeholder experiences and meet necessary governance requirements.
Health/Safety	- Create and sustain a culture that is focused on health, wellness, safety and an injury free environment.
Environmental	- Create, implement and support sustainable and responsible program, practices and partnerships to become NJ's environmental leader in the water/wastewater industry
People Development	- Foster and promote a culture and work environment where employees: - Are engaged in and contribute to the success of NJAW/AW - Work in high performing team(s) - Respect and learn from each other - Are recognized for their contribution. - Seek out and are provided opportunities for learning and development - Are prepared to meet future challenges and opportunities

- While these goals are not linked to a Corporate or Company overall Mission or Vision, and there is no evidence as to how they were developed, the Goals are appropriate at the company level.

- For the most part the department level goals linked to these Company goals simply echo the company-level goals, without expansion or additional details. Where there are additional details, the connection between the department and NJAW goals is not clear. For example:
 - Government affairs has “promoting the value and leadership position of NJAW/AWK at all levels of government” as its goal in support of the “Deliver shareholder return and enhance long-term value” NJAW Goal. While this goal is not inappropriate for the governmental affairs department, the link between the goal and the financial health of NJAW is not direct.
 - Operations lists “delivering a reliable, positive and high quality customer and stakeholder experience” as its contribution to the “Deliver a positive and high quality customer and stakeholder experience” NJAW Goal. The (almost) echo of the company goal provides no guidance to management as to what that department is going to do.
- In none of the instances are the department goals measurable.

14. NJAW senior management, AWK executive management, and the AWK Board of Directors are involved in the development, review, and approval of the financial “business plans” developed by NJAW.

- As there is no strategic business plan, there is no approval of the strategic plan.
- The financial “business planning” process identifies appropriate input into the financial assumptions by NJAW management and AWK executives, and approval by the appropriate boards of directors of the final financial “business plans” and operating budgets.

15. NJAW senior management regularly reviews performance against the financial business plans and other KPIs for both NJAW and AWWSC.

- NJAW senior management has monthly meetings to review the Business Performance Report (BPR). The BPR report includes progress towards financial goals and other KPIs, as well as operational and business development activities during the previous month.
- AWWSC executives, including the NJAW President and other operating unit executives review the AWWSC BPR monthly as well.

16. The Business Transformation (BT) project represents a major initiative for AWK, with the potential for both major improvements in process efficiencies and customer services, and the risk of cost overruns and over-selling of benefits.

- While the initial driver for BT was the need to replace the outdated IT systems, BT has become a broad cross functional initiative with the potential to touch every aspect of regulated operations. The effort is addressing the following functions:

- Recruit to Retire (Human Resources)
 - Order to Cash (Customer Accounting and Collections)
 - Plan to Build (Capital Assets)
 - Procure to Pay (Procurement)
 - Inventory Management
 - Record to Report (Finance and Accounting)
 - Request to Completion (Customer Service and Field Maintenance)
- Up to the present time, AWK has performed most of the BT work with internal resources, with some assistance from an outside consultant.
 - AWK has solicited bids from both software/hardware companies and from consulting firms to assist with the implementation.
 - NorthStar's experience with projects of this type and scope indicates that promised functionality does not always match with delivered capabilities, and that the costs and the time required for implementing a broad project such as this is almost always underestimated.

17. The focus of NJAW's senior management and expertise is appropriately on NJAW operations.

- The involvement by NJAW management in activities and issues outside of New Jersey is very limited.
- While NJAW management personnel sit on numerous cross-company and corporate teams, they are involved to represent New Jersey regulated operations and activities.
- For example, numerous NJAW personnel are involved in various Business Transformation teams, where their focus is to insure that the BT effort will meet the needs of New Jersey operations.
- The NJAW President monitors and works to control AWWSC costs as much as possible within the constraints of the existing Service Level Agreements and organizational structure.

18. SSC and AWWSC personnel assigned full time to support NJAW generally have an appropriate focus on NJAW issues.

- Under the AWK organizational structure, several key NJAW personnel have direct line responsibilities to SSC and AWWSC executives, but work exclusively for NJAW. These positions include financial planning and reporting and legal.
- The NJAW Director of FP&A has instituted a process of having accounting personnel participate in NJAW operating team meetings so that the accounting personnel can be aware of what is going on in NJAW operations, and NJAW operations personnel can become more aware of the accounting impacts of decisions made.

- It is possible that the dual reporting relationships could lead to situations where conflicts of goals between NJAW and AWWSC or SSC exist. In those situations the reporting relationships could outweigh the dotted lines responsibility for NJAW.

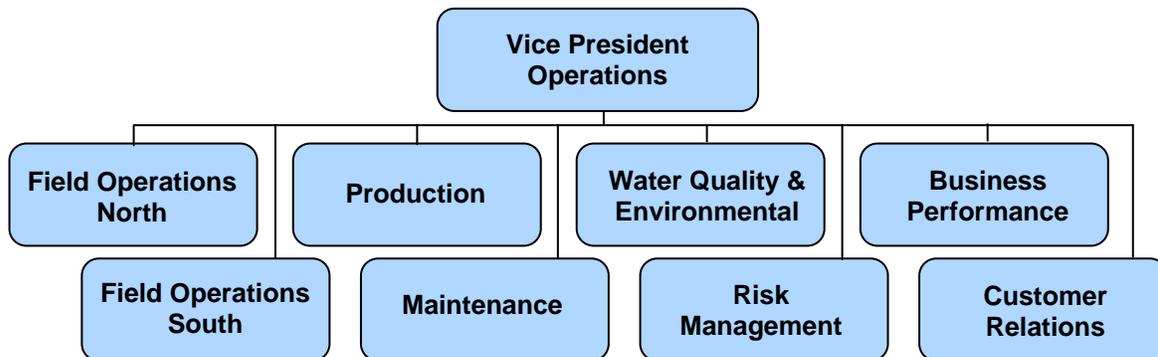
E. Recommendations

1. Continue the implementation of the VDS process, including completing the risk and gap analysis, developing a prioritization process, building action plans and fully linking the VDS to the budgeting process, KPIs and performance goals for NJAW. (Refers to Findings VI-1, VI-4, VI-5 and VI-8)
2. Link New Jersey consumer and public education messages to align with VDS goals. (Refers to Finding VI-9)
3. Link employee engagement and training, and other human resources activities with the VDS goals. (Refers to Finding VI-10)
4. Revise the AWK treatment of Business Development costs to an “as requested/fee” basis, and consider using non-AWK providers of training and other Business Development services. (Refers to Finding VI-11)
5. Modify the KPIs for NJAW to reduce redundancies, focus on controllable activities and clearly link with the VDS process and develop action plans for achieving performance improvements. (Refers to Findings VI-12 and VI-13)
6. Install a process to ensure that SSC provides low-cost, efficient, competitive, and valuable support services to NJAW. (Refers to Finding VI-15.)
7. Implement the Business Transformation project within budget and on schedule. (Refers to Findings VI-16, V-2, VI-8, VIII-5, VIII-10, VIII-24, X-10 and XII-3)

VII. SYSTEM OPERATIONS (3.5)

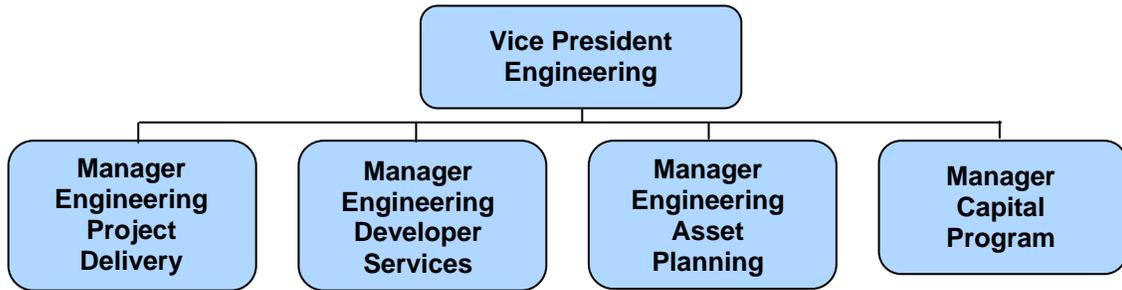
As part of the investigation of system operations, NorthStar reviewed how effectively New Jersey American Water Company, Inc. (NJAW) operates its system. NorthStar focused its efforts on system reliability and system planning. NJAW's system operations include the NJAW Operations Department and NJAW Engineering Department. The NJAW Vice President of Operations reports directly to the NJAW President. The Operations Department is responsible for the operation, maintenance, water production, treatment and water delivery assets and all wastewater collection and treatment assets. The Operations Department is also responsible for providing safe, adequate, reliable and proper service to customers. The Operations Department has support functions that are responsible for: water quality; environmental compliance; operational risk management (health and safety, security, event management, and claims management), maintenance services, business performance and state level customer relations. Over 800 NJAW employees operate 32 water systems and four sewer collection systems. The operations organization is responsible for the day-to-day operations and maintenance of facilities. This includes both the "above ground" production and "below ground" mains and services. The resources that carry out the operations and maintenance are geographically-based with field operations separated into north and south regions which are further organized into nine operating districts. NJAW's operations organization is shown in **Exhibit VII-1**.

Exhibit VII-1
NJAW Operations Organization



NJAW's engineering function is the responsibility of the Vice President of Engineering who reports to the president of NJAW. Engineering has four groups: project delivery, developer services, asset planning and the capital programs. Each group is headed by a manager. The project delivery organization is responsible for design, permitting, bidding and construction management. Developer services provide point of contact for developers from initial contact through project close out. Asset planning performs planning studies and also maintains Geographic Information System GIS records. The capital program group performs analysis and prioritization of capital projects and programs. NJAW's engineering organization is shown in **Exhibit VII-2**.

**Exhibit VII-2
NJAW Engineering Organization**



A. RFP Objectives

In its RFP for this audit, the BPU identified the following objectives for the review of system operations:

- Review NJAW’s existing practices and perform a comparison with best practices and relevant benchmarks.
- Evaluate the performance of NJAW’s design functions and their ability to communicate with field construction personnel.
- Review planning procedures and make recommendations to create achievable short-term and long-term efficiency goals that satisfy NJAW’s missions.
- Evaluate the engineering economics methodology and the ability to coordinate NJAW’s operations in an optimal manner.
- Review past and current construction projects for performance in planning, scheduling, cost minimization and efficiency.
- Evaluate the accuracy of documentation, response time and performance of NJAW’s operations and maintenance.
- Assess the systems reliability in providing water that meets the requirements of the Safe Water Drinking Act (SWDA).
- Evaluate NJAW’s conservation efforts in comparison to other New Jersey water utilities and with the Board’s strategic plan, renewable energy, and conservation objectives.
- Determine if NJAW’s practices promote efficiency and provide its ratepayers with optimal levels of rates and service.

B. Evaluative Criteria

In conducting our review of NJAW's system operations, NorthStar used the following criteria:

- Does NJAW have an organizational structure for its system operations that ensures cost-effective operations?
- Does NJAW adequately engineer, plan, and complete construction projects?
- Does NJAW utilize appropriate assumptions in modeling and evaluating projects?
- Does NJAW have a comprehensive emergency planning process?

C. Audit Tasks

To complete the review in this area, NorthStar performed the following tasks:

1. Reviewed NJAW's system operations organizational structure.
2. Reviewed NJAW's existing practices and performed a comparison with best practices and relevant benchmarks.
3. Evaluated the performance of NJAW's design functions and their ability to communicate with field construction personnel.
4. Reviewed planning procedures and systems and make recommendations to create achievable short-term and long-term efficiency goals that satisfy NJAW's missions.
5. Reviewed past and current construction projects for performance in planning, scheduling, cost minimization and efficiency.
6. Evaluated the accuracy of documentation, response time and performance of NJAW's operations and maintenance.
7. Assessed the systems reliability in providing water that meets the requirements of SWDA.
8. Evaluated the engineering economics methodology and the ability to coordinate NJAW's operations in an optimal manner.
9. Evaluated NJAW's conservation efforts in comparison to other New Jersey water utilities and with the Board's strategic plan, renewable energy, and conservation objectives.
10. Determined if NJAW's practices promote efficiency and provide its ratepayers with optimal levels of rates and service.

11. Reviewed the system planning process.
12. Examined NJAW system development plans for the expansion and modernization of its system operations.
13. Assessed the effectiveness of NJAW's operating and maintenance procedures.
14. Examined the linkages between on-going operations and construction project planning.
15. Examined the effectiveness of NJAW's planning and management of major construction projects.
16. Reviewed construction budgets, approvals, and actual results.
17. Evaluated the comprehensiveness and effectiveness of NJAW's project control processes.
18. Examined pipeline safety records, compliance with requirements and the incidence of reportable accidents.
19. Assessed the "plan-to-build and maintain" component of the Business Transformation (BT) program.
20. Reviewed NJAW's emergency planning process.

D. Findings and Conclusions

1. NJAW's systems planning process is not well-coordinated.

- NJAW's system planning within a one-year horizon requires a great deal of manual effort and is not consistently performed across all operating divisions. While projects are loaded into PowerPlant for tracking costs, NJAW does not have a system which consolidates future workload and resource requirements.
- Unplanned work is estimated based on previous experience and does not have any work units associated with the anticipated amount of work.
- Within the Production Department, the Computerized Maintenance Management System ("CMMS") is only partially implemented and to varying degrees within the various operating centers. The Field Operations organization has implemented a CMMS.

2. The capital planning and budgeting models which NJAW's uses to evaluate and prioritize projects and programs should give additional consideration to asset condition.

- NJAW uses prioritization models to evaluate and prioritize projects and programs. The models consider a number of factors influencing the repair versus replace decisions which are driven by engineering economics.
- While prioritization models differ by the asset category being evaluated, they generally consider service, capacity, customer satisfaction, regulatory requirements and operating and replacement costs. These programs and projects are recorded in the Capital Planning Program Risk Register.
- Asset conditions (age, equipment or pipe family) should be given additional consideration in the prioritization process.
- The evaluations take place separately depending on the type of asset. For example pipeline renewal and valve replacements use one prioritization model and wells, pump stations, plants and tanks use a different model. These models are appropriate for assigning prioritization within an asset grouping, each of which has different prioritization drivers.

3. The NJAW design process requires a significant amount of manual intervention.

- Design sketches are in multiple forms and systems and some are manually drawn.
- Units included in the design systems are not standardized units across the organization. Labor and materials cost estimates are manually determined in the design process.
- Work order approval is primarily a manual process due to the lack of built-in approval levels.
- The design process does not automatically interface electronically with mapping, inventory or procurement systems.
- The aforementioned deficiencies make monitoring design efficiency and accuracy difficult. It is not possible to track the amount of time spent in each step of the design process, the accuracy of designs, or where inaccuracies in the design and estimate process are occurring.

4. NJAW does not have fully-integrated work management systems or tools in place to measure the efficiency of its work force.

- NJAW lacks compatible units or other measures of work and materials that could provide a benchmark against which to measure performance.

- NJAW also lacks the ability to easily identify and measure the actual work performed on all jobs and the materials used due to the manual processes involved and the lack of system integration.
- NJAW has several isolated work management systems to manage various work tasks including: MapCall (T&D), Ventex (customer field services) and Equinox (meter reading). NJAW plans and manages work for certain tasks using these systems.
- An integrated work management system is needed to improve customer service, improve process efficiency and provide unit costs of work that can be managed within each department and benchmarked with other companies.

5. NJAW does not benchmark its systems operations in detail against other water utilities or other AWK regulated utilities.

- NJAW benchmarks its operations against other New Jersey utilities in a number of categories. This benchmarking draws almost exclusively upon readily available financial data. As part of the BT program goal setting, NJAW participated in, or drew from, a number of benchmarking studies performed by consulting firms and the American Water Works Association.
- These efforts did not provide the detailed information that would be useful to operations management in terms of measuring performance measurement and planning work. For example, the information benchmarks T&D cost per customer, a useful overall metric. However, NJAW needs to know more detailed information such as cost per foot of main installation, cost per emergency repair and labor hours per meter installation.
- NJAW does not measure itself against other AWK regulated companies which have directly comparable work activities such as pipe construction, meter setting, locates and repairs. The other AWK regulated companies would also be more forthcoming in discussing and explaining differences between the respective operations. AWK, as the largest water company in the US with operations in multiple states, has a unique opportunity to benchmark and compare its operations against each other.
- NJAW is hindered from conducting detailed comparisons of productivity and utilization because of its lack of system tools that capture the necessary data on their own operations.

6. NJAW's current information systems shortcomings prevent it from providing optimal service and promoting efficiency in many operating areas.

- It is difficult to determine whether NJAW operates at optimal operating efficiency because of the lack of available data on productivity and utilization.
- Available data indicates that NJAW is reasonably efficient and comparable to other New Jersey water companies. This data is at a very high level and is limited to self-reported financial information and comparative rate information.

- NJAW expects that the BT program will address the various system shortcomings that constrain system operations service delivery. This would include systems to reduce manual processes, improve hand-offs between organizations, coordinate planning better, project work-load based on unit drivers such as compatible units, allow for analysis of the unit cost of work, facilitate better benchmarking and improve visibility over the status of job timing and expenditures.

7. NJAW maintains high levels of customer service and response.

- Over 85 percent of NJAW customer report being “extremely” or “very” satisfied with service overall.
- NJAW has met over 99.5 percent of service appointments in 2009.
- NJAW reads almost 97 percent of meters each month.
- NJAW is ahead of plan for valve inspections.

8. NJAW has controls and procedures in place that enable it to comply with the Safe Water Drinking Act (SWDA) and other water quality regulations.

- NJAW has an extensive program in place to ensure compliance with water regulations. The program includes policies, management plans, key performance indicators and both focused and specific audits.
- Within NJAW, water quality is the primary responsibility of the Senior Director of Water Quality & Environmental Management. The director is responsible for water quality for both production and distribution facilities including 32 water systems and four wastewater facilities. The group has 29 employees including laboratory personnel. The water quality team also coordinates the services of AWK’s Central Laboratory in Belleville, Illinois for more complex analytical methods necessary for regulatory compliance monitoring and reporting.
- The primary tool used to communicate responsibilities and manage regulatory compliance is the Environmental Management Plan (EMP) which includes approximately 35 separate plans for individual areas and operations. Each plan is further broken down by categories such as: environmental activity, regulatory reference, environmental impact, long-term objectives, target KPIs, responsibilities and progress against targets.
- Major acts and regulations such as the Clean Water Drinking Act are further broken down into specific sub-sets or rules. For example, the arsenic rule and the lead and copper rule would each be managed individually within the EMP.
- The EMP is supported by an Environmental Audit Plan (audit plan). The audit plan calls for both system-wide compliance audits and focused audits which address specific regulatory programs. System-wide plans are audited annually and focused

audits are conducted once every five years for a system (or on the frequency required by regulators if different than five-year intervals).

- NJAW had a strategic plan for improving customer service in 2009 which focused on improving customer water quality. The plan had five major components:
 - To achieve a greater customer satisfaction survey rating
 - Attain satisfaction targets for year-end 2009.
 - Attain a greater satisfaction rate on the service quality survey.
 - Attain extremely or very satisfied on the water service quality rating.
 - Attain a reduction in water quality complaint service orders.

9. NJAW has proposed an extensive conservation plan to the BPU.

- NJAW is proposing a conservation program in its pending rate case. NJAW believes that its efforts and proposals are greater in its breath and specificity than other New Jersey investor-owned water utilities because of its greater size. The NJAW plan was developed with the assistance of an external consulting firm.
- The NJAW plan reflects a broad strategy which includes system-wide rebates, an expanded low-income program, education and communication and several rate measures
- The plan identifies specific costs and anticipated savings (water and customer bill) and allows for adjustments and reassessments on a going forward basis.

10. NJAW has a comprehensive Emergency Response Plan.

- NJAW has a complete Emergency response Plan for dealing with emergency events.
- NJAW also has an established Consequence Management Plan for planning and responding to accidental or intentional incidents of drinking water contamination. The plan was developed based on the Environmental Protection Agency (EPA) guidance for the development of Consequence Management Plans.

E. Recommendations

1. Take steps to improve the asset management systems, tools and processes. (Refers to Findings VII-1)
2. Revise the models which NJAW's uses to evaluate and prioritize projects and programs to give additional consideration to asset condition. (Refers to Finding VII-2)
3. Implement a computerized design tool that includes at a minimum: a compatible units feature; and interfaces with materials, PowerPlant and graphical design and mapping software. (Refers to Finding VII- 3)

4. Implement systems to enable NJAW to capture and compare actual work units completed to those designed and budgeted. (Refers to Finding VII-4)
5. Benchmark detailed work performance metrics against other AWK companies and other water companies. (Refers to Finding VII-5)

VIII. CUSTOMER SERVICE (3.6)

Customer service activities include meter reading, field customer service, billing, credit and collections, and complaints and inquiries. Customer service activities affect the quality of service provided to customers and New Jersey American Water's (NJAW) revenue stream.

Customer service activities are performed by both NJAW and American Water Works Services Company (AWSSC). AWWSC operates Customer Service Centers (CSCs) which include call center operations in Alton, IL and Pensacola, FL. The CSCs provide certain customer service functions on behalf of all American Water Works Company, Inc.'s (AWK) regulated utilities. Call handling is provided out of both CSCs. Alton operates 24/7 with a staff of about 400 and Pensacola operates from 6 am to 11 pm with a staff of about 300. Call handling staff are union personnel. Service orders are generated in two ways: customer requests received by the CSC and internally. In 2008, AWK processed about 3.8 million service orders; 1.8 million were generated at the CSCs including customer requests, billing orders and collection orders. Emergency service orders are immediately routed to the field resources coordination center (FRCC) that serves NJAW.

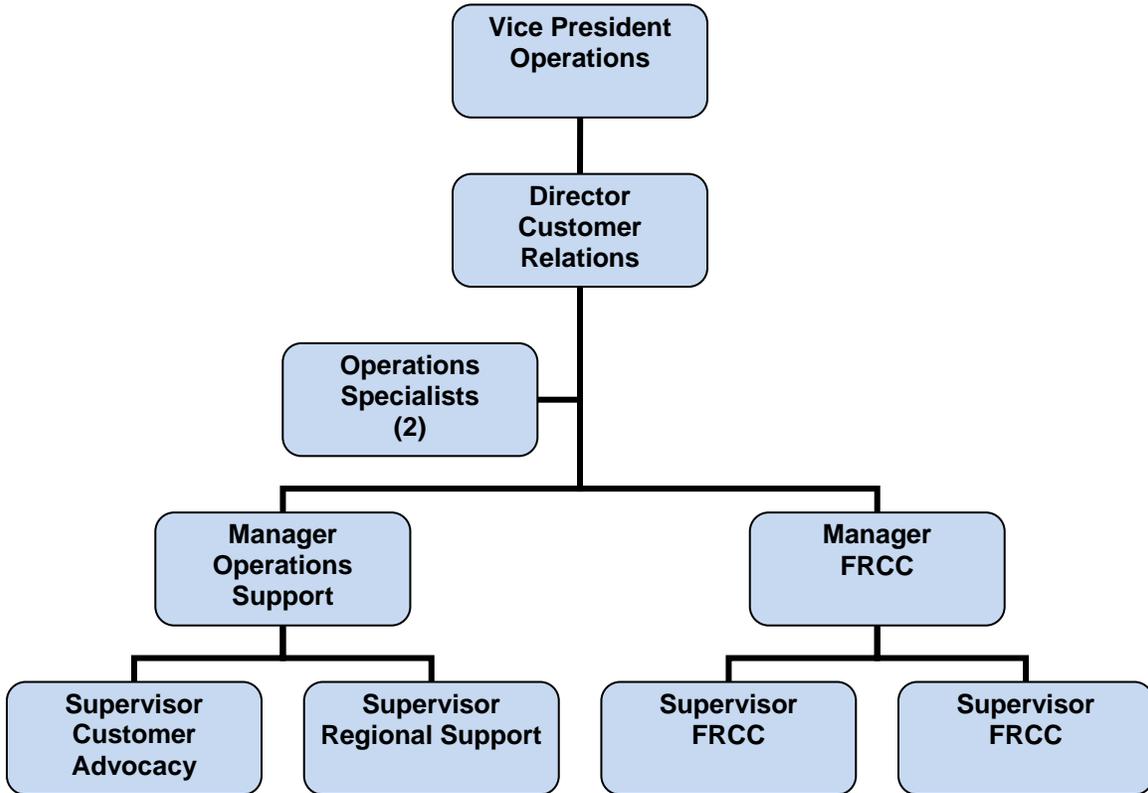
Billing, some scheduling, and the collections notification processes are currently provided by multiple locations, including centrally out of Alton; however, these processes have redundant capabilities for certain of these functions are planned for Pensacola. Collections notification activities are handled by AWWSC which uses an outside first party collection agency for inbound and outbound collections calls.

Field collections and other short-cycle activities (e.g., re-reads and meter change-outs) are performed by NJAW Field Service Representatives (FSRs) who operate out of nine Districts/Operating Centers located throughout New Jersey. Meter readings (MR) and meter testing are also performed by NJAW personnel. NJAW recently added a MR/FSR classification. NJAW's Field Resource Coordination Center (FRCC) handles the scheduling, dispatch, and monitoring of the FSRs. In December 2009, the transition of "time critical" activities (after hours dispatch and scheduling) from the AWWSC CSC to the NJAW FRCC was completed. As a result, the FRCC now operates 24/7. Long-cycle work, typically involving transmission projects and/or distribution is handled by the T&D group in Field Operations.

NJAW also handles a number of customer service back office/reconciliation functions and BPU and Executive Management complaint investigations. Customers who call the CSC and are not satisfied with information provided by a CSR are generally escalated to a higher level representative or supervisor for assistance. Customer billing disputes are transferred to billing and are handled by the CSC.

Exhibit VIII-1 provides the NJAW Customer Relations organization.

**Exhibit VIII-1
NJAW Customer Relations Organization**



Customer Advocacy handles BPU contacts and complaints to executives, and special account collections. Special accounts include fire services, hospitals, nursing homes, large apartment complexes, large industrial complexes and municipal accounts. Special accounts cannot be shut-off without special notification, review and upper management involvement. Executive complaints were previously handled by the CSC, but were transitioned to NJAW in 2010. Customer Advocacy also handles revenue enhancement/theft-of-service, meter reading, error resolution, and support for the CSC core billing group, and support for the NJAW dispatch function. Customer Advocacy consists of a supervisor and ten service delivery specialists.

The Regional Support Group includes a supervisor; four operations support staff, one premise quality assurance (QA) and two operations specialists. Operations support performs the back-office review, investigation, and input of work generated from the field. As there are limited direct links between the field and the CSC customer information system, any changes to the customer records that must be made as a result of something found in the field, must be manually input by the operations support group. Premise QA ensures that the premise is set-up correctly in the system, i.e., the customer is on the proper rate and the premise information is entered into the system correctly. Eighteen percent of all new premises are sampled monthly.

The FRCC consists of a manager, two supervisors and ten coordinators who schedule and monitor the work of the FSRs. On December 1, 2009, the FRCC moved to 24 hours per day, 7 days per week operations when the time critical function moved from the CSC to NJAW. The FRCC is staffed with a minimum of two people at all times.

As shown in **Exhibit VIII-2**, in 2009, NJAW met or exceeded most of its customer service targets.

**Exhibit VIII-2
Customer Service Performance**

Service Metric	2007 Actual	2008 Actual	2009 Actual	2009 Target
Non-pay shut offs worked as a percent of issued			71.7%	85%
Non-pay shutoff orders	46,929	39,608	41,064	40,044
Percent meters read	92.5%	96.6%	97.3%	97.3%
Percent scheduled estimates			0.0%	
Reduce consecutive estimates		55.7%	37.5%	35.0%
Current year meters due tested	89,973	92,052	36,908	36,043
Backlog meters tested			25,603	25,310
Service orders completed before expiration			97.1%	
Number of public relations adjustments			1,500	
Dollars of customer public relations adjustments			\$428,511	
Orders per hour per FSR equivalent (normalized)			2.18	
Appointments met within scheduled window	97.9%	98.7%	99.5%	99.0%

A variety of systems are used by customer service. The Enterprise Customer Information System (ECIS) is AWK's customer and premise information and billing system. NJAW maintains two separate versions of ECIS: one for the former Elizabethtown Water (EW) customers and one for the remaining NJAW service territory. The CSC also uses Instant Data Access (IDA) which provides alerts and other non-customer specific information related to the customer's premise, such as payment locations and water quality issues. IDA also provides a snapshot of customer specific information which is used by the CSC representatives.

Advantex is used by the FRCC and FSRs to schedule and report field work. Advantex automatically prioritizes the customer scheduled work. Job times (by job type) and travel times are built into Advantex. The FRCC adds in the undated work – company-generated service orders and non-pay disconnects. As work orders are closed, Advantex updates ECIS.

Meter reading is generally performed using ITRON and Neptune devices. AWK recently implemented MyH2O.com, a self-service website which allows customers to check their

account balances, pay their bills, schedule some service appointments and update their account information.

Meters are read monthly, primarily on a manual read basis. 610,000 accounts are read by a staff of about 75 to 80 NJAW meter readers. NJAW targets an actual read rate of 96 percent and no more than three months of consecutive estimates. Overall, meter location is fairly evenly split between inside and outside meters. NJAW also operates a meter test shop, which purchases and tests all meters for NJAW.

There is a three-day lag between meter read and bill print (i.e., meters read on Monday will be part of the batch process on Wednesday and printed on Thursday). The lag allows time for the bill edit process to take place. Bill verification responsibility is shared by both AWWSC and NJAW. The AWWSC core billing group located in Alton handles the batch processing, bill print, and certain types of bill exceptions – high bills, low bills and opening bills. NJAW investigates inactive with consumption, zero consumption and consecutive estimates.

According to the New Jersey Administrative Code (NJAC or Code), NJAW may not disconnect service for non-payment unless the customer's arrearage is more than \$150 and/or the customer's account is more than one month in arrears, and may only disconnect for nonpayment of utility commodity charges. NJAW may provide notice of disconnect no earlier than 15 days after the postmark date of the outstanding bill, and the disconnect notice must provide the customer with at least ten days notice. A new notice must be served each time the utility intends to terminate service for non-payment. The NJAC also requires that NJAW make good faith efforts to determine which residential customers are over 65 years of age and notify these customers by telephone in addition to the mailed notice. The Code also sets deferred payment arrangement parameters and requirements for notification of tenants and other special accounts. Special account collections are handled by NJAW. Much of the collections work is processed manually.

For a regular, non-multi dwelling customer, the bill is due 15 days after the bill is issued, the customer is provided eight grace days, and then the collections batch process runs. At day 24, the customer notice is mailed, calls begin at day 31 and the customer is eligible for termination at day 40. The disconnect work file is generated at day 42 and available to be worked at day 43. Accounts are assigned to the FSRs on day 44 and worked on day 45. If the service is terminated, and the customer does not contact the utility to make payment arrangements, the final bill is issued at day 62 and accounts are placed with a third-party outside collection agency at day 90 and charged-off at day 120.

A. RFP Objectives

In its RFP for this audit, the BPU identified the following objectives for the review of NJAW's customer service:

- Evaluate customer service areas in order to determine if NJAW is serving the best interest of its ratepayers.

- Assess the accuracy and efficiency of NJAW’s meter reading procedures.
- Evaluate the effectiveness of NJAW in servicing its customers, including the areas of billing, credit and collection, complaints and inquires, revenue protection, and marketing.

B. Evaluative Criteria

In conducting our review of NJAW’s customer services, NorthStar used the following criteria:

- Does NJAW have effective procedures for measuring the quality of service it provides to customers and are customer service levels adequate?
- Does NJAW handle customer complaints and inquiries in an appropriate manner?
- Does NJAW have appropriate processes to ensure meters are read efficiently and on a timely basis and that customers receive accurate and timely bills?
- Does NJAW operate its call centers in an effective manner?
- Is NJAW effective in minimizing theft of service?
- Are credit and collection policies and procedures in compliance with BPU regulations and are they effective in minimizing bad debts?
- Is NJAW’s plan and schedule to implement automated meter reading (AMR) appropriate?
- Is NJAW’s meter read to bill one day or less?

C. Audit Tasks

To complete the review in this area, NorthStar performed the following tasks:

1. Assessed the extent to which customer surveys are used to evaluate service levels, identify problems, reduce complaints, and meet customer needs. Reviewed customer satisfaction survey results.
2. Reviewed results of surveys performed following customer contact with NJAW and determined whether results are used to correct any identified service issues.
3. Analyzed NJAW’s procedures for measuring, tracking, investigating, and resolving customer complaints.

4. Reviewed BPU and executive complaints to identify any significant issues, determine compliance with any BPU regulations and assess timeliness and responsiveness.
5. Compared actual customer service levels to targets. Assessed compliance with any mandated service levels. Reviewed any initiatives to improve service levels.
6. Determined how promptly NJAW responds to requests for new service.
7. Assessed compliance with regulations and guidelines for providing and disconnecting service.
8. Compared activities performed by AWSC with those performed by NJAW and determined whether redundancies or inefficiencies exist.
9. Reviewed any studies performed by NJAW or AWWSC regarding the relative cost-effectiveness of AWWSC customer service functions.
10. Reviewed SLAs between NJAW and AWWSC and associated performance targets.
11. Determined if meter reading is performed in a timely manner without excessive numbers of estimated bills or re-reads. Reviewed policies concerning inactive meters. Investigated the use of a three-day read window and five-day bill cycle.
12. Evaluated the efficiency of NJAW's meter reading processes and use of current technology.
13. Reviewed the strategy for AMR/AMI implementation including timeline, current status and implementation by the Divisions/Operations Centers.
14. Reviewed NJAW's meter testing program including:
 - Meter test parameters (new, periodic and other)
 - Notification process for periodic meter tests
 - New and existing meters test results for 2009.
15. Reviewed meter reading performance results by operations center.
16. Reviewed and evaluate meter testing program, methods, and procedures.
17. Reviewed processes and controls designed to ensure the accuracy of customer bills.
18. Assessed the time between meter reading and billing.
19. Assessed the adequacy of payment options available to the customer.
20. Evaluated billing and customer information systems for timing, accuracy, and efficiency. Assessed customer information system accuracy, accessibility, and utilization by customer service personnel.

21. Reviewed procedures followed by customer service office personnel to handle customer inquiries, requests, and complaints. Identified the extent to which employees are empowered to work with the customer to solve problems.
22. Reviewed and assessed the operations and responsiveness of the call center.
23. Determined if field customer service activities are efficient and responsive to customer needs.
24. Reviewed credit and collection activities, including procedures for account opening, deposits, collections, turn-offs, write-offs, and theft-of-service prevention.
25. Determined the effect of customer billing and credit and collection procedures on accounts receivable and bad debt.
26. Assessed NJAW's policies and procedures for identifying and billing un-metered service (revenue protection). Determined if NJAW's theft-of-service detection program is effective.
27. Reviewed the processes followed to credit customer bill payments and evaluate error rates.
28. Evaluated NJAW's marketing efforts.
29. Assessed the "order to cash" and the "service request to completion" components of the business transformation program.

D. Findings and Conclusions

- 1. NJAW has effective procedures for measuring the quality of service it provides to customers.**
 - AWK conducts annual statewide customer satisfaction surveys and quarterly tactical service quality surveys.
 - The annual customer satisfaction survey, surveys customers in each of the states within which AWK operates, and benchmarks AWK's performance relative to other local electric and gas companies. Results are evaluated in "tiers" corresponding to the level of customer satisfaction achieved – extremely, very or somewhat satisfied or dissatisfied.
 - The tactical surveys are performed as a follow-up to a customer contact. The tactical surveys contain detailed questions regarding the customer's experience. Customers are generally satisfied with their experience if they contact NJAW, as shown in **Exhibit VIII-3**.

**Exhibit VIII-3
NJAW Tactical Survey Results
(Percent)**

Extremely or Very Satisfied	2006	2007	2008	2009
With the outcome of the contact	80%	79%	82%	86%
With the service contact	77%	76%	80%	84%
With the telephone representative		80%	86%	88%
With the FSR		88%	96%	90%

2. Although customers are dissatisfied with the rates, they are generally satisfied with the service provided by NJAW.

- Customer perception of the value of NJAW fell from 2006 to 2009. Overall, higher rates were cited as the greatest contributor to dissatisfaction.
- NJAW's recent customer satisfaction performance ranks higher than most AWK states or the company as a whole in most categories. **Exhibit VIII-4** summarizes the results in the customer satisfaction surveys from 2006 to 2009. Although overall satisfaction rose, the number of extremely satisfied customers fell.

**Exhibit VIII-4
NJAW Customer Satisfaction Survey Results
(Percent)**

	2006	2007	2008	2009
Top Two Tier				
Extremely Satisfied	32%	23%	22%	17%
Very Satisfied	41%	35%	45%	51%
Subtotal	73%	58%	67%	68%
Goal	70%	70%	70%	70%
Top Three Tier				
Somewhat Satisfied	21%	34%	26%	23%
Subtotal	93%	91%	93%	91%
Goal	90%	90%	90%	90%
Somewhat/Very Dissatisfied	7%	9%	7%	9%

- As indicated in Exhibit VIII-4, NJAW's performance improved from 2007 (58 percent extremely or very satisfied) to 2009 (68 percent). During the same period, AWK's overall performance was 61 percent, with states ranging from a low of 44 percent to a high of 76 percent in 2008.

3. NJAW handles customer complaints in compliance with Title 14 Chapter 3 of the NJAC.

- Complaints fall into three categories: calls into the call center, executive complaints, and BPU complaints. Call center and executive complaints are handled and monitored internally by NJAW and the CSC. The BPU monitors and tracks NJAW's handling of BPU complaints. Title 14 Chapter 3 of the NJAC provides two processes for customers filing BPU complaints: informal and formal. The informal complaint process involves the customer submitting a complaint to the BPU. The BPU forwards the complaint to NJAW. NJAW is required to respond to the BPU within three days for telephone or presidential complaints and five business days for written complaints. If the customer is not satisfied with how the process or the outcome of an informal complaint, the customer may file a petition for a formal BPU hearing. NJAW has 20 days to submit a response. If, after the response is received, the case is considered a contested case, it is then sent to the Office of Administrative Law (OAL).
- NJAW has a clear policy for handling BPU complaints that is in compliance with NJAC Title 14 Chapter 3. A file is established, customer contact is attempted within 24 hours, additional information is obtained, an account hold is placed if necessary, the complaint is resolved in a timely manner, and the BPU is notified. A test of a small sample of complaints found: the files were complete, the required response times of three or five days were met, and the resolution of the disputes seemed reasonable. However, a large percentage of verbal case responses sent via EDI system to NJAW are received in an incomplete manner.
- NJAW maintains a database of all BPU and executive management complaints, and maintains files recording the complaint, the correspondence, the investigation, and the resolution.

4. Complaints are handled in a timely manner.

- In 2009, 920 NJAW complaints were received at the CSC. Four complaints were cancelled or withdrawn and four complaints are still open. The remaining 912 complaints were handled within 1.3 days on average, with 626 processed on the same day.
- In 2009, NJAW received 190 executive complaints. Two complaints were cancelled or withdrawn, one complaint is still open, and the remaining 187 complaints were handled within an average of five days. Thirty-five of the 187 were handled on the same day.

5. Customer service system deficiencies result in inaccuracies and inefficiencies.¹

- There is no direct link between the field service representatives and ECIS except for meter reading. Any changes to the customer record/information that result from work

¹ See Finding VIII-24 and Recommendation VI-8

in the field must be manually investigated and entered into ECIS by NJAW's Operations Support Group.

- Fees for after hour's service calls must be manually entered. The current system is only able to handle one charge – the standard service charge of \$22 is attached to all orders. If the customer calls after three pm and wants same day service, the \$22 fee must be changed to \$100.
- Non-pay disconnect service orders are manually generated and all are reviewed to ensure the disconnection is valid (i.e., check for returned checks, payments, proper notification).
- NJAW does not have re-routing software and has not performed a major re-route in a number of years, despite the implementation of radio frequency units in certain regions. NJAW plans to begin r re-routing once it has procured the necessary software.
- Service order route optimization is performed manually by the FSRs as opposed to being performed by the system.
- The CSC has a high service order error rate (14.5 percent). The error rate represents the number of service orders evaluated which had CSC representative errors divided by the number of service orders evaluated.

6. The AWWSC call centers may not provide the most cost-effective solution for NJAW ratepayers.

- Neither AWK nor NJAW have performed an analysis of the costs to NJAW of outsourced (to a third party) versus in-house call center operations. In 2007 an outside consulting firm performed a “market cost comparison” of AWWSC charges provided to NJAW. The analysis compared the cost of the CSC to the customer account service cost of neighboring electric and gas utilities using adjusted FERC-reported data. The adjusted AWWSC cost was estimated at \$31.02 per customer compared to the average of \$28.90. The study evaluated the cost per customer rather than the cost per call.
- AWK has begun developing redundant operations for all call center functions in Pensacola. This provides emergency backup, but potentially mitigates some of the cost benefits of consolidation.
- Supervisor to staff ratios may be high. **Exhibit VIII-5** provides the supervisor to staff ratios for Alton and Pensacola at January 2010. For Alton, the specialty desk ratio of CSRs to supervisors was higher than for general call handling.

**Exhibit VIII-5
Call Volumes and Staff Levels**

Category	Supervisors	CSRs	CSRs per Supervisor
Alton Call Handling	17	132	7.8
Pensacola Call Handling	24	185	7.7

- Handling of time critical calls was recently moved from the CSC to NJAW as it was believed these calls could be better addressed at the local level.

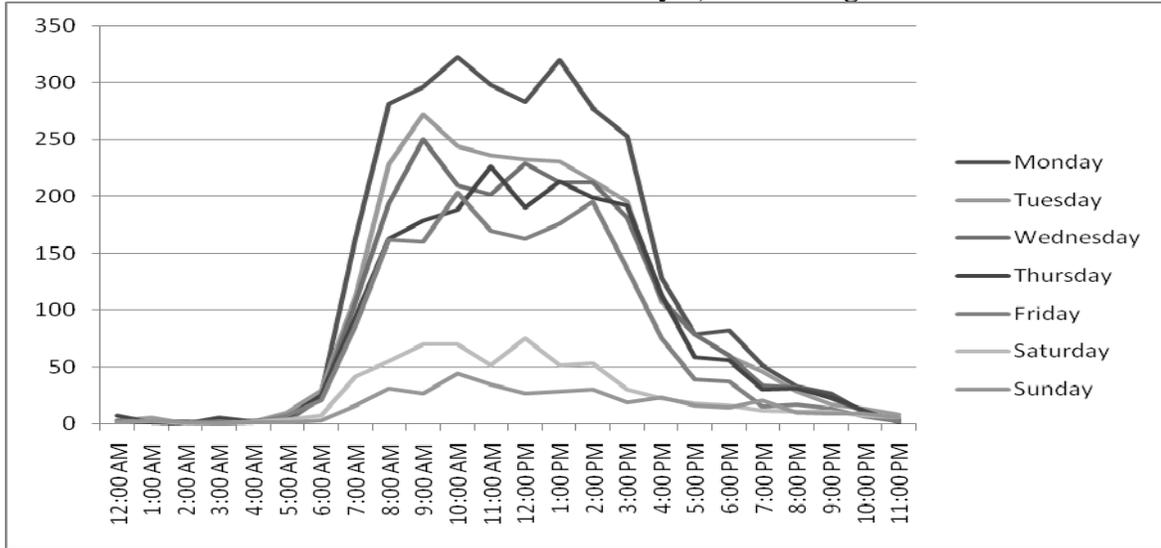
7. Operation of the call center 24 hours per day, seven days per week is unnecessary.

- Neither AWK nor NJAW have performed analyses supporting the 24/7 operations of the call center.
- The 2000 business case review supporting the consolidation of the call centers evaluated the cost-effectiveness of consolidating the regional call centers into a centralized call center. The analysis assumed 24/7 operations and did not evaluate the relative cost effectiveness of 24/7 operations.
- Time critical calls were recently moved back to the regional operating companies as a result of service concerns. They are now handled by NJAW and not the Alton call center. As a result, NJAW's FRCC has moved to 24/7 operations to handle the calls.
- No evaluations of 24/7 operations were made as a result of the movement of the time critical function from the consolidated call center to the NJAW customer service function.

8. Although the Alton CSC operates with a reduced staff during non-business hours and on weekends, call volumes are low during these periods and the number of calls per staff per is relatively high.

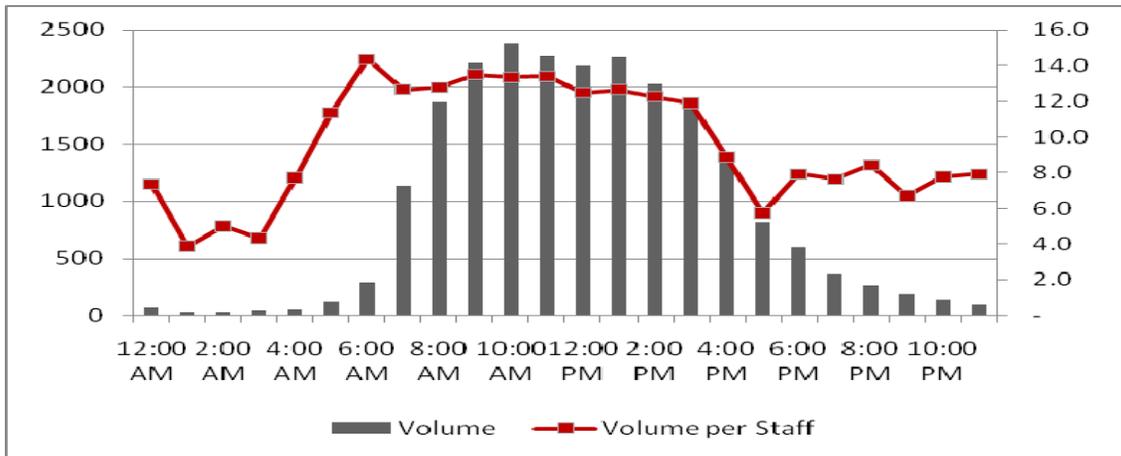
- **Exhibit VIII-6** shows the substantial drop in NJAW call volumes during the non-business hours. Counts do not include emergency and collections calls as these calls are not tracked/routed by state.

**Exhibit VIII-6
NJAW Call Volumes – Week of January 4, 2010 – High Volume Week**



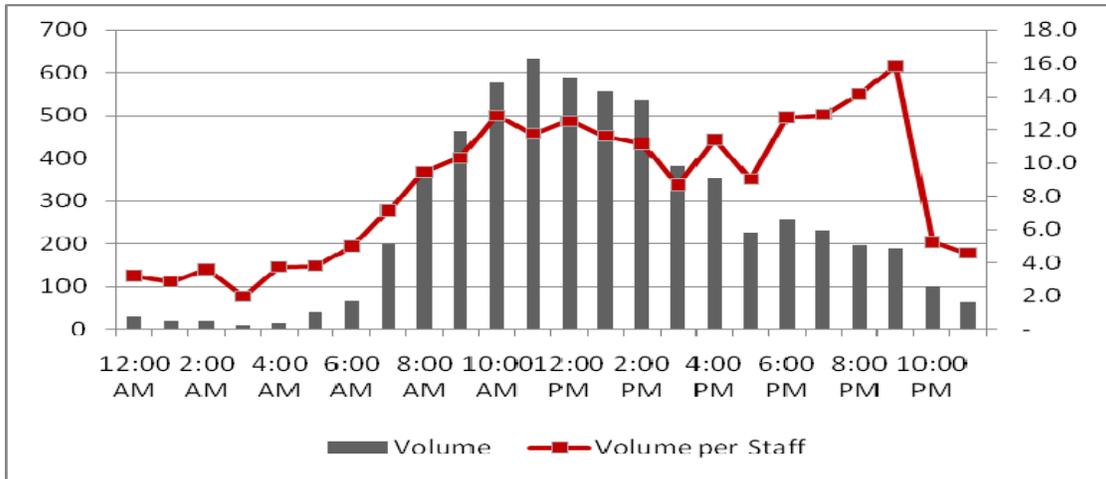
- **Exhibit VIII-7** provides the AWWSC CSC call volumes and calls per staff on a Monday during a high-volume week. During normal business hours the staff handles about 13 calls per hour. The count drops to between four to eight calls per staff during the late evening to early morning hours. The off-hour counts drop even lower (between two to five) during a low-volume week.

**Exhibit VIII-7
Call Volumes and Calls per Staff
Monday, January 4, 2010 – High Volume Week**



- **Exhibit VIII-8** provides the call volumes and calls per staff for Saturday, January 9, 2010.

**Exhibit VIII-8
Call Volumes and Calls per Staff
Saturday, January 9, 2010 – High Volume Week**



- It is unclear that the added level of service provided by 24/7 call center operations is important to the customer or commensurate with the additional cost.

9. CSC staffing-related service level standards may be high, contributing to a higher cost of call center operations.

- Although there is no formal CSC Service Level Agreement (SLA) between AWWSC and NJAW, AWWSC does have New Jersey specific service metrics. Call center performance targets include average speed of answer (ASA) (80 percent in less than 30 seconds), percent calls answered (95 percent), annualized calls per customer (less than 1.36), CSR service order accuracy (> 90 percent), CSR quality assurance scores (> 89 percent), first call resolution (78 percent) and CSR customer service survey (90 percent excellent or very good).
- In 2009, AWWSC exceeded its staffing level-related call center KPI's, as shown in **Exhibit VIII-9**.

**Exhibit VIII-9
CSC 2009 KPIs
(Percent)**

KPI	Target	Actual
Calls answered < 30 seconds	80.0%	82.7%
Percent of calls answered	95.0%	97.7%

- The CSC ASA was 20 seconds in 2009, and was well below the 30 second target for most months, as shown in Exhibit VIII-10 which provides NJAW call volumes and ASA by month (excluding emergency and collections calls). The average talk time

during 2009 was 4:51. The Alton and Pensacola AWWSC call centers do not have dedicated NJ representatives, but recently began tracking NJ calls.

**Exhibit VIII-10
NJ Call Volumes and ASA**

	Calls Offered	ASA
Jan	49,224	:48
Feb	40,321	:14
Mar	35,552	:16
Apr	47,507	:17
May	47,128	:18
Jun	51,610	:20
Jul	53,742	:19
Aug	60,900	:26
Sep	58,620	:16
Oct	54,028	:18
Nov	48,010	:19
Dec	46,333	:13
Total/Average	592,975	:20

- Call center staffing is designed to achieve service level metrics on an hourly (15 minute increment) rather than daily basis, contributing to potentially high staff levels. The system is actually programmed to exceed the ASA target in order to accommodate less than perfect attendance.

10. While meter reading and billing performance meets or exceeds targets, both involve a number of manual processes, resulting in inefficiencies, rework, and a greater potential for errors.²

- Billing accuracy - as measured by the percent of billing corrections to the total active accounts - is high (about one percent in 2009) compared to the target of 2.5 percent. 97.3 percent of meters were read in 2009.
- Meter reading routes are selected through a manual process. Route numbers must be manually keyed in to generate bills in ECIS.
- NJAW does not offer e-billing and quarterly budget billing is manual. The budget bill format is not user-friendly. If a budget billing customer pays more than is due, it generates an exception, which must be manually reviewed.
- AWK produces about 32 million bills per year and about ten percent require manual intervention. Bill re-calculation, cancel/re-bills, back billing and validation of meter edits are largely performed through manual processes involving ad hoc spreadsheets and databases. The state of New Jersey requires that the customer be credited for any

² See Finding VIII-24 and Recommendation VI-8

fast meter which is defined as a meter reading over 101.5 percent. Fast meter corrections require between 48 and 72 man hours per month.

- High bill exceptions are generated based on an absolute dollar threshold (as opposed to a percentage of prior bill basis), resulting in the generation of a large number of false positive exceptions, which must be manually reviewed.

11. AWK and NJAW perform a number of checks to ensure the accuracy of meter reads and customer bills.

- NJAW uses a number of diagnostic tools to evaluate meter reads and customer bills. These include periodic exception reports as follows:
 - Weekly reports of unbilled meters
 - Daily reports of non-residential bills greater than \$2500.
 - Daily reports of residential bills greater than \$250.
 - High reads and low read.
- Meter reading discrepancies are typically evaluated during the three-day window from the read to the printing of the bill.
- Customer complaints are investigated in compliance with BPU statutes. Reconciliation of a customer's complaint due to a high bill in the customer's favor is credited to the customer's account.
- NJAW, however, has made no audits of the accuracy of customer bills in the past five years.

12. The window between meter read and billing is too long.

- There is a three day window between meter reading and billing due to the existing review and batch billing processes.
- On day one, meters are read and reads are downloaded to ECIS. On day two, service orders are worked in the field and districts may complete routes or meters not read on day one. On day three, the routes are selected for billing using a batch process. Exceptions are reviewed and cleared where possible. Bills are mailed on day four.
- Meters changed during the three-day window generate errors and associated service orders.
- For accounts where exceptions cannot be immediately cleared, a service order is generated. Service orders are worked on days five through seven, and then billed.

13. NJAW's implementation of AMR is driven by regulatory replacement requirements and employee attrition.

- AMR installation began six years ago, and is just over 30 percent complete. Installation is not projected to be completed for about six years. NJAW did not define its current AMR replacement strategy until late 2009.
- NJAW's 2010 AMR deployment strategy is based on the following:
 - Replacement of meters as required by regulation under NJAW's periodic test program. New Jersey regulations require that a meter be replaced after ten years, regardless of whether it is still working properly. As meters are removed under this program, they will be replaced with an RF AMR unit. No new touch pads will be installed. Prior to the 2010 strategy, touch pads were still being installed. About 46,000 AMR devices will be installed in 2010 under the periodic test program.
 - Access difficulties, primarily from a meter reading standpoint.
 - Meter reader attrition through normal retirements and separation.
- More concentrated niche deployment may occur based on geographic considerations, e.g., homes that are further away from operating centers, and along highways, or where AMR is near saturation. About 40,000 additional installations are projected for 2010.
- Once a region is complete, routes are read on a drive-by basis. Until they reach appropriate saturation, routes continue to be read by a meter reader. The Atlantic/Cape May and South Jersey regions are at or near 100 percent complete and routes in those regions are read by drive-by.

14. BPU requirements result in the testing of a significant number of meters.

- Although not specifically mentioned in New Jersey regulations, New Jersey requires that ten percent of all new meters be tested. Meters are also tested by the manufacturer before they are shipped to the utility.
 - In 2009, NJAW tested 7,720 new meters; 99.7 percent were reported to be accurate. It is possible the new meter accuracy is actually greater.
 - Seventeen meters were reported to be potentially fast (0.2 percent); five meters were reported to be potentially slow. The remaining meters (99.7 percent) were reported to be "OK". As a result of the report structure, certain meters reported to be fast or slow may actually be within the required parameters. A meter that operates at 98.5 or 101.5 percent is accurate. Based on the report column headings, meters that read exactly 98.5 percent are reported as slow and meters that read exactly 101.5 percent are reported as fast although these meters are within the accuracy requirements.
 - It is also possible that if these meters were tested at the manufacturer, they would be reported as accurate, due to the differing processes and equipment. NJAW

tests 48 meters at a time based on ten gallons of water and the results are read by a meter shop employee.

- Existing meters must be removed from the field and tested after ten years or 750,000 gallons for 5/8-inch pipe and four years for two-inch pipe. In 2009, NJAW removed and tested about 65,000 meters due to the BPU periodic test requirements. An additional 15,000 were removed and tested for other reasons including building renovations, customer requests, seasonal residents, and meters that were frozen or broken.
- All meters are tested when they come back to the shop, even those that will be scrapped. Most meters do not return to the field due to age and obsolescence. Of the 57,228 meters removed during 2009, 95 percent of them were scrapped.
- According to research performed by NJAW, New York and Pennsylvania rules stipulate a maximum length of service before periodic testing is required. For meters less than one inch, the maximum length of service is 15 years in New York and 20 years in Pennsylvania. Missouri and California use a similar approach. California requires a maximum of 20 years, Missouri requires ten years but allows up to 15 years based on testing, compliance and accuracy data. In Pennsylvania, California, and Missouri, manufacturer test results are accepted as valid test results for new meters. Pennsylvania, California and Missouri also only require out-testing of meters replaced before the maximum service age if the meter is to be re-installed.

15. Advantex provides an appropriate tool for the scheduling, monitoring and performance of short-cycle work, i.e., re-reads and meter change-outs.

- NJAW uses Advantex to organize, assign, monitor and track short-cycle FSR work.
- The Advantex system communicates with ECIS through middleware and provides real time updates to the customer accounts. The Advantex system is made up of several components.
 - The system administration tool is houses all of the information for the system i.e., user information, schedules, appointment windows, order priorities, job durations, completion form drop down boxes, areas, subareas, and travel time. It is used to select appointment windows and schedule work.
 - The appointment booker interfaces with ECIS and schedules appointments.
 - The dispatch application is used by the FRCC, to monitor and assign work to the field technicians.
 - The Mobile Application is used by the FSRs to view, and complete their assigned service orders.

16. NJAW does not have an integrated tool for the scheduling, monitoring and performance of long-cycle work (e.g., new service).

- Once a service order is scheduled by the CSC, it is transferred to a paper order and the CSC loses sight of the order. If a customer calls to check the status of the order, the CSC cannot respond to the customer's inquiry and typically must direct the customer to the local office.
- The CSC representative creates the customer order in ECIS.
- A paper order is printed by T&D or New Construction/Engineering which takes responsibility for the project completion.

17. While NJAW lacks a sophisticated or aggressive collections process, its bad debt levels are low.

- Uncollectible expense was 0.51 percent of revenue in 2008 and 2009 and 0.37 percent in 2007. Given the split in responsibilities between AWWSC and NJAW with respect to collections activities, it is unclear who is accountable for the utilities' bad debt numbers.
- NJAW does not require deposits from any customers as a result of systems limitations. BPU regulations allow NJAW to take deposit of customers that have had their service terminated for non-payment.
- Existing systems do not allow for risk-based segmentation of collections practices. Under BT risk-based segmentation should be possible. Currently, collections is handled using batch file processes.
- AWK uses only one primary outside collection agency (OCA). Utilities frequently use multiple OCAs and a tiered approach to maximize OCA performance.
- According to the collections timeline, outbound calls are allowed for all business and residential accounts that are at least 31 days past due with a balance of \$50 or more in any one utility. Due to NJAW budget restrictions, generally only regulatory-required, pre-termination calls are performed.

18. Collections activities are performed based on collections thresholds which are the same for all customers regardless of prior payment history.

- All budget customers with arrearages greater than \$100 receive disconnect notices.
- All regular customers with arrearages greater than \$150 receive disconnect notices. The threshold for regular customers was raised from \$100 to \$150 in 2009, to be consistent with AWK's policy of two times the average residential bill.
- For multi-family dwellings the threshold is \$150 for NJAW.

19. Special account collection activities are performed by NJAW's customer relations organization.

- Accounts are researched to confirm delinquency, application of payments and billing accuracy, contact information is verified, the customer is contacted, and payment information is updated in collections spreadsheets. In the case of fire services, NJAW also provides proper notification to the various parties involved.
- NJAW does not credit report. ECIS is unable to mask social security numbers and so AWK does not collect them.

20. NJAW is not able to work all non-pay disconnect orders due to resource limitations and the expiration of the service orders.

- Field collections activities are performed by the same FSRs who also perform customer scheduled work. Scheduled work is placed in the FSRs schedule first, and then non-pay offs are added based on workload and resource availability.
- Non-pay, disconnect service orders expire 11 days after they are generated if they are not worked. Orders are prioritized daily by the FRCC based on expiration date and then by highest dollar amount.
- In 2009, 72 percent of non-pay shutoff orders issued were completed or cancelled as a percent of the total number scheduled. This does not include the number of orders that were eligible but not scheduled. NJAW exceeded its 2009 shutoff order target: 41,064 shut-off orders completed versus a target of 40,044.

21. NJAW does not perform traditional marketing in its service territory.

- Marketing materials do not make any efforts to attract new customers to NJAW.
- NJAW's marketing materials include the following:
 - Water Quality reports
 - Water Conservation – leak prevention, water saving tips
 - Corporate Branding
 - Customer Service/Payment Options and Assistance
 - Service Outages
 - Rate Information
 - Career Opportunities
 - American Water Resources Protection Plan

22. NJAW has an adequate program for detecting theft of service.

- NJAW's primary identification of theft of service is through its "use on inactive meter program". NJAW reads inactive meters as part of its meter reading routes. Those accounts with usage are investigated. In 2009, NJAW reviewed 2,993 inactive meters with consumption.

- The program has a well defined procedure supported by training that begins with a meter reading exception report through a number of processes to recover the lost revenue and mitigate future theft on the meter.
 - In 2009, the program resulted in back billing of almost \$ 3 million.
- NJAW reviews zero consumption accounts. In 2009, 38,291 zero use accounts were reviewed. NJAW also uses a voluntary employee tip program to identify possible incidences of theft. Employees identifying theft of service receive \$50 for each occurrence. In 2009, \$83,500 was back billed for unmetered services as a result of employee tips.
 - NJAW recently implemented an Inactive Fire Service Initiative. As a safety practice, NJAW leaves the fire service line on but disconnects the water service line when a premise becomes unoccupied. NJAW determined that some of these meters were not assigned to the new customer when the premise was occupied and water service established. In 2009, NJAW reviewed all inactive fire services to identify those where the premise is currently occupied and billed the occupants for the past due amounts, resulting in the back billing of \$1 million from unbilled meters.
 - NJAW is currently developing a meter location versus residence GIS system to identify unmetered services.

23. NJAW does not evaluate its theft of service program performance in terms of revenue recovery.

- NJAW does not maintain comprehensive records of recovered revenue versus back billing for water services. NJAW did collect data in 2008 but discontinued the practice in 2009, as the process is manual intensive. For the one year where recovery was tracked, only 50 percent was recouped. Revenue recovered per meter is not tracked.
- Risks associated with theft are minimal. NJAW rarely utilizes legal means to address theft of service, and only as a last resort.

24. NJAW expects that the Business Transformation (BT) program will address a number of the customer service systems and process inefficiencies.³

- BT should allow AWK to develop customer risk-based collections processes and eliminated a number of the manual collections processes.
- BT should facilitate same-day or next day billing (meter read to billing) and eliminate the existing manual route selection process. BT should also minimize the number of errors which currently occur when meters are changed during the read window.
- BT should increase billing process automation and allow AWK to develop better billing exception parameters. This should reduce the number of “false positives”

³ See Recommendation VI-8

currently investigated as part of the billing exception process. It should also reduce the manual effort involved in back billing, bill corrections, and cancel/rebilling.

- BT should facilitate enhanced web offerings, including web self-service and e-billing.
- BT should provide for an integrated customer information system, eliminating the number of bolt-on and supplemental systems, and streamlining the CSC order selection process type which should reduce errors. New systems should improve CSC representative visibility regarding the status of field activities, improving CSC responsiveness to customer inquiries. Representatives may potentially have real-time views of field work.
- BT should provide for better meter reading and FSR route optimization, and work planning and scheduling.

25. In 2009, NJAW refunded about \$175,000 to customers due to 3,500 fast meters. During 2009, periodic meter tests were performed on 80,000 meters.

- Per NJAC 14:3-4.6, whenever a water meter is found to be registering fast by more than one and one half percent, an adjustment of charges is to be made. No adjustment is made if the meter is found to be slow.
- The adjustment is determined based on the percent the meter was inaccurate and the date when the meter first became inaccurate, if known, or if not known, based on the date of the previous meter test or the date upon which the meter was taken out of service. The adjustment is calculated based on a formula specified in the regulation.
- Meters test results are uploaded to NJAW's ECIS customer information system and used by AWWSC's Billing Group to calculate the fast meter refunds.
- NJAW calculates the refund based on the corrected usage (estimated billed usage reduced by the amount the meter was fast). Estimated usage is determined by multiplying half of the metered usage from the date the meter was set to the read when the meter was removed multiplied by a rate adjustment factor.

26. NJAW customers can contract with the unregulated affiliate, American Water Resources (AWR), for service-line protection warranty programs.

- NJAW customers are responsible for repairs to the water and sewer lines running from the customer's home to the street and for plumbing repairs inside the home. AWR's service line protection warranty programs cover the cost of these repairs. The water line protection program began in 2001.
- The water line program provides protection for claim coverage amounts up to \$5,000 and the sewer line program provides coverage for amounts up to \$8,000. The in-home plumbing emergency program provides up to \$1,500 for in-home plumbing repair costs. Service contractors are available 24 hours per day, seven days per week. Repair services are provided by a network of independent contractors.

- Customers pay \$5 per month for the water line program and \$9 per month for the sewer line program, or \$12 per month for the combined programs. The in-home plumbing emergency repair program is offered at \$3.99 per month.
- As shown in Exhibit VIII-11, as of June 30, 2010, about 140,000 NJAW customers are enrolled in at least one program. Most customers participating in the sewer-line and in-home plumbing programs also participate in the water-line program.

Exhibit VIII-11
Service Line Protection Program New Jersey Contracts – June 30, 2010

Program	Number of Contracts
Water Line Protection Program	139,865
Sewer Line Protection Program	98,864
In-Home Plumbing Emergency	34,463

- The programs are marketed by AWR through a direct mail campaign. Consistent with the agreement between NJAW and AWR, the program is identified as an AWR program which is introduced to the NJAW customer by NJAW. Customer inquiries and claims are processed by AWR personnel at the AWR call center. If a customer inadvertently contacts the NJAW call center, the call is transferred to AWR.
- Program charges are included on the customer’s NJAW bill. AWR pays a fee to NJAW for billing and payment processing - about ten cents per contract per month.

E. Recommendations

1. Perform an analysis of the relative costs of in-house versus outsourced call center operations for NJAW. (Refers to Finding VIII-6)
2. Discontinue 24/7 operation of the call center. Determine the systems/staff necessary to transition after hours' emergency calls to the local level. (Refers to Finding VIII-7)
3. Determine whether call center staffing levels could be reduced while maintaining the overall average speed of answer (ASA) target. Consider changing the ASA target. (Refers to Findings VIII-8 and VIII-9)
4. Shorten the window between meter read and billing. (Refers to Finding VIII-12)
5. Implement a system that integrates the customer information system with the scheduling, monitoring and performance of long-cycle work (e.g., new service). (Refers to Finding VIII-16)
6. Take steps to improve non-pay disconnect performance. (Refers to Finding VIII-20)

7. Implement programs to track and increase the theft of service revenue recovered. (Refers to Finding VIII-23)

IX. EXTERNAL RELATIONS (3.7)

American Water Works Company, Inc.'s (AWK) has a complex matrix organization for its external relations activities. Most of AWK's external affairs are directed by its Senior Vice President - Corporate Communications and External Affairs (CC & EA). The following positions report to the SVP both administratively and functionally:

- Director, Communications and External Affairs
- Director, Marketing & Advertising
- Manager, Corporate Responsibility
- Director, External Communications
- Director, Internal Communications
- Director, Government Affairs

Individuals with responsibilities for New Jersey American Water Company, Inc.'s (NJAW) external affairs have the following reporting relationships:

- The managers of customer communications and internal communications for NJAW report administratively and functionally to the AWK Director, Marketing & Advertising and the AWK Director, Internal Communications respectively. These individuals also are responsible for supporting the Pennsylvania and New York regulated operations.
- The NJAW Director, Government Affairs reports administratively to the NJAW president and functionally to the AWK Director, Government Affairs.
- The individual responsible for NJAW's state external affairs reports administratively to the AWWSC Director, Communications & External Affairs responsible for NJAW and functionally to the AWWSC director, External Communications.
- The AWWSC Vice President - Investor Relations reports directly to the AWK chief executive officer (CEO) and president.

A. RFP Objectives

In its RFP for this audit, the BPU identified the following objective for the review of NJAW's external relations.

- Assess and make recommendations regarding the effect of NJAW's management of the external relations function - the methods by which NJAW relates to its various

stakeholders (i.e., customers, regulators, the media and investors) in the fulfillment of its corporate goals and objectives.

B. Evaluative Criteria

In conducting our review of NJAW's external relations, NorthStar used the following criteria:

- Does NJAW effectively deal with outside parties?
- Are investors and the financial community kept abreast of NJAW activities and important developments?

C. Audit Tasks

To complete the review in this area, NorthStar performed the following tasks:

1. Assessed NJAW's management of the external relations function – the methods by which NJAW relates to its various stakeholders (i.e., customers, regulators, media and investors) in the fulfillment of its corporate goals and objectives.
2. Evaluated types and frequency of information provided to external groups such as the media, financial community, investors, legislators, regulatory agencies and community leaders.
3. Evaluated the effectiveness of the public affairs function to include: policies and procedures, education programs for the community, consumers, and other government agencies/departments, and extent of public awareness of operations.
4. Assessed NJAW's approach to working in legislative affairs.

D. Findings and Conclusions

- 1. NJAW's state external affairs are managed administratively by the AWK senior vice-president despite doing all its work for the NJAW president.**
 - The CC & EA organization performs customer and internal communications functions which are appropriately centralized to attain economies of scale.
 - State external affairs are managed administratively and functionally by the AWK senior vice-president when all the work is actually performed for the NJAW president.
 - The NJAW government affairs director reports administratively to the NJAW president and functionally to the AWK senior vice president.

- The state external affairs and government affairs functions are similar in nature and both should report administratively to the NJAW president and receive functional direction from the corporate senior vice president.

2. NJAW could make more effective use of bill inserts to communicate with its customers.

- AWK's 2008 Customer Satisfaction Survey found NJAW's performance to be below average with respect to customer information. The survey classified NJAW's performance as below average in the following areas:
 - Water pressure and taste
 - Information provided about water quality
 - Is involved in the local community
 - Information provided about maintenance and improvements
 - Advice on how to reduce the bill.
- NJAW was found to be about average in these areas in the 2008 tactical survey.
- Similar improvement opportunities were highlighted in the 2009 survey. NJAW was rated below the AWK mean in terms of customer perception in a number of categories.
- Sixty-one percent of New Jersey residents indicate that they read the bill inserts. This is higher than the AWK average of forty three percent.
- Despite the aforementioned issues, NJAW's use of bill inserts to communicate its message to its customers is limited. Bill inserts provide limited information regarding issues that are important to customers. Advertisements are generally "branding" in nature.

3. AWK interfaces with its investors in an effective manner.

- The AWWSC Vice President, Investor Relations, the AWK President and Chief Executive Officer and the AWK Chief Financial Officer typically meet with domestic and international institutional investors twice a month.
- A key goal of AWK's investor relations program is to increase the company's name recognition.
- Thirteen security analysts representing both the buy-side and sell-side currently track AWK.
- AWK's focus on institutions is appropriate because eighty percent of its shares are held by institutions. About twenty five percent of the institutional shares are in international funds.

4. NJAW keeps local media and local government officials informed about its activities and AWK actively interfaces with officials at the Federal level.

- NJAW has two people assigned to keep local media informed about main breaks and NJAW initiatives like its energy efficiency and green initiatives. The tagline for NJAW's current environmental initiative is "Save Blue, Save Green."
- NJAW has two people assigned full-time to governmental affairs and both are registered lobbyists. Their responsibilities are to keep legislators, mayors and county officials updated on developments at NJAW.
- The two independent members of NJAW's Board of Directors are active in New Jersey civic and regulatory affairs. They consider themselves ambassadors for NJAW and AWK and provide valuable feedback to NJAW and AWK senior management about issues in New Jersey that might affect the company.
- AWK also actively promotes its programs at the Federal level. The AWWSC Director of Government Affairs is a registered lobbyist who is active with the US Conference of Mayors and helped organize the US Congressional Water Caucus.

5. NJAW has a good history of working with the BPU, its economic regulator, despite its high rates.

- During the past twelve years, NJAW has applied for and received four rate increases which is the average number of rate increases received by the five other water companies in New Jersey.
- NJAW's residential rates are higher than the other Class A Water Companies in New Jersey. Its average residential bill in 2008 was \$569 compared to an average of \$469 for the next four largest water utilities in New Jersey.
- NJAW attributes its higher rates to historical investments in infrastructure mandated as a result of its role as regional water supplier and lower customer density per mile compared to its peer utilities.

E. Recommendations

1. Assign administrative responsibility for the NJAW state external relations to the NJAW president. (Refers to Finding IX-1)
2. Take steps to improve communicating with customers including making better use of customer bill inserts. (Refers to Finding IX-2)

X. SUPPORT SERVICES (3.8)

Support services help New Jersey American Water (NJAW) perform its core business - delivery of quality water to its customer base. NJAW receives support services primarily from the American Water Works Service Company, Inc. (AWWSC) a wholly-owned subsidiary of American Water Works Company, Inc. (AWK). The services covered in this chapter include:

- Insurance
- Legal
- Facilities and real estate
- Supply Chain
- Fleet
- Information Systems
- Records Management
- Operational Risk Management

For NJAW, these functions are provided at varying levels in the organization. Although support services are grouped together for this report, it is important to understand that there is no singular group responsible for support services. As such, each of these services is reviewed as a standalone unit. The key management tool used for controlling what services are provided, their cost, quality of services, and effectiveness is the service level agreement (SLA).

The support services task is complicated at NJAW by the absence of many of the centralized support organizations normally found in utilities. NJAW also outsources the management and maintenance of its fleet operations. Each service provided for NJAW and delivered by an outside entity such as AWWSC should be covered in an SLA.

A. RFP Objectives

In its RFP for this audit, the BPU identified the following objectives for the review of NJAW's support services.

- Examine NJAW support services and determine their effectiveness in accomplishing their objectives of providing a favorable environment for NJAW's operations and service.
- Determine if NJAW's insurance and claims policies provide clear risk management strategies based on a current, quantitative evaluation of loss and premium alternatives.
- Assess the efficiency of NJAW's legal operations, measuring internal and external costs against the achievement of business objectives.

- Evaluate the performance of NJAW's facilities management in providing a cost effective, flexible and efficient set of offices and facilities.
- Determine if NJAW's land management and real estate land strategies ensure the acquisition and ownership of land consistent with the company's objectives without any duplication of effort.
- Determine if NJAW's materials management operations minimize costs, maintain appropriate service levels and control inventory levels.
- Assess the transportation department's effectiveness in providing efficient transportation service, non-stationary equipment and vehicles.
- Determine if the information technology structures meet NJAW's current business needs and have the capacity to adapt to future requirements.
- Determine if the records management systems make information accessible in a complete and timely manner and provide for the security of confidential information.
- Assess the security department's abilities to provide a safe working environment.

B. Evaluative Criteria

In conducting our review of NJAW's support services, NorthStar used the following criteria:

- Does NJAW obtain support services that meet its needs at a reasonable cost?
- Does NJAW appropriately outsource components of support services to minimize costs?
- Does NJAW make effective use of SLAs?
- Does AWWSC have an appropriately staffed supply chain management function?
- Does AWK have a comprehensive long-term information technology (IT) plan that is integrated with its business transformation (BT) program?

C. Audit Tasks

To complete the review in this area, NorthStar performed the following tasks:

1. Determined if NJAW's insurance and claims policies provide clear risk management strategies based on a current, quantitative evaluation of loss and premium alternatives.

2. Assessed the effectiveness of NJAW's legal operations, measuring internal and external costs against the achievement of business objectives.
3. Evaluated the performance of NJAW's facilities management in providing a cost-effective, flexible and efficient set of offices and facilities.
4. Determined if NJAW's land management and real estate land strategies ensure the acquisition and ownership of land consistent with the company's objectives without any duplication of effort.
5. Determined if NJAW's materials management operations minimize costs, maintain appropriate service levels and control inventory levels.
6. Reviewed the "procure to pay" component of the BT program.
7. Assessed the staffing capabilities of the supply chain management function.
8. Assessed the transportation department's effectiveness in providing efficient transportation service, non-stationary equipment and vehicles.
9. Determined if the IT structure meets NJAW's current business needs and has the capacity to adapt to future requirements.
10. Assessed the long-term IT plan and how it is integrated with the BT program
11. Determined if NJAW's approach to outsourcing is cost-effective.
12. Determined if the records management systems make information accessible in a complete and timely manner and provide for the security of confidential information.
13. Assessed the Operational Risk Management Department's abilities to provide a safe and secure working environment.

D. Findings and Conclusions

- 1. SLAs do not exist or are lacking in necessary detail for most support services being provided to NJAW by AWWSC.¹**
 - The agreement for support services between AWWSC and NJAW does not cover all of the services normally identified as support services.
 - The service agreement between AWWSC and NJAW contains only certain support services provided and lacks details.
 - The agreement is dated January 1, 1989

¹ See Recommendation III-7

- The agreement includes Information System and Risk Management support services which are reviewed in this chapter.²
- Security Services are included but only as an ancillary item to Risk Management.
- The agreement is inaccurate and not representative of the manner in which insurance premiums are actually charged.
- The agreement provides no performance metrics or means of evaluating performance.

2. NJAW carries appropriate categories of insurance.

- NJAW carries the following categories of insurance:

- Commercial General Liability	- Auto Liability
- Workers Compensation	- Employers Liability
- Collateral Bonds for Casualty	- Property ³
- Pollution Liability	- Directors and Officers Liability
- Fiduciary Liability	- Comprehensive Crime
- Kidnap, Ransom and Extortion	- Employee practice Liability
- Employed Lawyers Network security	- Group Travel ADD

- The insurers, limits of liability, deductible and premium to NJAW for each of the coverages are detailed.

3. NJAW controls its insurance premium costs.

- Insurance premium allocations for certain types of insurance are based on causative factors. The general liability, auto liability and workers compensation premiums are based on a combination of the business units loss experience and exposure. Each of these factors is weighted at 50 percent. Loss experience is a five-year average to prevent isolated events from causing rapid and constant variations in the premiums.
- The general liability, auto liability and workers compensation premiums comprise 68 percent of insurance premium other than health, disability and life insurance.
- Insurance is frequently rebid. Insurance bid frequency has strategic cost implications just as does securing any commodity or service for a fixed price and fixed period of time. At the present time, many insurers are reluctant to extend coverage for three years or more until economic conditions are more certain. Most NJAW coverage is re-bid annually. This insures that premiums are reflective of current conditions.
- All insurance not allocated by causative factors is based upon percentage of business unit exposure. Property insurance is based upon property replacement value. Property insurance premiums in 2010 to NJAW were 18 percent of total 2010 premiums. AWWSC purchases NJAW's insurance.

² The agreement lists other services including HR and Engineering which are not being reviewed in this chapter.

³ Property includes a number of sub-components.

- The remaining premiums of 13.2 percent of total premiums are allocated based on estimated annual payroll.
- 4. While NJAW has had an unusually high number of OSHA reportable incidents, it has a comprehensive plan in to reduce safety related incidents and reduce losses.**
- In 2009, NJAW had the highest OSHA Reportable Incident rate (ORIR) and the second highest Lost Work Days Case Incident Rate (LWDCR) among the AWK divisions. Both the ORIR and the LWDCR are shown in **Exhibit X-1**.

Exhibit X-1
New Jersey American Water ORIR and LWDCR

Division	ORIR	LWDCR
Service Company	.99	0.30
Eastern	5.23	1.60
New Jersey	6.12	1.47
Pennsylvania	4.60	0.77
Western	5.72	1.35
AWE	.97	0.83
Total	4.29	1.10

- Fortunately most of these reportable incidents are minor in nature. The largest categories of losses which have occurred are due to “over-exertion”.
 - The 2010 Strategic Safety Plan for Continuous Safety Performance Improvement contains key elements of a safety plan including specific targets, KPIs and direct identification of responsibilities.
 - The plan’s targets are to reduce the ORIR by five percent or greater and the LWDCR by 7.5 percent or more in 2010 from 2009 levels.
- 5. AWWSC allocates a portion of its legal costs to NJAW.**
- AWWSC has two dedicated attorneys and one dedicated paralegal assigned to NJAW for NJAW specific matters, including regulatory concerns, rate cases, civil litigation and bankruptcies.
 - AWWSC allocates its legal cost across all corporate entities for matters such as SEC filings, labor relations, employment matters, and Code of Ethics.
 - NJAW has a separate legal department.

6. AWWSC's legal costs allocated to NJAW are reasonable.

- NJAW's total cost for legal services was \$2.8 million for 2009. Approximately one million dollars are charges billed from AWWSC and \$1.8 million are costs internal to NJAW.
- Approximately \$500,000 of the legal costs are allocated charges from AWWSC for services associated with SEC filings, labor relations, employment matters, and Code of Ethics issues..
- NJAW retains external legal counsel to provide expertise in matters specific to NJAW. The external contracts represent 38 percent of the annual legal costs.
- Approximately eighty percent of all NJAW costs associated with legal services are specific to NJAW. Costs specific to NJAW include direct charges from AWWSC and legal costs internal to NJAW.

7. NJAW's costs for legal services appear reasonable.

- Legal costs represent approximately 0.5 percent of the annual budget.
- NJAW's fully-weighted hourly cost for legal services is \$96.60 per hour.
- Research of the national average for corporate legal salaries shows a median wage between \$151,000 to \$177,000 (depending on industry) per attorney and \$52,000 per paralegal per year. NJAW has two dedicated attorneys and one paralegal for a cost of \$504,000. Applying the median wages plus NJAW overheads of 27 percent, the cost would be approximately \$483,000.
- Accounting for differences between medians and actual attorneys and geographic areas, NJAW legal services are within the median.

8. NJAW holds a minimum amount of property in anticipation of future facility requirements.

- NJAW only holds two properties in anticipation of future use as indicate in **Exhibit X-2**:

**Exhibit X-2
Future Use Property**

Property location	Size	Intended Use
Egg Harbor Township	1.24 acres	Locate Water Tank
Runnemede Borough	0.21 acres	Locate Booster Station

- NJAW does have property available at existing locations for expansions as needed.

9. The supply chain process is hindered by the lack of a Materials Resource Planning System (MRP).⁴

- The future of materials and purchasing systems is under evaluation at the time of the audit and is likely to include a total revision of existing systems as part of the business transformation program.
- MRP is a formal approach to inventory planning, material scheduling, supplier scheduling, and materials planning. An MRP system provides the user with information about material lead times and material quantity, generates new requisitions automatically, and reschedules existing orders as necessary to meet the changing requirements of customers and manufacturing.
- An MRP system constantly recalculates material requirements based on actual forecast orders and can analyze material requirements in complex material scenarios such as NJAW's where material delivery must be calculated over a large number of delivery points.
- AWK's current MRP processes are not integrated and are highly manual.

10. NJAW reduced its inventory levels by 8.9 percent from January 2009 to January 2010.

- **Exhibit X-4** shows inventory, demand and turnover at NJAW from January 2009 until January 2010.
- This reduction is primarily due to the reduction in new business associated with the economic downturn.

**Exhibit: X-4
NJAW Inventory**

	Demand	Inventory
Jan-09	\$25,195,323	\$4,058,851
Feb-09	24,871,797	4,050,978
Mar-09	24,842,655	4,060,116
Apr-09	24,538,787	4,065,148
May-09	23,306,301	4,052,776
Jun-09	21,448,155	4,020,400
Jul-09	20,071,647	3,974,876
Aug-09	20,375,450	3,921,107
Sep-09	18,719,675	3,852,974
Oct-09	15,886,063	3,784,326
Nov-09	14,935,295	3,730,013
Dec-09	14,269,170	3,690,620
Jan-10	14,744,155	3,697,090

⁴ See Recommendation VI-7

11. NJAW holds a minimum of materials inventory at its operating and production locations.

- **Exhibit X-4** shows the material inventory held at various NJAW locations:

Exhibit X-4
NJAW Inventory by Location
(\$ thousands)

Location Name	Inventory Value 7-2009
Atlantic/Cape May	\$160
Burlington/Camden	350
Lakewood Meter Shop	195
Essex/Passaic	324
Hunterdon/Warren	39
Shrewsbury	343
Lakewood	273
Ocean City WW	12
Lakewood WW	5
Pensgrove	10
Long Island	443
Belle Mead	841
Plainfield	920
Mt Holly	75
Total	\$3,990
Less: meters	\$3,795

- The relatively low field inventory levels are consistent with the functions of a water utility. Major capital projects often utilize drop shipments or turnkey contracts. The shipments are reflected in demand figures even though they may never have physically resided in warehouse locations. Much of the field inventory consists of stock held for emergency repairs and that required for ongoing maintenance.

12. NJAW benefits from AWK's national purchasing agreements.

- Most major utilities utilize a centralized supply chain function with varying levels of local procurement and materials involvement.
- Centralized supply chain organizations benefit from nationwide purchasing power (volume purchases) and also from the reduction in redundant staff.
- The centralized organizations do not ensure that each entity for which they purchase will always receive the lowest price available on each item purchased. The weighted average cost nature of national contracts is meant to ensure that overall materials are purchased at the lowest possible cost.
- Without a detailed item by item analysis, the actual savings and costs cannot be accurately determined.

13. AWK uses two outsourcing firms to manage its fleet.

- AWK was operating under the third amendment to a contract with Automotive Rentals, Inc. (“ARI”), for the lease, purchase/disposal and fleet management services dated May 10, 2004. The original contract was entered into on June 5, 1992.
- The contract was recently rebid and NJAW is now using two fleet service companies. ARI manages lease costs only until leases expire and PHH is responsible for vehicle purchases and maintenance, registration and fuel for leased and purchased vehicles.
- ARI does not actually perform physical maintenance but provides the management and scheduling for maintenance which is performed at “recognized nationwide service centers”. The agreement with ARI covered sales and disposal of vehicles and also assigned to ARI management of NJAW’s fleet maintenance program.

14. AWK has undertaken a comprehensive business transformation (BT) process program to address its IT needs.

- IT developed a strategic plan (2008) to address changing business needs and its aging technology.
- Implementation of the IT strategic plan and BT is scheduled between 2010 and 2014 with various pieces rolling out over that period (See Exhibit X-5).
- The implementation of BT and the IT strategic plan should improve AWWSC’s ability to meet future IT requirements.
- However, the overall cost to implement the BT program could exceed estimates and the ability of AWK to meet the schedule is questionable.

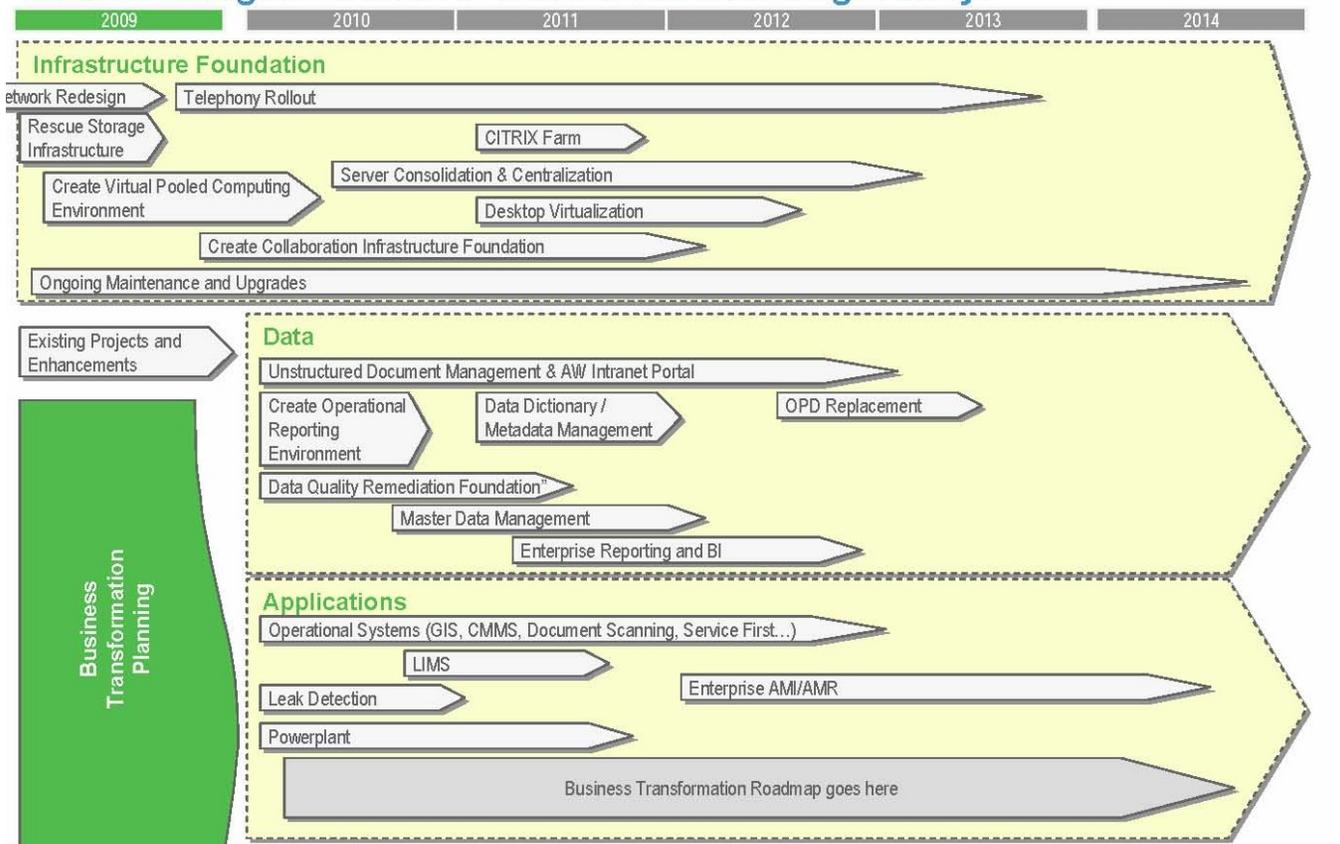
15. A 2009 customer satisfaction survey indicates that the AWWSC’s IT department has an overall satisfaction rating of meeting or exceeding customer expectations of 88 percent.

- The survey included all areas of IT services.
- The survey population included all users of IT services.

16. AWK does not have a formal process for comparing its IT costs to other utilities.

- The company does review industry publications which present cost comparison data.
- Ad hoc analysis was performed by AWK during 2009 as to comparative costs. The comparison focused on other New Jersey and Pennsylvania water utilities but did not cover IT costs.

Exhibit X-5 Integrated BT IT Roadmap



17. While the IT organization does not have a written disaster recovery plan, it performs a disaster recovery test annually.

- The last test was performed in 2009.
- Major applications and critical functions were tested.
- The test plan was detailed by process.

18. Although NJAW has a robust records retention policy, NJAW has not conducted any reviews or audits to ensure that the policy and schedule is actually followed.

- The NJAW records retention policy is functionally assigned to the legal department. The current policy was approved by the AWWSC Board on May 29, 2009.
- The record retention policy, schedule, and practices were developed for AWWSC by a firm that specializes in consulting services and software for records management. The retention schedule is based on legal research to ensure compliance with applicable state and federal laws and government regulations.

- The records retention policy contains key elements including:
 - Scope
 - Policy Statement
 - Monitoring
 - Reporting/Metrics
 - Consequences of non-compliance
 - Waiver
 - References
 - Definitions
 - Review
 - Updates
 - Approvals
 - Schedule
- The policy is organized by business process, record series name and required retention period. It includes legal citations and production applications as appropriate.
- NJAW has not conducted any audits of the records retention policy and practices to determine if the policy and practices as written are actually followed.

19. NJAW has the organization, policy and practices to ensure a reasonably secure working environment.

- AWWSC has an established physical security policy and associated practices which establishes a framework of security management throughout the company. The Operational Risk Management department is assigned the responsibility for security and coordinates with all departments on specific security requirements.
- NJAW has two dedicated positions responsible for security. AWWSC also has one management position which provides direct support to NJAW and two additional positions which provide indirect support and assistance as required. AWWSC has an operations security support team which coordinates service and performs programming of the electronic security systems and vendor coordination for NJAW.
- NJAW outsources the repair, monitoring and maintenance of electronic security systems to ADT Security Services. NJAW also utilizes a security guard service at two critical water treatment facilities.

20. NJAW has recently developed and monitors metrics for security management.

- NJAW has a Security Alarm Tracking system which is used to track alarms generated on the electronic card access and intrusion system which occur at facilities. The purpose of the metric is to improve the overall effectiveness of the security system and reduce false and nuisance alarms. It established an Alarm Frequency Rate to track and trend security alarms. The metric was established in 2009. In 2010, NJAW has shown a year-to-date improvement of 6.9 percent over the 2009 monthly average.

- NJAW has a Security Incident Tracking system which is used to track the frequency and financial loss associated with security incidents. This metric was established in 2009 and NJAW performance data is not yet available. The purpose of this metric is to reduce risk and financial loss resulting from security related incidents.
- NJAW is developing a Security Improvement Status metric which will be complete by the end of the year. This metric will be used to track the progress of security improvements by facility based on an established criterion and level of improvement.

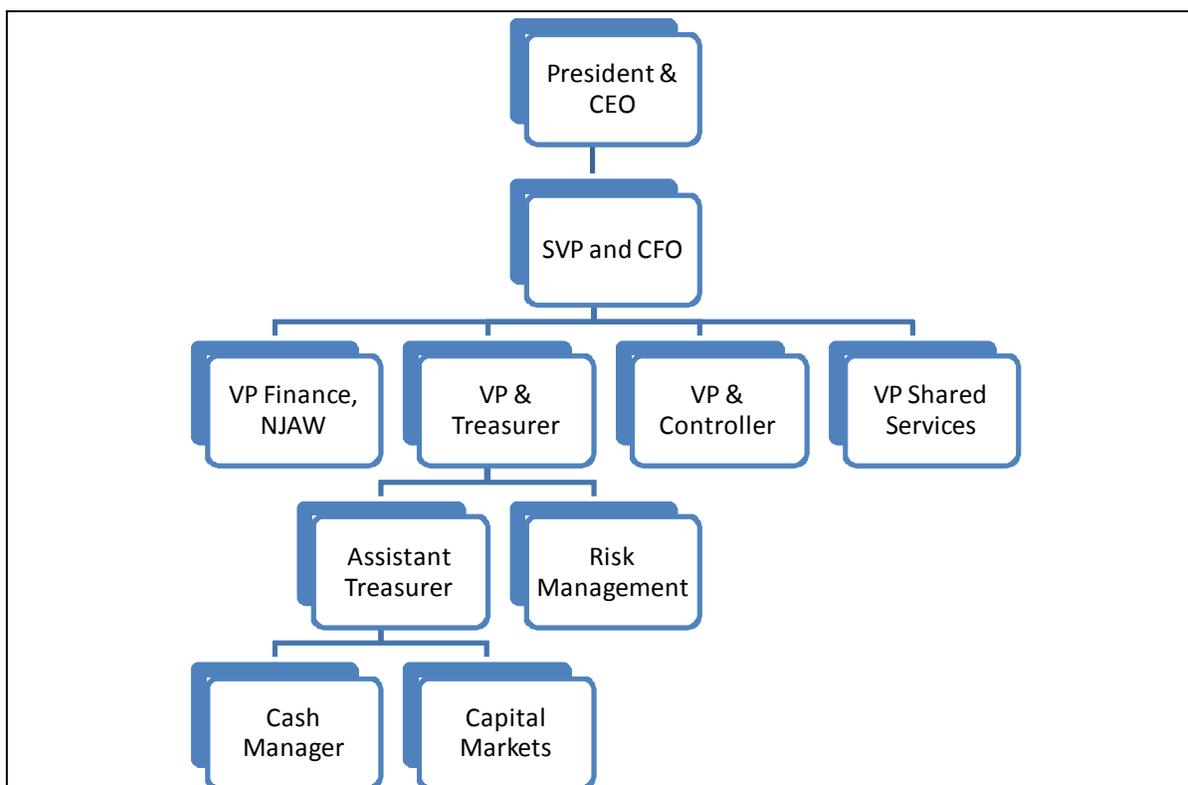
E. Recommendations

1. Periodically, benchmark IT costs against similar utilities. (Refers to Finding X-16)
2. Formalize the IT disaster recovery plan. (Refers to Finding X-17)
3. Conduct periodic reviews of records retention practices to ensure that policies are being adhered to, (Refers to Finding X-18)

XI. FINANCE (3.9) & CASH MANAGEMENT (3.9.1)

Financing and cash management activities for New Jersey American Water Company, Inc. (NJAW) are handled on a consolidated basis by the American Water Works Company, Inc. (AWK) finance group within American Water Works Service Company (AWWSC). As shown in **Exhibit XI-1**, all financing activities are the responsibility of the AWK Treasurer, under the AWK Chief Financial Officer.

Exhibit XI-1
Finance and Cash Management Organization



AWK established American Water Capital Corp. (AWCC) in May 2000, to facilitate raising debt and managing short term cash for AWK's regulated affiliates, including NJAW, and for AWWSC. AWCC is a financing entity with no employees. All financing activities of AWK, whether through AWK, AWCC, or AWWSC, are performed by AWWSC employees. As a result of its divestiture by RWE, AWK has issued considerable debt over the past several years. NJAW maintains standalone audited financial statements and its own bond ratings, enabling it to issue debt in its own name, including first mortgage bonds. Cash management for all regulated affiliates is centralized within AWWSC. AWCC operates as an "in-house bank" for 22 of its regulated affiliates, to which all cash is "swept" daily. AWCC supports NJAW by providing cash management services (disbursements and collections) directly or through a third party (i.e. banks), and providing working capital needs

through the short term borrowing market. AWCC also issues unsecured senior long term notes on behalf of its regulated affiliates.

A. RFP Objectives

In its RFP for this audit, the BPU identified the following objectives for the review of NJAW's finance and cash management:

- Assess NJAW's cash management, corporate finance and cost control strategies and their effect on the cost of capital, liquidity, financial risk, profitability and rates. Also assess the effect of affiliate activities on NJAW's creditworthiness.
- Determine the effects of diversifying activities on NJAW's cost of capital.
- Review and assess the cost of capital for NJAW relative to the cost of capital to utilities with comparable risk but without non-utility affiliates. Provide recommendations to insulate NJAW's capital costs from non-utility operations.
- Identify the extent to which funds generated from the utility's depreciation are used for non-utility purposes and make recommendations for improvement, if applicable.
- Determine the effect of NJAW affiliates' use of NJAW's generated income upon NJAW's financing ability, company value, dividend policy, retained earnings, cash flow, and other financial performance measurements.
- Assess the quantified or potential impact of write-offs by affiliates on NJAW.
- Review the processes for receiving and securing accounts receivable. (From 3.10 Accounting & Property Records)
- Evaluate the cash forecasting and diversification of investments among any affiliate corporate to determine:
 - The details of NJAW and its affiliate's cash management methodologies.
 - If NJAW's cash is held separately from the cash of its affiliates.
- Evaluate the methods that NJAW and its affiliates have used to determine and allocate consolidated income taxes over the past three years.
- Evaluate any other tax treatments allowed by the IRS and report on their advantages and disadvantages.
- Assess the degree to which the historical and projected tax benefits from diversified activities have been and are projected to be realized as a result of the taxable income of NJAW and provide the identities of the chief beneficiaries.

- Compare the residential rates charged by NJAW versus other Class A Water Companies in New Jersey and review the major drivers for frequent rate increase filings by NJAW versus the comparative Class A Water Companies (i.e. capital expenditure levels, operating expenses, management philosophies). (From 3.4 Strategic Planning)
- Determine if NJAW's rate structure and design are constructed in an optimal way for its ratepayers.

B. Evaluative Criteria

In conducting our review of NJAW's finance and cash management, NorthStar used the following criteria:

- Do the financing plans of AWK, as executed by AWWSC through AWCC and NJAW, ensure that NJAW will have the capability to meet its current and future anticipated capital and operating needs?
- Do the financing activities of affiliates, both regulated and non-regulated, have an adverse effect on NJAW ratepayers?
- Does the structure and assignment of roles and responsibilities within AWK adversely affect NJAW ratepayers?
- Are the cash management policies used by AWK appropriate and do they have an adverse effect on NJAW ratepayers?
- Are NJAW ratepayers adversely affected by income tax consolidations or other tax treatments?
- Do NJAW ratepayers receive appropriate tax benefits from diversified activities?
- Are the differences between NJAW's residential rates/bills and those of peer utilities understandable and supportable?
- Are the drivers for NJAW's rate filings reasonable and appropriate?
- Are NJAW's ratepayers adversely affected by the current rate structure?

C. Audit Tasks

To complete the review in this area, NorthStar performed the following tasks:

1. Assessed AWK, NJAW, and AWCC's financing strategy and recent experience for their effect on NJAW's cost of capital, liquidity and financial risk.

2. Reviewed the structure, roles and responsibilities of the financial activities within AWK and its subsidiaries.
3. Reviewed and assessed NJAW's cost of capital relative to that of AWK and affiliates.
4. Examined the integration of financing activities between AWK, AWCC, NJAW, regulated affiliates and non-regulated activities/affiliates for their effect on NJAW's cost of capital, liquidity, and financial risk.
5. Assessed the effect of the cost control strategies of NJAW and its affiliates on NJAW's cost of capital, liquidity, and financial risk.
6. Reviewed past financing needs/activities of non-regulated and regulated affiliates on NJAW's cost of capital, liquidity, and financial risk.
7. Assessed the effect of recent AWK diversification activities on NJAW's cost of capital, liquidity, and financial risk.
8. Examined the effect of the dividend payment policy on NJAW's financing strategy and costs, and on other NJAW financial performance measurements.
9. Examined the extent to which depreciation, write-offs and other non-cash and non-recurring accounting and finance entries on NJAW's books accrue benefits to other regulated or non-regulated affiliates.
10. Examined the extent to which any recent write-offs on NJAW books benefit non-regulated affiliates.
11. Reviewed recent actions by bond rating agencies on the credit ratings of AWK, AWCC, NJAW and other regulated and non-regulated affiliates, and assessed the effect of actions on NJAW's cost of capital, liquidity, and financial risk.
12. Examined NJAW's cost of capital compared to (1) AWK, AWCC, other independently rated affiliates, and (2) comparable utilities.
13. Reviewed the processes for receiving and securing accounts receivable.
14. Evaluated the cash management strategies used by AWWSC for NJAW and other affiliates.
15. Reviewed the cash forecasting models and methodologies used by AWWSC for NJAW.
16. Assessed the role of the "in-house bank" approach to cash management, and determine its impact on NJAW costs.
17. Determined how NJAW cash is monitored and tracked separately from cash of other affiliates.

18. Assessed the rates charged and paid to NJAW for funds borrowed from and lent to the in-house bank/corporate centralized cash pool.
19. Reviewed the methods and models used by AWWSC to determine income taxes imputed to NJAW over the past three years, and compare with methods used for other affiliates.
20. Examined how tax benefits from diversification activities are treated in the income tax calculation and consolidation process.
21. Ascertained the extent to which benefits from diversification activities are transmitted to NJAW and its ratepayers.
22. In conjunction with AWWSC tax experts, explored how other income tax treatments and options are assessed for applicability to NJAW, and reviewed manner in which NJAW has applied alternative tax treatments over the past three years.
23. Verified that the processes and controls for the calculation, payment, and audit of gross receipt taxes in New Jersey are appropriate.
24. Determined if the design of the “Peer Study” underway at NJAW provided appropriate data and analysis to address the rate analysis and other comparison work for the management audit.
25. Reviewed the results of the peer study regarding the factors contributing to NJAW’s level of rates relative to peer utilities.
26. Conducted independent analysis of Peer Study and other appropriate data to validate the factors contributing to NJAW’s level of rates relative to peer utilities.
27. Reviewed the most recent rate case and cost of service filing of NJAW.
28. Reviewed relevant documents from NJAW’s last three to five rate case decisions.
29. Determined if NJAW’s rate structure and design are constructed in an optimal way for its ratepayers.

D. Findings and Conclusions

- 1. NJAW is not adversely affected by the centralization of finance and cash management activities within AWWSC.**
 - Finance decisions (both for long term debt issuances and short term cash management) are made in a non-discriminatory manner. NJAW is treated similarly to all regulated affiliates.

- Regulatory financial decisions are made independently from decisions regarding non-regulated affiliates.
 - The NJAW Board of Directors approves debt issuances and adjustments in NJAW’s Line of Credit (LOC) limits.
- 2. The capital structure and the resulting weighted average cost of capital in place at NJAW are within the ranges typical for regulated utilities and regulated subsidiaries of diversified corporations.**
- AWK has established a target capital structure for its regulated subsidiaries, including NJAW, of 50 percent equity and 50 percent debt.
 - Typical capital structures for regulated utilities range from 40 percent to 60 percent equity.
 - Based on the target capital structure, NJAW has an authorized rate of return of approximately 8.4 percent, as shown in **Exhibit XI-2**. This return was established in December 2008 by the NJBPU.

**Exhibit XI-2
NJAW Cost of Capital**

Type of Capital	Ratios	Rate	Weighted Cost Rate
Long-Term Debt	49.95%	6.4924%	3.2429%
Preferred Stock	0.05	4.8000	0.0024
Common Equity	50.00	10.3000	5.1500
Totals	100.00%		8.3953%

- The NJAW authorized rate of return is in line with the rate of return approved by its peer New Jersey water utilities around the same time frame, as shown in **Exhibit XI-3**. Many factors are involved when regulatory commissions authorize rates of return, so care is needed in comparing rates of return across utilities and jurisdictions (New Jersey and Pennsylvania). The return authorized for NJAW in late 2008 is consistent with other rate decisions in that time period.

**Exhibit XI-3
Rate of Return Comparison**

Utility	Rate of Return	Effective Date
Aqua New Jersey	8.09%	7/11/2008
Aqua Pennsylvania	8.48	7/31/2008
NJAW	8.40	12/8/2008
United Water – Toms River	8.35	1/28/2009
United Water	8.05	4/3/2009
Pennsylvania American Water	8.56	11/7/2009
Middlesex Water	7.54	3/17/2010

3. Over the past seven years, NJAW has paid \$171million more to AWK in dividends than it received in equity infusions.

- According to the AWK Subsidiary Dividend Policy, regulated subsidiaries generally pay 75 percent of their net income to the parent company (absent any state, debt covenant or other regulatory restrictions). The payment is calculated based on twelve month income ending September 30th of each year. This 90-day offset between dividend calculation and annual net income reported on a calendar year basis skews the apparent payout ratio.
- Non-regulated subsidiaries are expected to payout all cash in excess of that needed for the entity’s approved business plan. AWK invests equity in its regulated subsidiaries to maintain approximately the target equity ratio of 50 percent.
- As shown in **Exhibit XI-4**, over the past seven years NJAW has paid on average 76 percent of its net income to AWK, totaling \$277 million. The company received equity infusions of \$121 million from AWK over this period of time.
- AWK’s Subsidiary Dividend Policy and equity investment strategy are not atypical, and it is not unusual for a subsidiary such as NJAW to be a net contributor of cash to the parent company.
- The net cash contribution by subsidiaries to AWK is used by AWK to support its consolidated operations, including investments in other regulated subsidiaries, non-regulated subsidiaries, business development and payment of dividends to AWK shareholders.

Exhibit XI-4
Dividends Paid and Equity Contributions
NJAW and Elizabethtown Water (2003-2009)
(\$ thousands)

	Net Earnings	Dividends Paid to AWK	Payout Ratio	Equity Contributions from AWK	Net Cash to (from) NJAW
2003	\$30,364	\$19,482	64%	\$0	-\$19,482
2003 Etown	\$26,499	\$12,813	48%	\$0	-\$12,813
2004	\$34,448	\$26,405	77%	\$0	-\$26,405
2004 Etown	\$27,727	\$12,144	44%	\$0	-\$12,144
2005	\$32,372	\$30,096	62%	\$31,500	\$1,404
2005 Etown	\$24,552	\$12,000	49%	\$22,100	\$10,100
2006	\$50,026	\$48,292	97%	\$0	-\$48,292
2007	\$69,340	\$44,321	64%	\$0	-\$44,321
2008	\$68,045	\$49,052	72%	\$90,000	\$40,948
2009	\$79,455	\$60,082	76%	\$0	-\$60,082
Total	\$551,843	\$380,319	69%	\$143,600	-\$171,087

4. NJAW finances its capital program using a combination of cash from operations and non-cash benefits of depreciation and amortization.

- NJAW's capital expenditures exceed the company's depreciation and amortization expenses, as shown in **Exhibit XI-5**.
- The additional funds needed to finance NJAW's construction program are generated through short or long-term borrowing and equity infusions from AWK.

Exhibit XI-5
NJAW Capital Expenditures and Depreciation Expense
(2005-2009)

	Capital Expenditures	Depreciation/Amortization
2005	\$90,365	\$53,269
2006	\$155,333	\$56,322
2007	\$152,991	\$55,276
2008	\$205,713	\$58,199
2009	\$108,313	\$63,741

5. NJAW’s bond issuer ratings are currently identical to those of AWK and AWCC.

- **Exhibit XI-6** shows the bond ratings for NJAW, AWK, and AWCC by S&P and Moody’s.

**Exhibit XI-6
Bond Ratings**

	S&P	Moody’s
NJAW Issuer Rating	BBB+	Baa2
NJAW 1st Mortgage Bond	A	A2
AWCC Issuer Rating	BBB+	Baa2
AWCC Sr. Unsecured Bond	BBB+	Baa2
AWK Issuer Rating	BBB+	Baa2

- Recent industry assessments of AWK have noted that AWK trades at a discount to its water utility peers, indicating the company may be undervalued. Additionally, analysts point to the continued need for access to capital markets for both debt and equity to finance annual capital expenditures in excess of internally generated cash.
 - Analysts point to improved returns on the regulated asset base, and do not appear to discount the corporate valuation appreciably for its non-regulated investments.
 - AWK clearly intends to grow the regulated and “regulated-like” aspects of the company, which should support analysts’ assessment of the corporation’s growth prospects.
- 6. NJAW has the advantage of multiple sources of long-term debt financing, and is able to select the lowest cost financing source that meets its financing needs.**
- By maintaining stand-alone bond ratings, NJAW has access to a range of long term debt offerings. Without stand-alone ratings, the company would only have access to long-term debt issued by AWCC.
 - NJAW has authority, approved by the NJBPU, to issue:
 - Secured or unsecured tax-exempt (or taxable) securities in conjunction with the New Jersey Economic Development Authority (EDA)
 - Secured or unsecured low interest loans obtained through the New Jersey Environmental infrastructure Trust Finance Program (EIT, or the Trust Fund),
 - Unsecured taxable issuances in conjunction with AWCC
 - Secured or unsecured, tax-exempt or taxable issuances directly to the market
 - Over the past five years, NJAW has issued approximately \$500 million in new debt; half of that was issued by NJAW on its own, and half was issued by AWCC and

allocated to NJAW - see **Exhibit XI-7**. The SJW and PGW debt issuances were not originally issued by NJAW; rather they were acquired as part of the acquisition of those two entities.

Exhibit XI-7
NJAW Debt Issuances 2005 to 2009

Description	Interest Rate	Issuance Date	Maturity Date	Outstanding Amount
NJAW Prior Debt (1)				\$ 451,501
NJAW Debt issued 2004-2009				
NJEIT Pennsgrove 2005 Trust	2.49%	11/10/2005	8/1/2025	\$ 1,141
SJW CoBank 1997	8.21%	11/1/2007	12/20/2011	\$ 122
PGW CoBank	8.21%	11/1/2007	12/20/2011	\$ 244
First Mortgage Bond, 2009A	5.48%	5/13/2009	5/13/2019	\$ 25,000
First Mortgage Bond 2009B	6.35%	5/13/2009	5/13/2039	\$ 75,000
NJEDA Water Facilities 2009B	5.00%	10/20/2009	10/1/2039	\$ 10,500
NJEDA Water Facilities 2009A	5.70%	10/20/2009	10/1/2039	\$ 134,225
Total NJAW New Debt (1)				\$ 246,232
AWCC Debt Allocated to NJAW				
	5.62%	1/31/2007	12/21/2018	\$ 27,500
	5.77%	1/31/2007	12/21/2021	\$ 65,000
	6.59%	10/22/2007	10/14/2037	\$ 130,000
	8.25%	2/4/2009	12/1/2038	\$ 25,000
Total AWCC Debt to NJAW (2)				\$ 247,500
Total NJAW Debt (3)				\$ 945,233
Note (1) NJAW Balances unaudited, as of 12/31/09				
Note (2) AWCC Balances unaudited, as of 9/30/09				
Note (3) Total does not match exactly with the audit balance sheet figure of \$941,759.				

- The difference between the \$945m shown above, and the \$941m audit balance sheet is the unamortized debt discount, the current portion of LTD & redeemable preferred stock that was included in \$945m.
- Decisions as to the source and mechanism to finance NJAW capital needs are based on an assessment of market conditions at the time the new debt is needed. If NJAW is able to obtain debt on its own at rates (including issuance costs) lower than that available through AWCC, then the debt will be issued through NJAW.

- Because NJAW has access to tax-exempt debt through the EDA, and low interest loans through the EIT, those sources of debt will generally be at a lower cost for qualifying projects.
 - There are situations where AWCC is able to access lower cost debt because it is aggregating capital needs for multiple AWK subsidiaries, resulting in larger packages and therefore lower all-in costs.
- 7. NJAW has appropriate access to short-term borrowing through AWCC intra-company loans and a corporate outside line of credit (LOC).**

- Short-term credit needs of NJAW are met generally through intra-company loans with AWCC acting as the in-house bank.
- If the aggregate cash needs of the subsidiaries exceed the cash available in-house, AWCC has access to an \$850 million of committed unsecured credit facilities. AWK affiliates are allocated a portion of this credit by establishing an intra-company LOC with AWCC on an annual basis. The intra-company LOC limits with AWCC can, and are, adjusted during the year if needed by one or another affiliate. NJAW's credit limits on the LOC were \$124 million, \$305 million and \$160 million in 2009, 2008, and 2007, respectively.
- The higher credit limit in 2008 was authorized to cover the company's construction program at a time when it was disadvantageous to obtain long-term debt in the markets and to fund the redemption of \$145 million of NJAW's variable rate demand bonds. The short-term borrowing was repaid in 2009 with the proceeds from the May and October 2009 long-term debt offerings.

8. NJAW's financing is not adversely affected by the activities of its affiliate companies, either regulated or non-regulated.

- NJAW is able to access the credit markets on its own, and as part of the aggregated AWCC.
- NJAW does not appear to be credit or cash constrained as a result of the capital needs of its affiliates.
- In 2009, NJAW was scheduled to receive 22 percent of the long term debt and 15 percent of the equity contributions planned for AWK subsidiaries. In 2010, NJAW is scheduled to receive six percent of long term debt and 27 percent of equity contributions. The lower debt infusion for NJAW in 2010 reflects the need to maintain the target equity percentage.

9. Over the past three years, NJAW was only minimally affected by write-offs by affiliates of capital projects.

- In 2009, AWWSC wrote off an information technology application that was deemed no longer useful. NJAW's allocated portion of this write-off was \$128,264.

- No write-offs were recorded in 2007 or 2008 that were charged or allocated to NJAW.

10. The processes used by NJAW for receiving and securing payments by customers are appropriate.

- NJAW customers can pay their bills through mail to a lockbox with Mellon Bank, through payment agents, by phone and on-line.
- Funds collected at the payment locations are transferred daily to the AWK consolidation bank account.
- All payment agents provide AWK cash operations with daily electronic reports that are matched with customer accounting records. Over 99 percent of payments are matched automatically; the transactions that do not process automatically are generally resolved and properly credited within two days.
- The customer payment posting and reconciliation process is appropriately documented.

11. NJAW's cash management for NJAW is handled by AWK Treasury under a BPU-approved in-house banking arrangement which does not harm NJAW ratepayers.

- The funds collected by NJAW are transferred daily to the AWCC consolidation account, where they are managed on an aggregated basis. Fund consolidation is typical for large companies, and enables the corporation to minimize transactional costs and fees, and maximize interest earned by "idle" cash.
- On a daily basis, AWK Treasury tracks cash transfers from customer collections into AWCC's concentration account from affiliates and disburse payments to be made from the account, including vendor, principal and interest payments of short-term and long-term debt, tax payments, insurance payments, payroll, and benefits. The cash forecasting spreadsheet includes funds transferred from AWCC (commercial paper, bank facility, line of credit draws and long-term debt proceeds) and repayments to AWCC (for line of credit re-payments and vendor payments).
- Based on the actual inflows and outflows, AWK Treasury will place "idle" cash in the market through a prime money market account to earn overnight interest. NJAW receives the benefit of its pro-rata share of the interest earned based on its contributed cash.
- Regulated affiliates who are in a short-term borrowing position with AWCC are charged interest based on the weighted average short-term borrowing rate by AWCC. Likewise, regulated affiliates in a short-term investment position with AWCC are credited interest income based on AWCC's weighted average short-term borrowing rate. Interest on draws from the AWCC line of credit is charged to the affiliate requiring the funds.

- Consolidation of cash generally benefits all affiliates by reducing the number of times they must actually go to market for short term borrowing (thereby reducing transaction fees), and enabling them to receive better interest rates because the cash available for short term lending is greater. Operating independently, an affiliate would likely have to pay higher interest on borrowing and receive much lower interest on lending, as well as bearing the burden of higher transaction fees and set up costs.

12. AWK’s uses of prime money market funds and bank overnight sweep investments for excess cash are appropriate.

- Currently, interest rates in general are very low with all short-term investment vehicles offering interest rates less than 0.5 percent. Prime money market funds and bank overnight sweep investments are a standard investment vehicle for large corporations to obtain interest on idle cash on a short term basis.
- AWK continues to place its excess funds, obtaining some return on these dollars for its affiliates and their ratepayers. While the dollars received from these overnight investments are very small, the company continues to take advantage of reasonable, low-risk vehicles to place these funds.
- The processes in place within AWK Treasury provide for the company to identify alternative investment options that could provide increased returns on daily excess cash as the financial markets improve.

13. The methods used by AWK to calculate federal income tax liabilities and refunds due to NJAW and other affiliated companies provide neither an advantage nor a disadvantage to New Jersey ratepayers.

- For federal income tax purposes, NJAW files as a member of an “affiliate group” (i.e., AWK), which files a single consolidated tax return. The consolidated return takes advantage of all available federal income tax credits.
- As stated in the Tax Sharing Policy, “Each subsidiary shall be required to pay to parent an amount equal to the federal income tax liability that would have been payable by the subsidiary ... if it had filed a separate income tax return.”
- AWK determines the effective federal tax liability or refund for each of its subsidiary legal entities. Subsidiary companies that have tax losses roll those tax losses back to the extent allowed by the federal tax code. Remaining tax credits are then allocated proportionately to subsidiaries with tax liabilities. This results in all subsidiaries with tax credits being reimbursed for those credits (as if they had received payment from the Federal government), and subsidiaries with tax liabilities “pay” the taxes they owe. No individual subsidiary benefits from the sharing of tax losses more than any other subsidiary.

- Affiliates with taxable losses include both regulated and non-regulated entities. Several regulated affiliates showed losses for income tax purposes in 2006 and 2007, and there were non-regulated affiliates that showed a taxable profit in those years.

14. In four of the past five years, NJAW reported taxable income and was able to use taxable losses from its affiliates in lieu of paying income taxes to the Federal government.

- In 2006 and 2007, NJAW received 14 percent and 34 percent of the consolidated AWK tax losses, respectively, as shown in **Exhibit XI-8**. The percentages of the tax losses received by NJAW were equal to its share of the total income earned by all subsidiaries who earned income in that year. NJAW paid their tax liabilities through intra-company transfers to the AWK loss companies equal to NJAW's calculated tax liabilities for those years.
- In 2008, NJAW showed a taxable loss as are result of a change in accounting methods (for tax purposes only) that was implemented by AWK for the affiliated group.
- NJAW does not file state income taxes in New Jersey; instead the company is subject to the Gross Receipts Tax (GRAFT).

**Exhibit XI-8
NJAW Tax Liability 2006 and 2007**

	2006			2007		
	Taxable Income	Calculated Tax	Percent	Taxable Income	Calculated Tax	Percent
NJAW	\$ 33,155,621	\$ 11,604,467	14%	\$ 80,006,860	\$ 28,002,401	34%
Other "Income" Companies	\$ 204,520,297	\$ 71,582,104		\$ 158,489,449	\$ 55,471,307	
Other "Loss" Companies	\$ (270,076,736)	\$ (94,526,858)		\$ (168,285,360)	\$ (58,899,876)	
TOTAL AWK	\$ (32,400,818)	\$ (11,340,286)		\$ 70,210,949	\$ 24,573,832	

15. AWK has pursued alternative tax treatments allowed by the IRS to the benefit of NJAW.

- AWK reported that for tax year 2008, it elected to change its accounting method for the affiliated tax group as a whole (i.e., AWK) for tax purposes only, to allow the corporation to deduct the cost of annual maintenance of its network of pipes, meters, valves and distribution mains as eligible repairs, rather than capitalizing those expenditures.
- As a result of this change, the corporation was able to obtain additional net operating losses that could be carried forward and would reduce tax liabilities in future years.
- NJAW received a deduction as a result of this change in tax accounting, which was carried back through tax sharing to obtain a refund for previously paid taxes.

- The AWK tax group has identified other tax credits and benefits that were not taken in the instant period, and is pursuing amended returns to capture these benefits for NJAW and other affiliates.

16. Rate treatment of income taxes has no effect on the calculation and payment of income taxes for NJAW.

- Income taxes for NJAW, and all AWK companies, are calculated under applicable Federal tax regulations. The level and treatment of income taxes included in the ratemaking process is independent of the company’s tax obligations.
- To the extent that rate-making decisions result in the inclusion of a lower level of taxes than calculated by the Federal tax regulations, or if a “Consolidated Tax Adjustment” (CTA) is imposed, the company’s actual return on equity may be different from the ROE allowed by the rate case.

17. Diversified, non-regulated activities undertaken by AWK have received no apparent benefit from NJAW taxable income, nor has NJAW been disadvantaged by non-regulated income or losses for tax purposes.

- NJAW is charged federal income tax at the standard corporate rate of 35 percent on all its taxable income.
- Non-regulated affiliates are charged federal income tax at the same tax rate.
- Affiliates (both regulated and non-regulated) that have taxable income “pay” their income taxes into the corporation; affiliates that have taxable losses are reimbursed by the corporation. Neither income affiliates nor loss affiliates receive any benefit or penalty. All affiliates pay income taxes at the federal corporate tax rate.

18. AWK is responding appropriately to the finding of “significant deficiency” in the area of income tax accounting, accruals and reporting.

- Income tax accounting, accruals and reporting were identified by the corporation as a significant deficiency as of the end of 2008.
- In response to this finding, AWK took the following steps:
 - Strengthened corporate tax leadership, skill sets and controls
 - Restructured the corporate tax department to integrate the provision and compliance processes
 - Established additional controls related to the review and approval of reporting of income taxes items.
- AWK is continuing to focus on this area making SOX control assessments and staffing improvements.

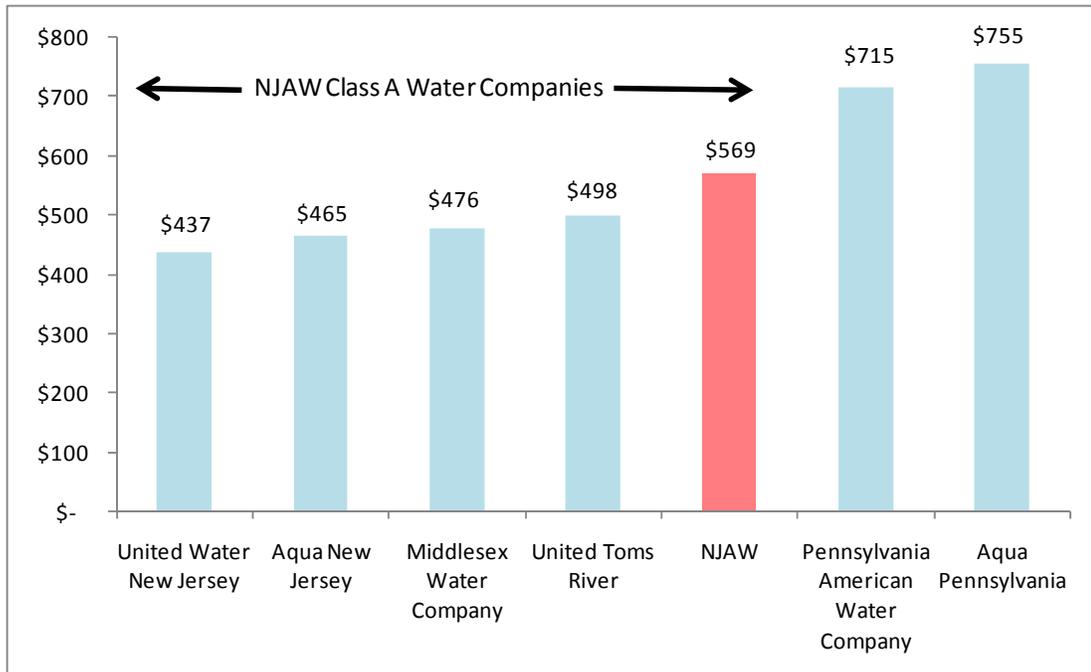
19. AWK has not formally adopted the policies for calculating federal income taxes and the sharing of tax liabilities and credits and the procedures are outdated.

- The “Tax Sharing Policy” dates to Thames Water’s ownership of AWK.
- The tax sharing policy is under review and being updated to reflect AWK’s ownership.

20. NJAW’s residential rates are higher than the other Class A Water Companies in New Jersey.

- As shown in **Exhibit XI-9**, the average annual NJAW residential bill is higher than the other New Jersey Class A water companies, but less than those of equivalent Pennsylvania companies.

Exhibit XI-9
Average Annual Residential Bill for NJAW and its Peers (2008)



Note: Based on comparison of General Metered Service (GMS) at usage of 7,000 gallons per month at current rates. This assumes a single statewide tariff for NJAW.

21. NJAW attributes its higher rates to historical investments in infrastructure mandated as a result of its role as regional water supplier and lower customer density per mile compared to its peer utilities.

- NJAW conducted a detailed assessment of the possible reasons for its rates being higher than its peer water utilities (the Peer Study). Because NJAW is much larger than the other New Jersey water companies, NJAW expanded its comparison group to include two Pennsylvania water utilities (see **Exhibit XI-10**)

- Collectively, NJAW calculated that mandated historical investments in infrastructure and a lower customer density per mile compared to its peer utilities added \$82.27 to its average utility bill. Removing these effects would bring the average NJAW residential utility bill within the range of its peer New Jersey water utilities.
- The level of investment in infrastructure for meeting Critical Area 1 and 2, and regional water supplier obligations appear to be unique to NJAW and are significant.
- Over the past twelve years, the percentage increases in NJAW residential rates were less than the level of inflation, indicating that the source for the higher rates lies in past capital investments.

Exhibit XI-10
NJAW Peer Group Demographics
(2008)

Company	Miles of Main	Total Customers	Customer/Mile of Main
New Jersey Class A Water Companies			
United Toms River	526	49,360	90
Aqua New Jersey	596	46,478	78
Middlesex Water Company	712	59,026	83
United Water New Jersey	2,185	197,133	94
NJAW	8,311	609,383	73
Pennsylvania Companies			
Aqua Pennsylvania	5,345	411,546	69
Pennsylvania American Water Company	9,216	631,657	77

22. NJAW's role as the regional water supplier and associated investments in infrastructure to benefit numerous New Jersey water utilities during the 1980s and 1990s has had a significant effect on the company's capital investments.

- As a result of over-pumping of regional coastal plain aquifers, the New Jersey Department of Environmental Protection (DEP) established water supply Critical Areas 1 (1985) and 2 (1991) which called for significant reduction in groundwater withdrawals. The critical area programs required all New Jersey utilities to reduce their reliance on groundwater pumping and use instead new surface water resources.
- NJAW was asked by the DEP take on the role of regional water supplier, investing in pumping facilities, surface water treatment plants, and conveyance infrastructure to serve both its own customers and the customers of other New Jersey water utilities affected by the Critical Area restrictions.
- As the largest water supplier in New Jersey, no other New Jersey Class A water company was as affected by these critical area programs as was NJAW. The

intention was for NJAW to recover a portion of the Critical Area investments through usage fees charged to the other utilities. However, the other utilities have not used the anticipated amount of water from these facilities, and rate increases necessary to recover the investment and operating expenses were not entirely passed through to the other users.

23. NJAW has invested more than \$264 million in Critical Area 1 and 2 facilities and continues to incur capital costs and incremental O&M costs associated with the maintenance and upkeep of these facilities.

- Capital costs are shown in **Exhibit XI-11**.

Exhibit XI-11
NJAW Capital Investment in Critical Areas 1 and 2
(Dollars in Thousands)

Component	Critical Area 1	Critical Area 2
Capital Investment to Implement the Program	\$20,808	\$173,484
Post implementation capital investments to support these systems	37,946	31,569
Total	\$58,753	\$205,053

- NJAW estimates \$7 million in annual incremental Area 1 O&M expenses to comply with the NJDEP mandate to purchase raw water from the Manasquan reservoir; and \$11 million in Area 2 O&M expenses to obtain water from complex surface water supplies.

24. NJAW’s lower customer density contributes to higher rates, as the lower density requires more pipes and other equipment.

- NJAW has the lowest density of its New Jersey peer utilities (see **Exhibit XI-12**).

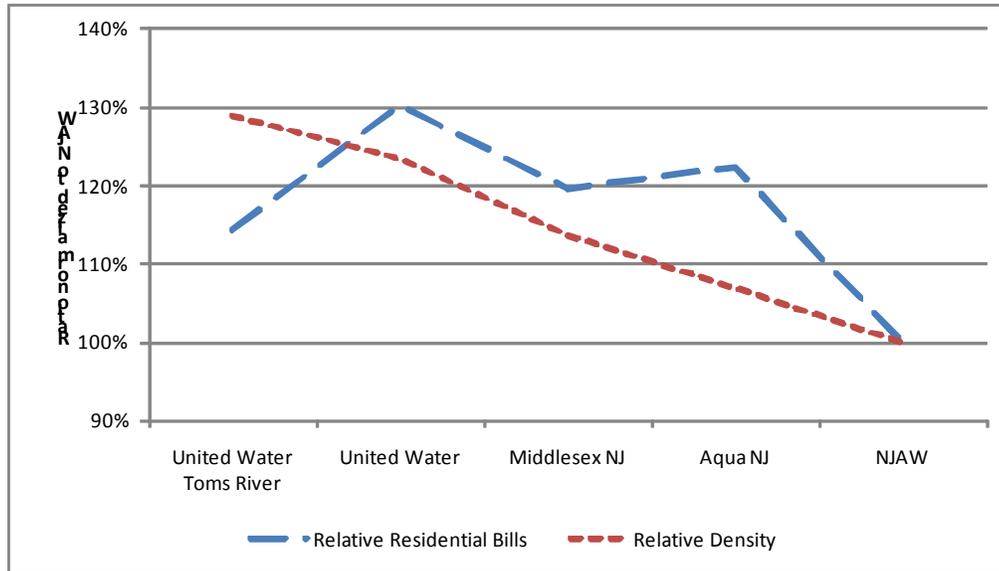
Exhibit XI-12
Comparison of Customer Density and Average Bills (2008)

Utility	Customers/ Mile of Main	Average Residential Bill
United Water Toms River	94	\$498
United Water	90	\$437
Middlesex NJ	83	\$476
Aqua NJ	78	\$465
NJAW	73	\$569

- There is a relationship between customer density and required capital investment – the less dense a service territory the more miles of pipe required to obtain the same

revenue compared to a more dense area (See Exhibit XI-13). This relationship does provide some support for NJAW’s higher rates.

**Exhibit XI-13
Comparison of Density and Average Bills**



25. NJAW’s rate structure and design are typical for regulated utilities.

- NJAW’s general water tariffs are comprised of a fixed meter charge plus a volumetric charge for all units (gallons or cubic feet) of water used during the billing period. The fixed meter charges are based on the size of meter. Volumetric charges vary depending on the portion of the service area and the type of service (e.g., general metered service, sale for resale, public and private fire service).
- NJAW has ten different general water rate schedules each with different per usages rates; the average customer would not be aware of the multiple rates and is not affected by them. Rate decisions include efforts to reduce the variation of rates across the state, within the framework of gradualism in rate changes.
- NJAW also has commodity demand rates and off-peak rates for its sales for resale customers, including a separate rate for customers purchasing water from the Manasquan reservoir. These rates provide a mechanism for NJAW to recover a portion of its investments as a regional water supplier.
- Sewerage rates are volumetric, and are based off the water meter reading. This is typical for sewer bills, as most water that flows through a meter flows back into the sewer lines.

26. NJAW's recent efforts to move its remaining customers from quarterly billing to monthly billing should benefit customers.

- NJAW's tariffs allow for meters to be read and customers billed quarterly. While quarterly billing does reduce customer service costs (meter readers and bill rendering), it does mean that customers receive a large bill on an infrequent (four times a year) basis.
- While water bills are not unduly large, for some customers, receipt of a \$150.00 bill once a quarter could cause cash flow problems that receipt of a \$50.00 bill monthly would not.
- Additionally, quarterly billing increases bad debt and collections risk, as it will take more months for a customer to be deemed delinquent and for activities to collect or terminate service to begin.
- NJAW has completed its conversion of all customers to monthly billing.

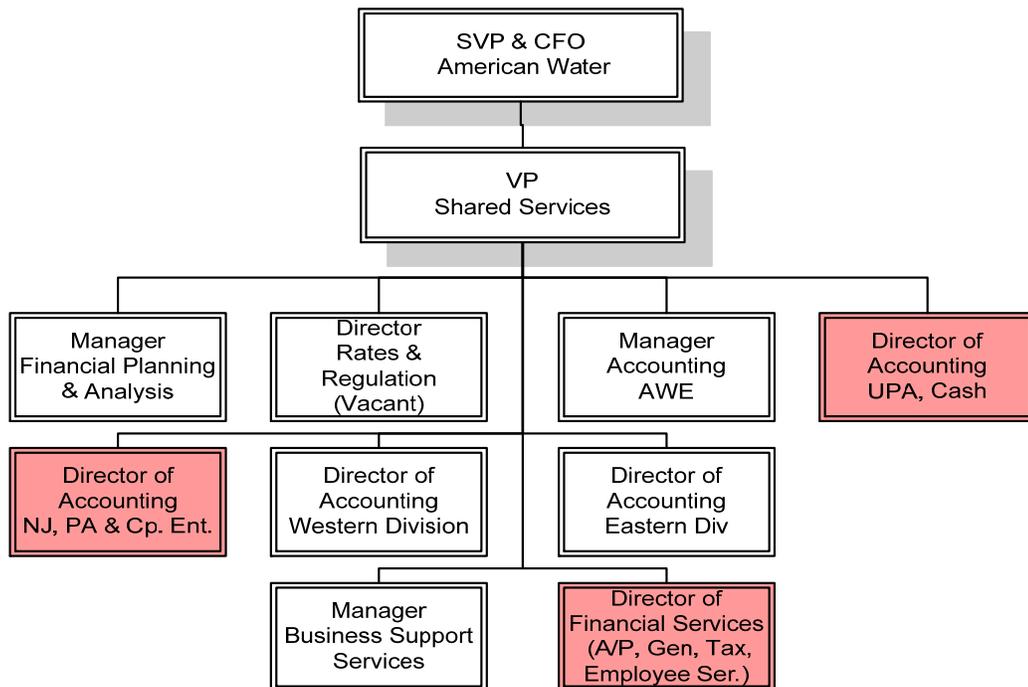
E. Recommendation

1. Update the tax sharing agreement policies and procedures. (Refer to Finding XI-19)

XII. ACCOUNTING, PROPERTY RECORDS & BUDGETING (3.10)

The American Water Works Service Company’s (AWWSC) Shared Services Center (SSC) provides finance and accounting services to American Water Works Company, Inc.’s (AWK) regulated water companies, including New Jersey American Water (NJAW). SSC performs general ledger accounting, utility plant accounting, general tax, payroll, and accounts payable functions for NJAW. An overview of the SSC organization is shown in **Exhibit XII-1**. Organizations which provide accounting and finance services to NJAW are highlighted and briefly described below:

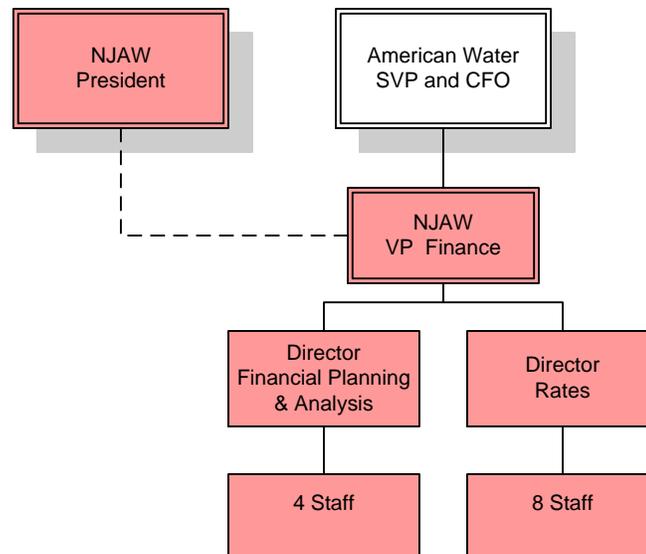
**Exhibit XII-1
Shared Services Center Organization**



- Accounting (NJ, PA and Corporate Entities) - Provides transactional account services to NJAW. This organization (“Shared Services Accounting”) is responsible for monthly closings, journal entries, financial statements and commission reports, and interfaces with the independent auditor.
- Financial Services - Provides support in the areas of tax (other than income tax), payroll, and accounts payable.
- Accounting (utility plant accounting and cash) - Provides support for utility plant accounting and cash management.

The NJAW Financial Planning and Analysis (FP&A) group serves as the liaison with the SSC for most accounting functions and is responsible for NJAW financial reporting, business plan and budget development. The FP&A group is part of the NJAW finance organization, as shown in **Exhibit XII-2**. The VP Finance for NJAW and the VP for Shared Services each report to the Senior Vice President and Chief Finance Officer for AWK. The VP Finance for NJAW has a dotted line relationship to the President of NJAW.

**Exhibit XII-2
NJAW Finance Organization**



Within NJAW’s engineering organization, the asset planning group is responsible for the development of the capital plan, while the capital program group tracks the costs of NJAW’s capital program. Both of these groups report up to the President of NJAW through NJAW’s VP of Engineering, and both are independent of the AWK finance organizations.

NJAW develops a multi-year financial plan as part of the annual AWK corporate business planning process. The five-year planning process commences in April and concludes in September of each year.¹ The NJAW Financial Planning and Analysis (FP&A) group coordinates the development of the NJAW “business plan.” The “business plan” is in essence a financial plan and budget with full financial statements (income statement, balance sheet, and cash flow statement).² The first year of the business plan serves as the basis for the annual operating budget.

Asset planning prepares the capital portion of the business plan, which is typically the first submission in the financial plan development process. During this phase, the bottom-up conceptual plan is developed which identifies an overall level of spending. The capital plan

¹ The 2009 planning process, which covered three years, was an exception as it was the year AWK began to use the Hyperion reporting system

² As discussed in Chapter VI, the NJAW “Business Plan” is currently just a financial plan.

prepared in the previous year generally provides the basis for developing the current capital plan.

NJAW's financial and budget reports are part of the overall AWK reporting scheme. NJAW's FP&A is responsible for the preparation of two monthly reports:

- Financial Reporting Package (FRP) – Ten days after each month-end, the FP&A team prepare an FRP Package. This package which is submitted to NJAW and AWK Senior Management and compares actual results of operations to plan and prior year. The FRP includes a discussion of any significant financial occurrences, and variances over a materiality threshold.
- Business Performance Review (BPR) – Each month the NJAW President submits a business performance summary to the AWK Senior Management Team. The BPR is prepared by various parts of the organization, and is reviewed by the NJAW President and NJAW senior management. While the BPR is focused on non-financial operations and metrics, it includes an income statement, the status on capital projects and the capital budget.

A. RFP Objectives

In its RFP for this audit, the BPU identified the following objectives for the review of NJAW's accounting and property records:

- Evaluate the processing, recording, authorization, and accountability of the accounting functions among all levels of affiliate management.
- Review NJAW's accounting procedures for compliance with Generally Accepted Accounting Principles ("GAAP"). (From 3.9 - Finance)
- Review the independence, processing, and accountability of the payroll function, including the time and resources spent by employees on payroll.
- Evaluate budget reporting, tracking, analysis, and revision at all levels.
- Evaluate work order procedures, corporate accounting manual, and property records at all levels.

B. Evaluative Criteria

In conducting our review of NJAW's accounting and property records, NorthStar used the following criteria:

- Are the roles of and relationships between NJAW and SSC accounting functions appropriate?
- Are NJAW's accounting procedures in compliance with Generally Accepted Accounting Principles ("GAAP")?

- Are the independence, processing, and accountability of the payroll function appropriate, and are appropriate employee resources dedicated to payroll?
- Does NJAW have appropriate operating budgeting guidelines, practices and procedures?
- Are the roles of and relationships between NJAW and AWK budgeting functions appropriate?
- Is there a need for NJAW to reforecast its budget three times a year?
- Are NJAW's budgets and variance reporting processes effective tools for managing spending consistent with operational plans?
- Are NJAW's cost control systems and processes effective in ensuring that changes to the capital and O&M budgets are justified and appropriately approved?

C. Audit Tasks

To complete the review in this area, NorthStar performed the following tasks:

1. Reviewed NJAW's accounting procedures for compliance with Generally Accepted Accounting Principles ("GAAP").
2. Evaluated the processing, recording, authorization and accountability of the accounting functions among all levels of affiliate management.
3. Assessed the independence, processing, and accountability of the payroll function and determine whether appropriate employee resources dedicated to payroll.
4. Examined NJAW and/or SSC processes to manage and account for its fixed assets, including work order processes related to utility plant accounting.
5. Reviewed the procedures used to develop capital and operating budgets, including participation in the budget development process, budget authorization levels, and time horizons.
6. Reviewed the need for NJAW to reforecast its budget three times a year.
7. Determined how planning and budgeting priorities and allocations among AWK's businesses are established.
8. Evaluated the budget reporting, tracking, revision and analysis at all levels.
9. Assessed the quality and timeliness of budget variance reports, and determine how effectively NJAW identifies, communicates and acts upon budget variances.

10. Assessed controls over spending outside the budget and over the scope and cost of support services and allocated costs.
11. Reviewed the AWK's Business Transformation "record to report" plans.

D. Findings and Conclusions

1. The roles and relationships between NJAW finance and the SSC accounting functions are appropriate.

- The SSC accounting functions perform transaction accounting, while the NJAW finance group is generally responsible for cost reporting and analysis. It is also involved in the monthly close process, and works with shared services accounting to follow-up on identified accounting issues.
- During the monthly close process, both shared services accounting and NJAW FP&A perform analytical reviews and discuss issues with NJAW management and AWK personnel.
 - Shared services accounting generates variance reports from the JD Edwards accounting system (JDE), including comparisons of income statement accounts and trial balances to previous month's actual.
 - NJAW's FP&A group performs variance analysis of all income statements and balance sheet accounts to detect irregularities (compares current period actual to budget and prior year actual). Relevant information is discussed prior to month-end close via flash calls and is ultimately incorporated in the FRP.
 - On the sixth day of the close process, there are scheduled flash calls with production, field services, maintenance, environmental, engineering, and distribution. The flash calls are used to investigate the source of variances, including the correction of accounting errors. The shared services director of accounting, accounting manager, and NJAW FP&A representatives address relevant items identified in the analyses performed during close.

2. NJAW's accounting procedures are in compliance with Generally Accepted Accounting Principles ("GAAP")

- NJAW's audited financial statements include an opinion by its external auditors that the balance sheet and related statements of income, capitalization, changes in common stockholders' equity and cash flows present fairly, in all material respects, the financial position of NJAW and the results of its operations and cash flows in conformity with accounting principles generally accepted in the United States.
- AWK has a comprehensive set of formal finance and accounting practices and policies available to employees on the company's intranet. These practices and policies were adopted in the period from 2007 through 2010, during the development of AWK's Sarbanes-Oxley (SOX) compliance program.

- The policy documents clearly state the company’s policies and identify the roles and responsibilities for policy performance monitoring and reporting/metrics.
- The practices clearly describe the procedures to implement the policies, providing details of the roles and responsibilities associated with implementation along with the descriptive detail on the procedures or actions required.

3. AWK’s budgeting, accounting, and financial reporting processes are inefficient and require a large accounting staff.

- AWK’s general ledger system is not integrated with other financial reporting and tracking systems and requires many manual inputs. NJAW and the other regulated AWK companies use JD Edwards as their general ledger system to process financial data. JD Edwards is an antiquated system, which requires much manual input. AWK has recognized the need to replace the JD Edwards system, and the replacement of the system is one of the first action items for the Business Transformation (BT) effort.
- In early 2010, AWK issued a Request for Proposals for an Enterprise Resource Planning system as part of its BT initiative. The BT Business Requirements and Impact Assessment Summary identifies several inefficiencies in AWK’s current budgeting, accounting, and financial reporting processes, including:
 - Manual loading of both operational and financial actual data.
 - Cumbersome uploading and downloading budget data.
 - No ability to version budgets or conduct “what if” scenarios.
 - Heavy focus on transaction capture, month-end close and getting the accounting right. Over 80 percent of time spent on data capture/collection.
 - Journal Entry process is highly manual.
 - Paper-based, manual workflow.
 - Operational data is duplicated across multiple systems.
 - A large amount of time is spent on historical analysis, leaving little time for planning and strategic analysis.
 - Heavy focus on compiling data and creating the reports.
 - Heavy reliance on home grown Excel or Access files to track data/metrics.
 - Account reconciliation process is manually intensive.
 - SOX controls are manual and time consuming.
- As a result of these manual processes, the AWK financial staff is larger than one would expect for a company the size of AWK. The BT effort is expected to result in significant savings for some financial groups as a result of likely gains in system efficiencies.

4. AWK took effective action to remediate a significant deficiency in its internal controls over its financial reporting processes in its preparation for SOX compliance.

- AWK had a “significant deficiency” in 2008 in internal controls over the financial reporting processes, as reported in the April 2009 independent auditor management

letter to the NJAW Board of Directors. This deficiency primarily related to the preparation and review of financial reports.

- Actions AWK took to address this deficiency included:
 - Revised its finance organization structure and recruited skilled personnel at both the operating company and corporate levels to support activities required in the financial reporting process.
 - Implemented Hyperion System 9 to automate consolidation and reporting process and provide a standardized reporting repository tool for management to prepare and perform analyses on the financial results on a company-wide or individual entity basis.
- The preparation and review of financial reports were determined to be operating effectively as of December 31, 2009.

5. The payroll functions are appropriately placed within AWK's organization.

- Payroll processing is performed by the employee services group within the AWWSC. There are three supervisors and 23 analyst level individuals within this group which processes payroll for all AWK employees.
- Most employee services group employees charge their time to a formula that allocates the cost to all regulated companies; some employee services group employees charge their time to a formula that allocates their time between NJAW and Long Island. If an individual works on a special payroll project for NJAW, they would charge their time directly to NJAW. If the project included more than one state, the formula would charge only those states, and payroll would capture those charges. In 2009, NJAW was charged \$456,000 out of \$2.55 million total payroll costs from the employee services group.
- AWK payroll processes payrolls for 80 separate bargaining units, each with a different pay day and pay cycle, plus the salaried employees at each operating company and AWWSC.³ Within NJAW, there are multiple bargaining units, each with a different pay cycle.

³ AWWSC employees are any employee who can, as part of their regular job responsibilities, need to charge or allocate their time to more than one operating company. There are also a few dedicated operating company employees who are AWWSC employees for specific legacy reasons.

6. AWK's payroll processing costs are reasonable.

- In 2009, AWK investigated possible outsourcing of some or all of the payroll functions, by requesting an outside payroll vendor to provide quote for three levels of service.
 - Comprehensive outsourcing, where the vendor would have supplied all services, including tax deposits and employee interface; described as using vendor people and systems.
 - Limited outsourcing, where the vendor would have provided the check processes and tax deposits only, and AWK would have continued to maintain the employee data and employee interface; described as using vendor systems only.
 - Tax depositing only, where the vendor would perform all required income tax filings and paperwork, including issuing W2 forms annually.
- The costs provided by the vendor were then compared to the cost to perform each of these services internally. Internal costs included labor and benefits only, and did not include rent, management or other non-labor overheads.
- The vendor costs to provide the comprehensive outsourcing and limited outsourcing were approximately twice the cost for AWK to perform this work internally. Even adding in other overheads it is unlikely that the vendor price would be lower than AWK internal costs.
- The cost for the vendor to provide tax filing series was approximately half the internal cost, and AWK is continuing to explore outsourcing this portion of the payroll function as part of the BT project. The cost savings on labor plus benefits only was \$100,000 per year for AWK in total. It is unlikely that there will be much non-labor cost savings from outsourcing the tax portion of payroll alone.

7. AWK payroll processes have appropriate oversight, review and controls.

- AWK has appropriate policies, procedures and controls in place relating to the entry, verification, approval, and processing of payroll.
- Bargaining unit personnel typically complete the time sheet manually, and then one person within the district office enters the time data into the computer for processing. Procedures provide several levels of checks, including validation by the time entry clerk and approval by the individuals' supervisors.
- Non-bargaining unit NJAW employees are generally paid "by exception," whereby the accounts charged for their time is pre-determined, and they only record changes (to an electronic timesheet) from that pre-set allocation. Typical changes are for vacation and sick leave. This time entry system is appropriate for individuals who perform the same work each week. Supervisory approval is still required for these individuals electronic time sheets, so any variations or special projects would be validated there.

- AWWSC and NJAW salaried employees who work on multiple types of work, or for multiple operating units, on a non-predictable basis use positive time reporting, where they actively complete an electronic time sheet each pay-period. Supervisory approvals are required.
- Supervisors are responsible for informing their direct reports of the correct account(s), project(s) and formula(s) to use on time sheets, and for actively reviewing and validating time charges. JDE generates a missing timesheet report listing all employees who have not entered time for a given pay period, and the payroll group contacts the employee or their supervisor to obtain a time sheet.
- The payroll group conducts time reporting training for new employees and periodically on a review basis for all employees.

8. The AWK and NJAW process for developing the five-year financial plan is not documented.

- There are no AWK policies and practices which specifically relate to the development of the financial plan.
- The five-year financial planning process is a “bottom-up process”, whereby budgeting commences at the lowest expense tracking level (i.e., “business unit” in NJAW) and summarizes up to the NJAW level, then to an enterprise level.
- The spreadsheet models used to develop the financial plan are developed and maintained at the AWK level; NJAW finance inputs data but would not make modifications to formulas or basic financing/accounting assumptions embedded in the models.

9. The financial plan has appropriate components and sources.

- The AWWSC asset planning team provides NJAW finance with customer usage trends for revenue forecasting. The NJAW rates team analyzes the customer usage and growth data and derives growth rates to be used in the revenue planning process. The customer usage data and non-revenue water assumptions (based on historical data and trends) are input to the revenue model for calculating system delivery, water sales and revenue by customer class and district.
- The system delivery data produced from the revenue model as well as other assumptions are input to the production model for calculating production expenses (i.e., purchased water, purchased sewer, chemicals, fuel and power). Business unit owners work with NJAW finance to forecast labor and related expenses using the workforce planning model. The NJAW finance team distributes standardized spreadsheet templates to various business unit owners for input to non-labor operating costs such as maintenance and supplies.
- The NJAW asset planning team prioritizes capital projects and provides the related budget detailed information to NJAW finance team. The capital close to plant is

input into the depreciation model for calculating depreciation, allowance for funds used during construction (AFUDC), amortization of contributions in aid of construction (CIAC), and net negative salvage (NNS) expense.

- The NJAW Business Development team forecasts acquisitions/growth related revenues and expenses using the business development model.

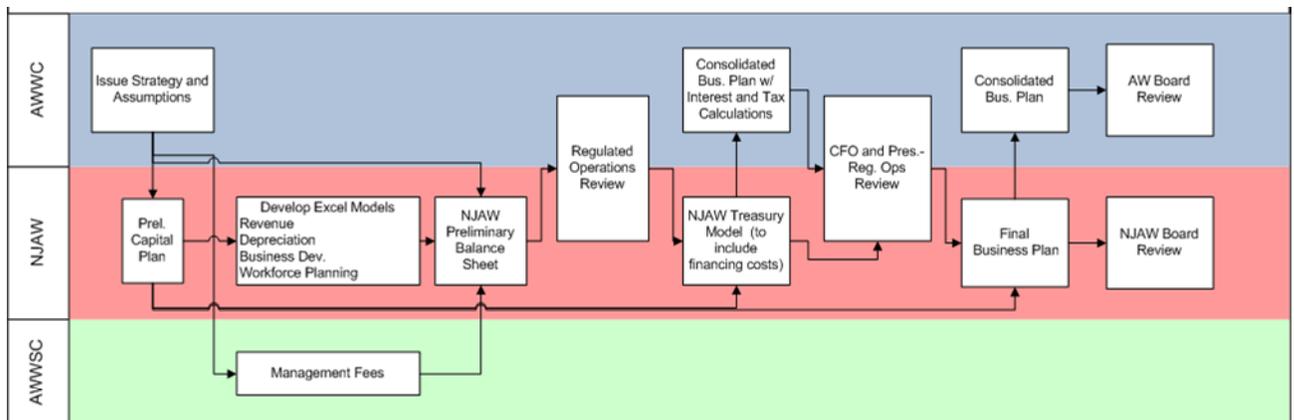
10. AWK and NJAW have an appropriate process for developing the five-year financial plan.

- AWWSC business unit owners use a process similar to that described for NJAW to derive their business unit budgets. The AWWSC business unit budgets are consolidated and then allocated based on budget assumption allocations and communicated to the operating companies, including NJAW.
- All of the NJAW budget information, including its portion of AWWSC fees, is consolidated into a NJAW master template which includes a preliminary budgeted balance sheet. This information is input to the AWK treasury model for calculation of financing and related costs.
- The NJAW financial “business plan” is finally loaded into the AWWSC reporting tool (Hyperion) and NJAW’s results are then consolidated with all other AWK entities for a consolidated plan.

11. The roles and relationships between the NJAW and AWK financial planning functions are appropriate.

- Several corporate entities are involved in the development of the NJAW financial “business plan.” The process, which involves many groups within the AWK organization. An overview of the responsibilities of NJAW, AWK and AWWSC in the financial planning process is shown in **Exhibit XII-3**.

**Exhibit XII-3
Overview of NJAW Financial Business Planning Process**



- The AWK planning group sets the timelines and provides NJAW finance with global assumptions, financing rates, and other inputs. NJAW uses the global assumptions, unless there are specific deviations applicable to NJAW such as labor increases mandated by local union contract. The five-year planning process commences in April and concludes in September.
- The financial planning process is an iterative process, with frequent communication among NJAW, AWWSC and the AWK. Corporate Planning and Treasury functions. There are several review meetings both within NJAW management, and between NJAW and AWK.
- Following draft submission of balance sheet and operating income statements, AWK corporate planning consolidates the regulated companies' draft submissions and performs a regulated operations review with NJAW and the other regulated entities.
- Following the regulated operations review, a consolidated plan is developed which includes financing and related costs. At this time, the CFO and President – Regulatory Operations meet with the NJAW senior management team to review the NJAW business plan.

12. The financial plans for NJAW and AWK are approved by their respective boards of directors.

- Upon final approval by NJAW's senior management team, the NJAW plan is consolidated with all other American Water entities for a consolidated AWK financial plan.
- That consolidated plan is also reviewed with AWK senior management and ultimately approved by the AWK Board of Directors.
- Following AWK Board approval of the consolidated AWK financial plan, the NJAW plan is approved by the NJAW BOD.

13. NJAW's annual operating and capital budgets are based on the five-year business plan.

- The annual budget is based on the first year of the multi-year financial "business plan."
- Beginning in October, NJAW and other AWWSC subsidiaries review their original financial "business plan" for the upcoming year to update for any known changes. This process goes through detailed review, including a reconciliation of changes from the original financial "business plan."
- The final review and approval of the NJAW annual budget follows the same general process as the financial business plan.

14. The FRP monthly financial report, prepared by NJAW's FP&A group, is an appropriate tool for reporting financial results to the NJAW VP Finance and the AWK CFO and Controller.

- The FRP includes:
 - *An income statement prepared in accordance with GAAP:* The NJAW FP&A group uses Hyperion, AWK's reporting tool, to upload financial information from the general ledger, including actual, budgeted and prior year amounts as well as the respective variances.
 - *Commentary explaining line item variances:* NJAW's threshold for variance explanations is \$250,000 and ten percent. The NJAW FP&A investigates and reports on variances to budget.
 - *Revenue summary report:* This report is generated in Hyperion based on information input by NJAW FP&A regarding changes from budgeted and prior year amounts.
 - *Balance sheet and related commentary:* On a quarterly basis, the NJAW FP&A uses Hyperion to generate a balance sheet, and explains changes in balance sheet line items compared to the prior year which meet pre-defined thresholds.
 - The FRP is reviewed on a monthly basis by both NJAW and AWK personnel. Following review and approval from the NJAW VP of Finance, the FRP is sent to the AWWSC Corporate Reporting Group. The CFO, VP and Controller and NJAW VP of Finance (among others) meet on a monthly basis to review the FRP.

15. The BPR monthly report is an appropriate tool for monitoring progress on Key Performance Indicators (KPIs) and reporting operating events to the NJAW senior management team, and the AWK CEO, CFO and the executive management team, and the President of Regulated Operations.

- The BPR is summary of key financial and operational information, including:
 - KPIs
 - Income Statement
 - Revenues
 - Accounts Receivable Aging and Uncollectibles
 - System Delivery, Water Sales and Non-Revenue Water
 - Operational Costs, Productions
 - Regulatory and Rate Case Updates
 - Commission Activity: Customer Complaints
 - Major Operational Projects/Capital Program
 - Return on Equity
 - Operational /Regulatory Compliance
 - Explanation of NOV's, OSHA Citations
 - Claims Data
 - Customer Service Center Scorecard
 - Other Operational Issues
 - Financing Activity

- Business Development
 - Human Resources
 - Legal
 - Communication and Government Affairs
- The BPR is reviewed on a monthly basis by both NJAW and AWK personnel.
 - Upon the compilation of all required data and commentary, the BPR is reviewed by the NJAW Senior Management Team and approved by NJAW's president.
 - After such review and approval, the BPR is submitted monthly to the AWWSC Corporate Planning & Reporting group and distributed to the President of Regulated Operations.
 - On a quarterly basis, the BPR is also signed by NJAW's president and distributed to the CEO, CFO, and the Executive Management Team. The NJAW President, NJAW VP's of Finance, Operations and Engineering, the President of Regulated Operations, CEO, CFO and members of the Executive Management Team then meet to conduct a formal review.

16. The BPR and FRP reports are used for different purposes and by different organizations.

- The FRP's focus is on financial performance. It is primarily used by the NJAW and AWK financial organizations.
- The BPR's focus is on operations performance and it contains statistics regarding activities throughout NJAW. It is primarily used by the NJAW Senior Management Team, the AWK President of Regulated Operations, and AWK Executive management.
- While both FRP and BPR contain income statements and revenue reports, the BPR does not review financial performance to the same extent as the FRP

17. NJAW has adequate information about operating expense variances and potential overspending.

- Variance thresholds are set by the AWK Corporate Controller. Variance threshold varies among states and is dependent on the size of the operating company. NJAW's threshold for variance explanations is \$250,000 and ten percent.
- Each month, variances to operating budget spend are reviewed through the FRP and the BPR process.
- As part of the monthly financial review and close process, all significant opportunities and vulnerabilities to the business plan (including the potential for overspend to the operating budget) are raised, discussed and acted upon.
- NJAW and AWWSC accounting have regularly scheduled "flash calls" with operating personnel to review individual business unit spending variance by general

ledger account and discuss business issues that could lead to significant variances. Operating managers, superintendents, and directors responsible for the business units participate in the calls.

18. NJAW does not control the scope and cost of services provided it by AWWSC.

- The NJAW President is one of 16 members on the AWWSC Board of Directors; however, Board meetings do not serve as an effective forum for NJAW to have meaningful input regarding the scope of service provided by AWWSC.
- NJAW incorporates AWWSC fees in its operating budget.
 - The Service Company management supported by the finance team develops a budget for the entire service company. This budget submission is eventually allocated to the various operating companies receiving services.
 - Once the preliminary budget submission is approved by the AWWSC Board of Directors, AWWSC costs are allocated to NJAW and the other operating companies based on formula driven allocations.
- NJAW reviews AWWSC fees in the monthly close and FRP processes, but has no control over cost overruns, and is not able to determine services received for charges billed. Service Company charges are further discussed in Chapter IV – Organization and Chapter XIII-Affiliate Cost Allocation.

19. NJAW and AWWSC have appropriate processes to manage and account for NJAW’s fixed assets, including work order processes related to utility plant accounting.

- Proper accounting for utility plant assets includes the maintenance of a continuing property record system (CPR). A CPR has a separate record for each unit of utility property, and provides for recording changes in the cost of the property unit as a result of additions, replacements, and retirements.
- AWK has formal policies and practices related to plant accounting and work orders, including:
 - Capital Investment Management Policy and Practice.
 - Capital Project Re-forecasting Practice.
 - Allowance for Funds Used During Construction Policy.
- Charges against a Funding Project can only occur via work orders. The Project Manager is responsible for maintaining each work order and advancing it through its stages in from project initiation, to project close.
- On a monthly basis, the Project Manager re-forecasts the capital project. PowerPlant updates the work order with actual costs from the general ledger, and the Project Manager enters the value of work performed that reflects current project status and explains the basis of the reforecast.

- The Project Close-Out process is the responsibility of the Project Manager. During the close out process, the SSC UPA group is notified and it performs the back office utility plant accounting tasks.
 - The financial closeout of the project includes taking necessary actions in PowerPlant to ensure the assets constructed and/or installed are properly identified, classified and converted from Construction Work in Progress to Utility Plant in Service.
 - Similarly, if assets are retired, these are also identified, classified and converted to retirement accounts.
- Additional activities occur to monitor post in-service invoicing and ensure timely final “completion” is recorded in PowerPlant. There are ten fixed Asset SOX controls which provide assurance that fixed assets are properly recorded.

20. The roles and responsibilities of the NJAW project managers and the SSC utility plant accounting group are appropriate.

- The Project Managers input data into the PowerPlant system to track capital project costs and status, while SSC UPA group performs “back office” plant accounting tasks.
- The project managers are responsible for plant accounting-related inputs to PowerPlant, including:
 - Work order initiation (with cost estimate) and subsequent transactions.
 - Monthly re-forecasting of a capital project to update the cost estimate to reflect actual recorded costs, the value of work performed (used for the accrual by UPA), and projected costs of the remaining work to complete the project.
 - “As-built” the work order when the project is completed (categorizing actual costs by property unit and whether addition or removal).
- The SSC utility plant accounting group:
 - Provides support to project managers regarding work orders, the use of the Power Plant system, and other fixed asset issues. (e.g. classification of costs)
 - Performs monthly closing of work orders to the continuing property records.
 - Ensures the depreciation, overhead, AFUDC amounts are correct.
 - Reconciles plant accounts.

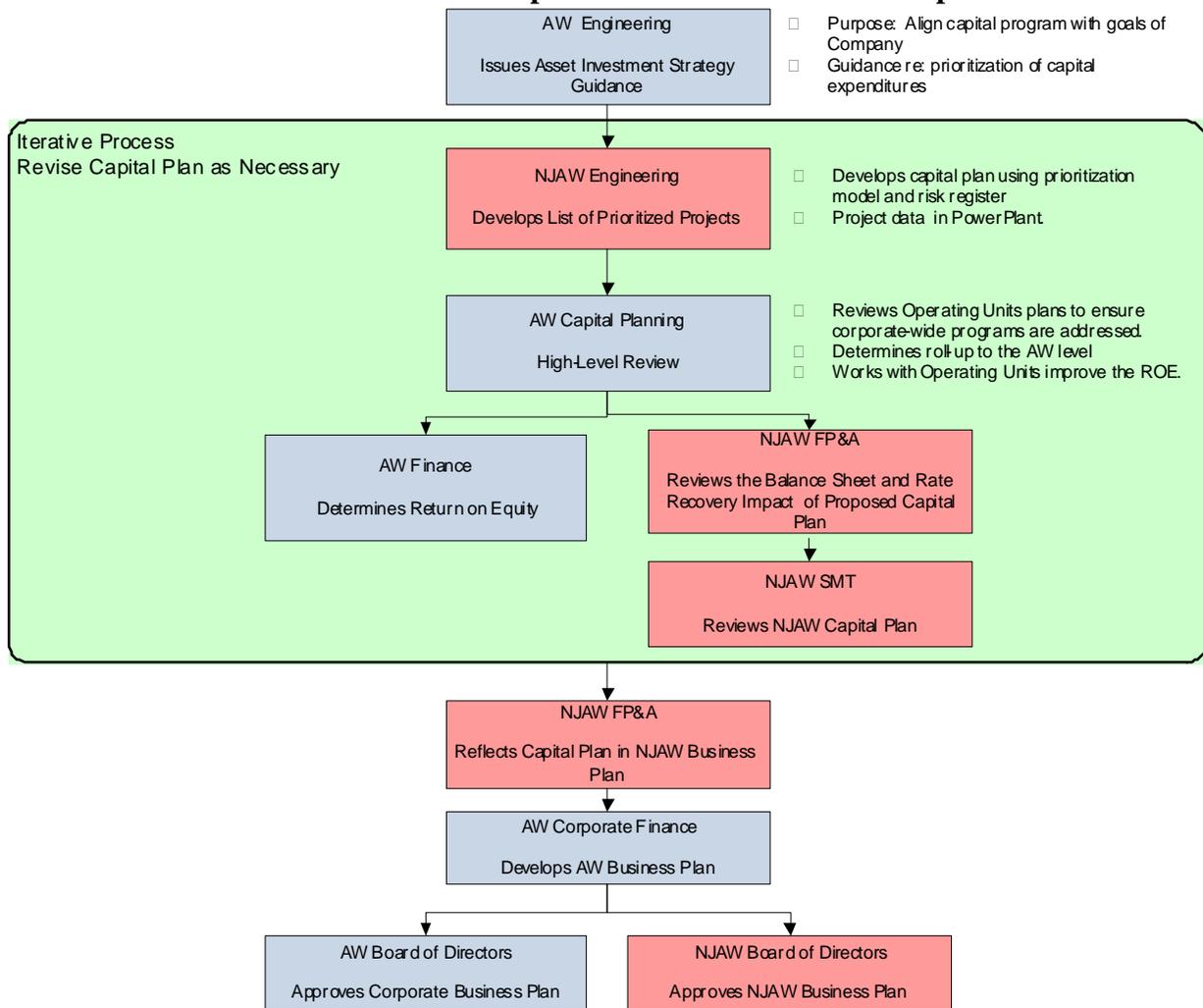
21. The roles and relationships between organizations responsible for capital planning are appropriate.

- The principal organizations involved in the development of the NJAW capital plan are NJAW Engineering (the Asset/Capital Planning group) and American Water Engineering (part of AWK’s Regulated Operations organization). Within AWK

Engineering, the Asset/Capital Planning group and the Enterprise Capital Program group are both involved in capital planning.

- An overview of the NJAW/AWK annual Five-Year Capital Planning process is shown in **Exhibit XII-4**. The development of the capital plan is an iterative process. Once NJAW and AW Engineering identify and review the initial list of projects, NJAW Finance and AWK Corporate Planning look at rate impact, return on equity, impact on the overall business plan, and other factors. All organizations then work together to refine NJAW’s capital plan during the financial “business planning” process.

Exhibit XII-4
Overview of the Annual Development of Five-Year NJAW Capital Plan



22. The process to develop and approve the capital plan is appropriate.

- AWK Engineering develops a corporate asset investment strategy and releases it to New Jersey and other operating companies prior to the development of their capital

plans. The asset investment strategy includes high level corporate guidance, including anticipated enterprise-wide budget ceilings, the need for inclusion of company-wide projects, changes in assumptions from the previous five-year plan, and general administrative guidance.

- NJAW develops a prioritized list of projects using risk registers and prioritization models and prepare their capital plans in PowerPlant, which is integrated with the Company's financial systems. (See Chapter X – Operations, for a discussion of the determination of projects included in NJAW's capital plan)
- NJAW Finance performs an initial review of the balance sheet and rate effect of the proposed plan. Once NJAW completes its initial capital plan, AWK Engineering performs a high level review of the plan to confirm adherence with the initial corporate guidance, and address any issues as necessary.
- Following the AWK Engineering review of the proposed operating units' proposed capital plans, AWK Corporate Planning reviews the rate of return on equity and overall budget levels.
- Following the initial submission of the capital plan to Corporate, NJAW's FP&A team prepares the remainder of the Business Plan. There could be a number of iterations to the plan before the final desired results are achieved.
- Formal approval of the Capital Investment Plan occurs when the AWK Board approves the Company's overall business plan, inclusive of the Capital Investment Plan. The NJAW president is then responsible for getting the NJAW Board approval for its portion of AWK's overall Business Plan.

23. AWK's practice of allocating capital to its regulated companies does not result in significant changes to NJAW's capital plan.

- AWK allocates capital to states partially based on its return on equity (ROE) in the different states. According to the 2009 Asset Investment Strategy Guidance, capital is directed more to states with rate regulation that supports and encourages capital investment (e.g., through an infrastructure renewal surcharge mechanism). There is no cross-prioritization between operating units.
- During the Business Plan development process, AWK finance determines the impact of the capital plan on each operating unit's ROE. If necessary, the AWK Enterprise Capital Program group will work with the operating units to reduce or change its plan to improve the ROE. (e.g., scheduling capital investments in accordance with rate case timing). If there is a need to reduce the overall capital plan amounts, the reductions are not evenly distributed across the states. States with better ROEs will have a smaller reduction.
- NJAW's 2009 Authorized ROE is 10.3, which coincidentally is the average ROE of the 16 AWK regulated entities. Note that a company's realized ROE may differ from the authorized rate.

- According to NJAW personnel, there are no significant reductions in NJAW capital program as it goes through the iterative development process. According to AWK and NJAW personnel, there are seldom significant modifications to the NJAW capital plan for ROE concerns. As shown in **Exhibit XII-5**, in 2008 and 2010, AWK approved the entire CIP amount NJAW submitted to corporate for Investment (unique, one time funding projects with a definitive start and stop and no dollar minimum or maximum) and Recurring Projects (see **Exhibit XII-6**). In light of the nation-wide financial crisis in 2008, AWK did make reductions to the 2009 capital plans originally submitted by NJAW.

Exhibit XII- 5
NJAW Capital Plans Developed, Submitted and Approved
Investment Projects (IPs)

Period	Dollars (Millions)				Number of Projects			
	CIP Dev. By NJAW Eng.	CIP Submitted by NJAW to AWK	CIP approved by AWK	Actual Year One Expenditures	CIP Dev. By NJAW Eng.	CIP Submitted by NJAW to AWK	CIP approved by AWK	Actual Year One Expenditures
Year One of the Capital Plan (Capital Budget)								
2008	\$117.00	\$117.00	\$117.00	\$107.50	112	112	112	122
2009	\$87.90	\$87.90	\$27.40	\$26.80	102	102	49	76
2010	\$69.10	\$69.10	\$69.10	N/A	84	84	84	N/A

Exhibit XII-6
Recurring Projects

Period	Dollars (Millions)			
	CIP Dev. By NJAW Engineering	CIP Submitted by NJAW to AWK	CIP approved by AWK	Actual Year One Expenditures
Year One of the Capital Plan (Capital Budget)				
2008	\$97.10	\$97.10	\$97.10	\$96.10
2009	\$56.30	\$56.30	\$52.80	\$54.20
2010	\$75.40	\$75.40	\$75.40	N/A

24. NJAW and AWK have an appropriate process to review and control capital expenditures.

- Capital expenditures are approved through the AWK capital investment management (CIM) process.
- The CIM process consists of a sign-off of the technical and functional aspects of individual projects requiring approval in a given month, and the ultimate approval of

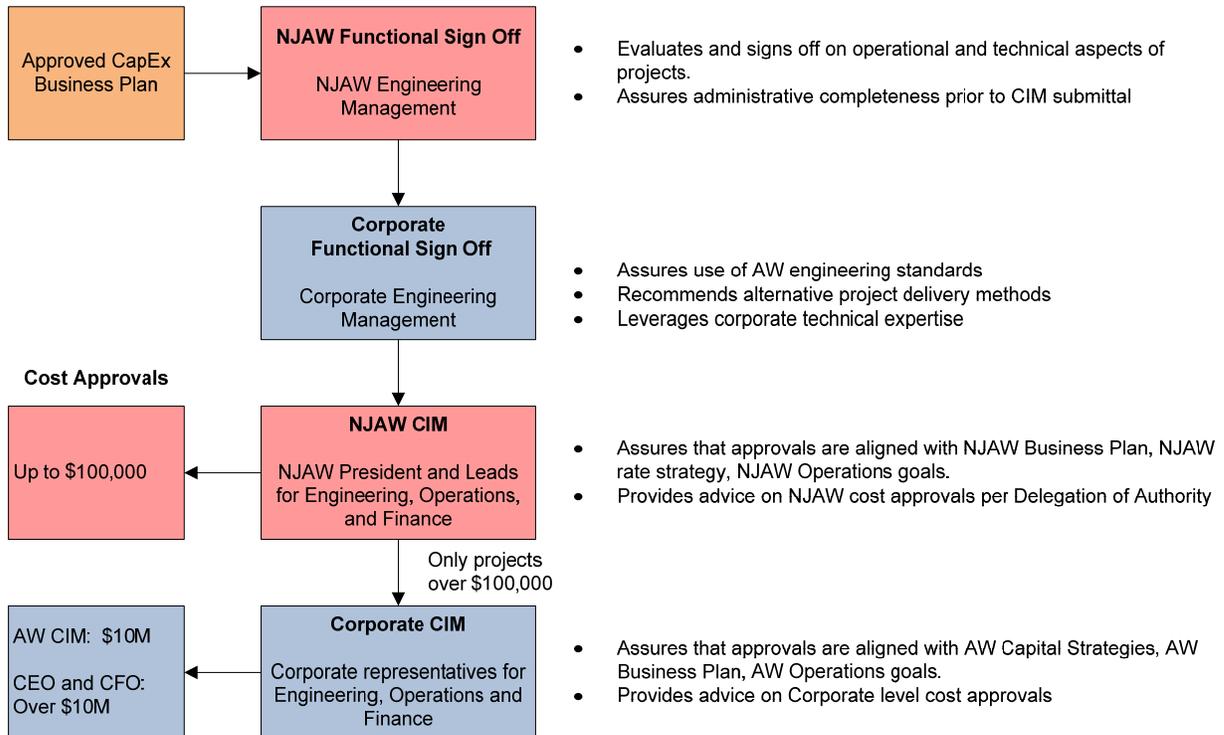
individual projects in accordance with a formal delegation of authority policy. The NJAW Delegation of Authority is shown in **Exhibit XII-7**.

**Exhibit XII-7
Delegation of Authority**

Position	Approval Level
AW CEO and CFO	Over \$10 million
AW CIM	Up to \$10 million
NJAW CIM	Up to \$100,000

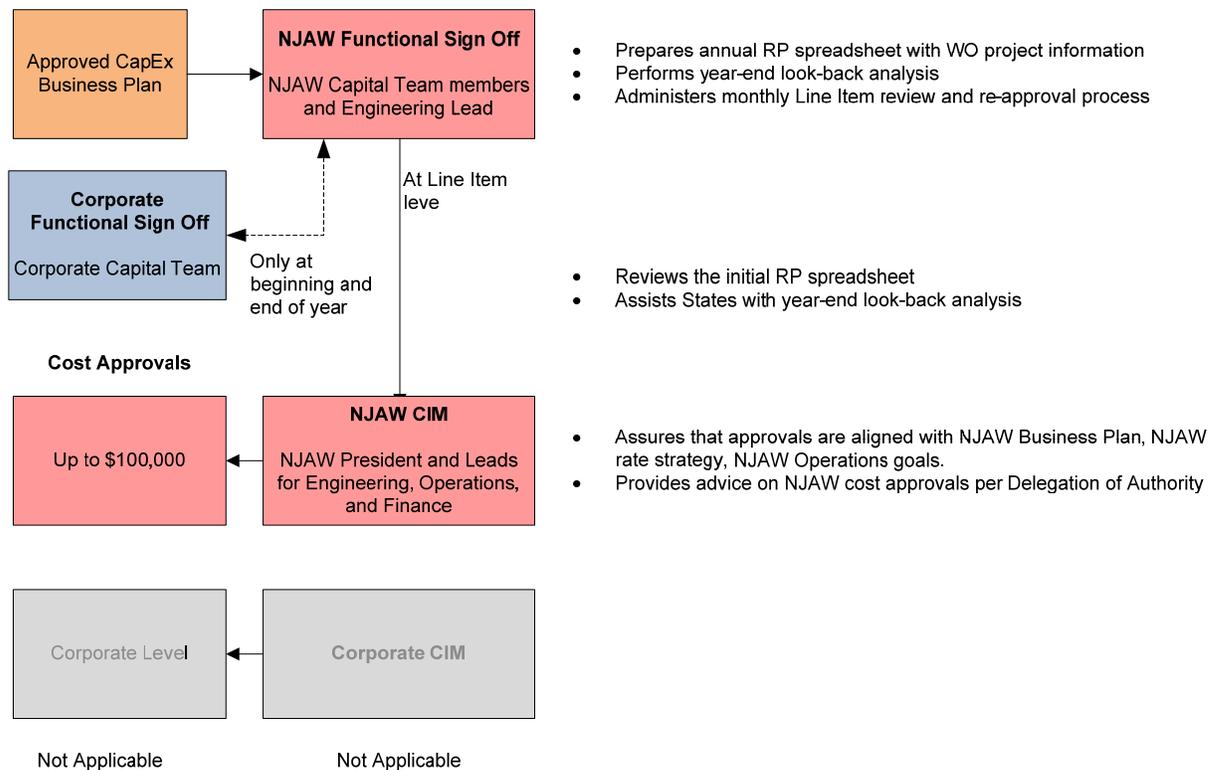
- An overview of the monthly IP project approval process is shown in **Exhibit XII-8**.
 - NJAW and AWK Functional Sign-Off (FSO) committees approve the technical and functional aspects of the project.
 - Proposed projects are then presented to the NJAW Capital Investment Management (CIM) Committee, which provides concurrence on scope and schedule, and advises the NJAW President regarding cost approvals.
 - If the project cost exceeds the NJAW delegation of authority, the project is elevated for review by the Corporate CIM.

**Exhibit XII- 8
Monthly IP Project Approval Process**



- The RP Funding Projects approval process is shown in **Exhibit XII-9**.
 - All Line Items are approved initially at the beginning of the year, supported by detailed Work Order level projects for known projects, and estimates for unknown projects based on historical spend.
 - The Line Items are reviewed each month during the year, and re-approved as needed.
 - The RP Functional Sign Off: is required prior to the beginning of the year approval. At year end, NJAW performs a comparison of the initial year proposed spend for each Line Item to the actual spend.

**Exhibit XII-9
RP Funding Project Approval Process**



E. Recommendations

1. Document the process for developing the five- year business plan. (Refers to Finding XII-8)
2. Take steps to improve controls over the scope and cost of support provided NJAW by AWWSC. (Refers to Finding XII-18)

XIII. AFFILIATE COST ALLOCATIONS & RELATIONSHIPS (3.11)

New Jersey American Water (NJAW) is a New Jersey utility owned by American Water Works Company, Inc. (AWK), a holding company that also owns numerous regulated and non-regulated companies throughout the United States. **Exhibit XIII-1** provides a summary of the AWK organization and NJAW affiliates. In executing its regulatory responsibilities, the BPU must monitor the transactions between NJAW, its holding company, other regulated utilities, and non-regulated business enterprises to determine if utility operations or costs are adversely affected by its holding company or affiliate relationships.

Exhibit XIII-1 AWK Organization and NJAW Affiliate Relationships

Unregulated Affiliates	Regulated Affiliates
American Lake Water Company American Water Capital Corp.(AWCC) American Water Enterprises, Inc.(AWE) AAET, Inc. - AAET, L.P. • EA2 Systems, L.C. American Water Enterprises Holding, Inc. - American Water Canada Corp. • American Water Carbon Services Corp. (includes Horseshoe Carbons Incorporated) • American Water Services Underground Infrastructure Corp. • Terratec Environmental Ltd. (includes Prism-Berlie (Windsor) Limited, Uniflo Limited, Braemar Acres Limited) - American Water (USA), Inc. • Mobile Residuals Management (USA), Inc. • American Water Services CDM, Inc. American Water Industrials, Inc. American Water – Pridesa LLC American Water – Acciona Agua LLC E'town Services, LLC Edison Water Company Elizabethtown Water Services, LLC Environmental Management Corp. - EMC Batesville, LLC - EMC of St. Charles County, LLC Liberty Water Company American Water Operations and Maintenance, Inc. American Water Services, LLC Illinois Lake Water Company American Water Resources, Inc. American Anglian Canada Company American Water Works Company, Inc. (AWK) E'town Properties, Inc	Arizona-American Water Co. California-American Water Co. Hawaii-American Water Co. Illinois-American Water Co. American Lake Water Co. Indiana-American Water Co. Iowa-American Water Company Kentucky-American Water Co. Long Island Water Company Maryland-American Water Co. Michigan-American Water Co. Missouri-American Water Co. New Jersey American Water Co. New Mexico-American Water Co. Ohio-American Water Co. Pennsylvania-American Water Co Tennessee-American Water Co. Texas-American Water Co. Virginia-American Water Co. United Water Virginia, Inc. West Virginia-American Water Bluefield Valley Water Co. Merged into NJAW: Elizabethtown Water Company The Mount Holly Water Company Applied Wastewater Mgt. Co.

<p>American Water Works Service Company, Inc. (AWWSC) American Water Services LLC Laurel Oak Properties Corporation TWH LLC E'town LLC - Applied Water Management, Inc. • Applied Wastewater Services, Inc. • Applied Water Management of Delaware, Inc. - Hydro-Aerobics, Inc. PWT Waste Solutions, Inc. UESG Holdings, Inc. TWNA, Inc. formerly Thames Water North America, Inc. OMI/Thames Water Stockton, Inc.</p>	
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As a member of the AWK family, NJAW regularly receives and provides services to certain affiliates. The relationships between NJAW and its affiliates along with the products and services provided are summarized in **Exhibit XIII-2**. Most of NJAW’s affiliate transactions are with American Water Works Service Company (AWWSC) which includes the Shared Services Center (SSC) and the Customer Service Center (CSC) which is a shared service provider to NJAW, other regulated utilities, and non-regulated businesses. AWWSC accounts for 88 percent of the dollar amount of all NJAW affiliate transaction activity, excluding finance charges/interest payments and pass-thru wholesale water costs, provides the following services to NJAW:¹

- Internal Audit (IA)	- Accounting
- Administration	- Communications
- Corporate Secretary	- Engineering
- External Affairs	- Financial
- Human Resources	- Information Systems (IS)
- Investor Relations	- Operations
- Procurement	- Rates and Revenue
- Risk Management	- Customer Service
- Legal	- Business Development
- Water Quality	

In principle, shared service functions allow a large enterprise with multiple operating companies to centralize common functions, optimize business processes, and increase efficiency. The cost of the AWWSC, including the SSC and CSC is charged to and paid by all of the affiliates to whom services are provided by the AWWSC.

Costs are assigned to AWK operating companies through a combination of direct and allocated charges. Direct charges are used when a specific unit of time and/or expense is spent on an activity for a specific company. Allocations are typically used for indirect costs such as overheads or when a clear methodology is not available to direct charge. There are

¹ Transaction dollars shown in Exhibit XIII-2:
(\$37,080) ÷ ((all 2009 affiliate transactions) – (\$17,691 AWCC to NJAW)) = 0.8847

two major methods for allocating costs associated with a shared service center among the participants:

- Activity-based costing is a method of cost allocation that focuses on the costs of performing specific functions (processes, activities and tasks) of specific organizational units.² Activity-based accounting generates summaries of activity levels and their cost information related to specific products and services by providers to users.
- Cost-driven allocation (causal factors) is a method of assigning costs of products or services, by selecting drivers that approximate the underlying behavior of the costs to be allocated. Fixed costs do not vary with changes in activity resulting in cost drivers that do not reflect usage levels.

**Exhibit XIII-2
NJAW Affiliate Relationships**

Participating Entities	Products and Services	2009 Transactions (\$000)
AWWSC to NJAW	Services for central shared services, customer call centers, central lab services, procurement, information systems, human resources, water quality and environmental, security, engineering, and risk management	\$37,080
AWCC to NJAW	Cash management and financing services	17,691
AWM to NJAW	Operate and maintain NJAW's Pottersville Sewer Treatment plant. Design and manage the upgrade of NJAW's Pottersville wastewater treatment plant. Haul residuals from specified water treatment plants	388
AAET, L.P. to NJAW (Consolidate GAC Treatment)	Carbon and carbon services to water treatment facilities	527
NJAW to AWR	Support services related to customer service line protection plans	195
NJAW to Edison Water Company	Operates, maintains, and repairs water system to support EWC's contract with the City of Edison.	771 (excludes bulk water sales)
NJAW to Liberty Water Company	Operates, maintains, and repairs water system to support LWC's contract with the City of Elizabeth.	1,359 (excludes bulk water sales)
NJAW to E'town Services, LLC	Operates, maintains, and repairs sewer and wastewater systems to support E'town Services' contract with the City of Elizabeth	806
NJAW to AWE	Labor and oversight to support AWE's contract with the Borough of Avalon	719
NJAW to E'town Properties, Inc.	Nominal management responsibilities. A former real estate enterprise the company is currently dormant.	
NJAW to Elizabeth Water Services	Processing fees for Customer protection plan accounting	68

² http://www.sourcimgmag.com/dictionary/activity-based_accounting-2.htm

Activity-based costing offers the most accurate methodology for assigning costs as it provides the clearest connection between activity level, cost and user. However, activity-based costing can be complex to implement. AWWSC utilizes a combination of direct charges and cost-driven allocated charges to NJAW and does not utilize activity-based costing.

Services obtained from affiliates are typically formalized by agreements between the supplier and consumer of services. Similar to a contract between an outside vendor and the company, service agreements provide a mechanism for governing the business relationship between the regulated utility and the services organization. Typically, service agreements address:

- Unbundled products and services provided.
- Specific timing, frequency and costs associated with each product and service.
- Measures of performance for each product and service as delivered.

Optimally, service agreements between the regulated utility and its affiliated services provider contain the following key elements:

- Top management commitment
- A participative approach
- Top to bottom involvement of staff
- Ongoing communication between the user and provider organizations
- A sound management framework with regulatory approvals
- Defined metrics for measurement of performance and costs
- Incentives and penalties for vendor performance
- Regular review of service levels
- Sufficiently detailed policies and procedures
- Benchmarked services
- Periodic alignment with utility user's needs
- Strong performance management with transparency.

Cost allocation methodologies associated with charges for services obtained from affiliated providers typically apportion costs based on a share of a variable metric such as number of employees, computer usage and square feet of a facility. Depending on the allocation methodology, there is potential for cross-subsidization between business units. NorthStar analyzed the NJAW's cost allocation methodology for accuracy, compliance and to identify any subsidies that occur between NJAW and its affiliates.

A. RFP Objectives

In the RFP for this audit, the BPU identified the following objectives for the review of NJAW's affiliate cost allocations and relationships.

- Review and assess affiliate cost allocation methodologies to determine accounting and allocation procedures for separating the costs of inter-company transactions, including all service company related charges.
- Determine if current accounting and allocation procedures are equitable, fair, and do not favor certain affiliates over NJAW and its ratepayers.
- Explain the allocations and rationale for the allocation methods, and make recommendations for adjustments if appropriate.
- Identify the accounting and allocation procedures for separating the costs of inter-company transactions of NJAW from affiliates.
- Determine the accuracy of allocations when allocating joint/common costs between NJAW and its affiliates. Any discrepancies shall be corrected by providing direct cost allocations when possible and explanations where the costs cannot be directly allocated.
- Review the time sheet reporting practices of employees with shared responsibilities to determine allocations.
- Determine if the duties of employees who bill time for NJAW and/or its affiliates permit cross-subsidization.
- Evaluate competitive and non-competitive bidding procedures.
- Identify all of NJAW's lease arrangements with its affiliates.
- Determine if the terms of the arrangements are consistent with lease arrangements in competing local markets, conform to recommended cost allocations, and appear to be set at arm's-length.
- Review affiliate charges and cost allocation methodologies among NJAW and its affiliates for adherence to applicable legal, regulatory, and contractual requirements.
- Examine and determine if the holding company structure, affiliates and their diversified activities have had or may have any detrimental effects on NJAW.
- Review and evaluate NJAW's interactions with its affiliates.
- Review NJAW's files covering all contracts and transactions with other affiliates.
- Evaluate the independence of purchasing on behalf of NJAW on all staff levels.
- Assess whether performance evidences that purchasing is acting in the best interests of NJAW and its ratepayers.

- Evaluate NJAW’s relationship with its affiliates and the ability of NJAW’s internal controls and structure to ensure that purchases made on behalf of NJAW are in the best interests of NJAW and its ratepayers.
- Examine and determine if NJAW has an internal system to provide assurance that its goals and objectives are accomplished at the lowest possible cost and maximum benefit to its ratepayers. The internal controls should give a true and accurate account of the transactions of NJAW and its affiliates, and should show that the transactions have been carried out with integrity and according to standards consistent with regulatory and legal requirements.
- Examine and determine if NJAW has internal controls that protect against irregular, illegal, and/or improper transactions.
- Evaluate the internal controls and flow of information between NJAW and its affiliates.
- Evaluate all correspondence between directors and officers to determine if discussions were conducted at arms’-length and in the best interests of NJAW’s ratepayers.

B. Evaluative Criteria

In conducting our review of NJAW’s affiliate cost allocations and relationships, NorthStar used the following criteria.

- Do adequate policies and procedures exist for allocating allowed common costs?
- Are allocated costs based on causal factors?
- Does NJAW have adequate internal controls to prevent against improper, irregular, or illegal transactions?
- Are common costs allocated in accordance with policies and procedures?
- Do pricing policies between affiliate interests adversely affect New Jersey ratepayers?
- Are lease arrangements between the utility and its affiliates market based?
- Is the cost allocation methodology in compliance with applicable regulatory, legal, and contractual requirements?
- Have NJAW and AWK conducted sufficient analysis to guarantee that service company and unregulated affiliate company services are at or below market price?
- Does the cost allocation process create a market advantage for affiliates or create subsidies?

- Are business development charges to NJAW appropriate?

C. Audit Tasks

To complete the review in this area, NorthStar performed the following tasks:

1. Reviewed and assessed affiliate cost allocation methodologies to determine accounting and allocation procedures for separating the costs of inter-company transactions, including all service company related charges.
2. Determined if current accounting and allocation procedures are equitable, fair, and do not favor certain affiliates over NJAW and its ratepayers.
3. Reviewed the methods for allocating costs.
4. Identified and evaluated informal time allocation procedures.
5. Identified the accounting and allocation procedures for separating the costs of inter-company transactions of NJAW from affiliates.
6. Determined the accuracy of allocations when allocating joint/common costs between NJAW and its affiliates. Any discrepancies shall be corrected by providing direct cost allocations when possible and explanations where the costs cannot be directly allocated.
7. Reviewed the time sheet reporting practices of employees with shared responsibilities to determine allocations.
8. Determined if the duties of employees who bill time for NJAW and/or its affiliates permit cross-subsidization.
9. Evaluated competitive and non-competitive bidding procedures.
10. Identified all of NJAW's lease arrangements with its affiliates.
11. Determined if the terms of the arrangements are consistent with lease arrangements in competing local markets, conform to recommended cost allocations, and appear to be set at arm's-length.
12. Reviewed affiliate charges and cost allocation methodologies among NJAW and its affiliates for adherence to applicable legal, regulatory, and contractual requirements.
13. Examined and determined if the holding company structure, affiliates and their diversified activities have had or may have any detrimental effects on NJAW.
14. Reviewed and evaluated NJAW's interactions with its affiliates.
15. Reviewed NJAW's files covering all contracts and transactions with other affiliates.

16. Evaluated the independence of purchasing on behalf of NJAW on all staff levels.
17. Assessed whether performance evidences that purchasing is acting in the best interests of NJAW and its ratepayers.
18. Evaluated NJAW's relationship with its affiliates and the ability of NJAW's internal controls and structure to ensure that purchases made on behalf of NJAW are in the best interests of NJAW and its ratepayers.
19. Examined and determined if NJAW has an internal system to provide assurance that its goals and objectives are accomplished at the lowest possible cost and maximum benefit to its ratepayers.
20. Determined if internal controls should give a true and accurate account of the transactions of NJAW and its affiliates.
21. Determined if transactions are carried out with integrity and according to standards consistent with regulatory and legal requirements.
22. Examined and determined if NJAW has internal controls that protect against irregular, illegal, and/or improper transactions.
23. Evaluated the internal controls and flow of information between NJAW and its affiliates.
24. Evaluated correspondence between directors and officers to determine if discussions were conducted at arms'-length and in the best interests of NJAW's ratepayers.
25. Reviewed rates, underlying costs, and allocation methodologies and determine if factors are based on reasonably related causal data.
26. Compared allocation methodologies to industry accepted practices.
27. Reviewed the appropriateness of business development charges to NJAW.

D. Findings and Conclusions

1. NJAW does not prepare separate affiliate transactions reports.

- NJAW cannot provide the costs from 2007 through 2009 for a contract between Applied Water Management and AWWSC to provide engineering services to NJAW.
- NJAW has financial records of charges for eleven contracts listed in Exhibit XIII-2 but has only copies of five of the contracts. NJAW does not have copies of the six contracts associated with services from NJAW to its affiliates.

- While NJAW includes all of its transactions in its consolidated financial statements, it does not prepare separate intercompany or affiliate transaction reports. The AWWSC monthly bill quantifies affiliate transactions.
- Less than seven percent of all hours charged to NJAW were direct charges in 2009.
- The primary directive of AWK’s cost allocation manual to utilize direct charges whenever possible is not achieved. AWWSC’s cost allocation manual specifically requires the following:
 - “Whenever possible, Service Company expenses are charged directly to the specific affiliate (regulated or non-regulated) that benefits from the underlying work.”
 - “Service Company expenses that cannot be direct charged to a specific affiliate are allocated via formulas used by Service Company employees for coding all time and expenses”.
- Less than seven percent of all hours charged to NJAW were direct charges in 2009 as indicated in **Exhibit XIII-3**.
- Allocated charges should represent product and service costs that cannot readily be assigned to a specific company. AWWSC has implemented an accounting and charging system for products and services that captures the provider costs but is indifferent to the recipients. Only seven percent of the work performed can be specifically assigned NJAW leaving 93 percent of charges allocated.
- When the hours are adjusted by removing capital projects from the totals, the percentage of direct charges decreases to 5.2 percent.

**Exhibit XIII-3
Direct Charges to NJAW for 2009**

Type of Direct Charge	Hours	Percent
Expense Charges	28,320	4.0 %
Capital Project Charges	7,636	1.0
Total – Direct Charges	35,956	6.6
Total – Allocated Charges	509,322	93.4
Total – Direct and Allocated	545,277	100.0 %

2. AWWSC does not direct charge NJAW for its services to the extent possible.

- While the time reporting system allows for direct charges, functional unit managers do not organize staff, assign or schedule work to comply with the direct charge policy.
- Internal audits are conducted on a subject matter by particular company basis. Hours associated with specific audits can and should be charged directly to the recipient of

the audit work. In 2009, 100 percent of all Internal Audit hours charged to NJAW were allocated.

- Accounting services are provided to a specific client. In 2009, 89 percent of all accounting hours charged to NJAW were allocated for the following accounting services: accounts payable, financial reporting, general accounting, tax accounting, cash management, and fixed asset accounting. The only allocated charges that NJAW should receive are those associated with AWK accounting requirements.
- In 2009, 100 percent of call center operations were allocated based on the number of customers. Direct charging by call would minimize allocations.
- In 2009, 100 percent of all business development hours charged to NJAW was allocated. Descriptions of the work performed by this organization question the value and necessity to NJAW ratepayers. Work performed specific to NJAW service territory growth should be the only charges for business development.

3. AWWSC utilizes two levels of cost allocation.

- The first level, Tier 1, allocates costs into two areas: regulated and non-regulated. There are no company-specific costs identified at this first level but rather a regulated companies' pool of costs and a non-regulated companies' pool of costs. **Exhibit XIII-4** identifies the ten types of Tier 1 allocations.
- After the costs are allocated to the regulated (and non-regulated) segments of AWK, they are distributed to NJAW based on NJAW's prorated share of customers, also called a Tier 2 allocation. This results in all costs from AWWSC to NJAW as direct charged or allocated by customer. **Exhibit XIII-5** provides a process flow diagram of the allocation methodology used by AWWSC.

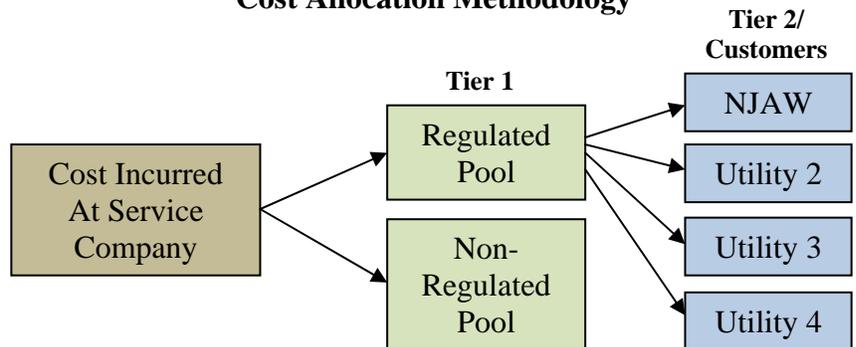
4. AWWSC's cost allocations are not entirely based on direct causal factors.

- Over-utilization of allocation factors results in limited managerial accountability over costs charged to NJAW.
- Costs are applied to NJAW through a series of time sheet codes called formulas. Formulas represent Tier 1 multiplied by Tier 2. The resulting product is applied to the cost. As an example:
 - Formula 100008 has both Tier 1 and Tier 2 components. Tier 1 is based on employees of both regulated and non-regulated operating companies and Tier 2 is based on customers in the regulated operating companies.
 - The regulated pool represents 90.06 percent of the employees. NJAW has 19.22 percent of the regulated customers.
 - Each cost coded to formula 100008 results in a 17.3 percent allocation to NJAW (0.9006 times 0.1922).

**Exhibit XIII-4
Tier 1 Allocations**

- Three-Factor Formula (#1) – Includes the primary cost drivers of operating revenues, net property, plant and equipment and employees which are common to the operation of regulated and non-regulated affiliates. The metrics are equally weighted within the formula.
- Two-Factor Financial Services Formula (#2) – Includes the primary cost drivers of operating revenues and employees. The metrics are equally weighted within the formula.
- Revenue Factor (#3) – Use operating revenues as a surrogate for customers counts due to the relative size differences of customers (e.g., two O&M contracts may support significantly different sized customer bases).
- Personal Computer Factor (#4) – Includes the primary cost driver for IT services associated with acquiring and supporting PC's. Metric: number of personal computers.
- Total Premises Factor (#5) – Includes the primary cost driver for IT services associated with the operation of AS 400 computers. Metric: number of premises maintained on the AS 400 database.
- Employee Factor (#6) – Uses count of active employees for all affiliates receiving services.
- Budgeted Capital Projects and Engineering Project Management Factor (#7) - Includes the primary cost driver for services associated with capital projects and costs not directly assignable to task orders. Metric: dollar value of budgeted capital expenditures for the year.
- Research Authorization Project Factor (#8) – Includes the primary cost driver for services associated with water quality research projects. Metric: dollar value of budgeted research projects for the year. This metric will only include affiliates that are receiving service.
- Purchase Orders and Purchasing Card (P-Card) Factor (#9) – Includes the primary cost driver for transactional services associated with purchasing and paying invoices for goods and services. Metric: number of purchase orders and P-Card transactions on an annual basis.
- Employee and Retiree Factor (#10) – Uses count of active employees and retiree's by affiliate as an allocation basis.

**Exhibit XIII-5
Cost Allocation Methodology**



- Formula 100001 is calculated in a similar manner but these services are utilized by only the regulated businesses in AWK. The regulated pool (Tier 1) represents

100 percent of the costs. Each cost coded 100001 results in a 19.22 percent allocation to NJAW (1.0 times 0.1922).

- AWWSC has not performed analyses to support a correlation between the work and how the drivers are appropriate proxies. AWWSC employees charged 545,277 hours to NJAW in 2009. The hours allocated by driver is shown in **Exhibit XIII-6**. Ten allocation formulas represent 90 percent of the total hours.
- Two instances where the cost allocations are not based on any causal relationships are:
 - AWWSC utilizes an arbitrary split of 50-50 between regulated and non-regulated pools for the Business Development Function. (DRs 93 and 166)

**Exhibit XIII-6
Most Utilized Allocation Factors**

Name	Utilizing Organizations	Time Sheet Code (Formula)	Hours	Drivers	
				Tier 1	Tier 2
Customer Call Centers	Customer Service	100792	255,966	100 percent Regulated	Customers
Regulated Customers	Eastern Division Operations External Affairs, Finance, Human Resources, Operations Regulated Operations, Regulatory, Information Technology, Support Services, Supply Chain	100001	114,301	100 percent Regulated	Customers
Overhead	Internal Audit, Business Development, Business Transformation, Eastern Division Operations, External Affairs, Finance Human Resources, Investor Relations, Legal, Operations Property, Regulated Operations, Western Division Operations, Customer Service Centers, Information Technology, Support Services Center	999999	21,534	Three-Factor Average – General Plant, Revenues, Employees	Customers
Unknown	Call Centers	101088	19,748	New Factor - unknown	Customers
Plant, Revenue, and Employees (General Allocation Formula)	Internal Audit, Business Development, Finance Investor Relations, Operations, Information Technology, Support Services Center	100003	19,032	Three-Factor	Customers

Northeast Region Regulated	Finance, Human Resources Legal, Operations, Information Technology, Support Services Center	100074	17,957	100 percent Regulated	NJ/LI Customers
Water Customers	Information Technology Laboratory Services	100533	14,051	100 percent Regulated	Customers
Employees	Finance, Human Resources; Information Technology, Support Services Center	100008	11,170	Number of Employees	Customers
Plant, Revenue, and Employees	Operations, Information Technology	100736	6,965	100 percent Regulated	Customers
Supply Chain	Supply Chain, Business Transformation, Other	100111	4,507	100 percent Regulated	Customers

- AWWSC utilizes the three-factor formula to allocate its Internal Audit function. Almost 100 percent of the charges by Internal Audit utilize this formula. Over half of Internal Audit resources in 2009 were allocated to SOX compliance. While these charges may be ineligible for recovery in rates, NJAW was charged approximately 17 percent of the SOX compliance costs.

5. AWWSC utilizes one set of drivers at the Tier 1 level and then switches to customer count as the driver at the Tier 2 allocation level.

- If the drivers are valid at the Tier 1 level to establish the costs associated with the regulated businesses, the same drivers should be valid for each individual company in the regulated businesses.
- The switch from Tier 1 drivers to customer count raises the question as to which driver is valid and underscores the fact that the allocation factors are not based on causal factors.

6. NJAW is not always in compliance with its own procurement policy which is to obtain services through a competitive bidding process.³

- NJAW's policy to procure competitively states:
 - Competitive bidding is "preferred".
 - Competitive Procurement is always required for purchases of goods or services that are known or anticipated to exceed \$100,000.
 - Internal Buyers will solicit pricing from three or more qualified suppliers whenever possible.
- NJAW is not in compliance with its own procurement policy. "Service agreements or contracts between NJAW and its affiliates are not obtained through a competitive bidding process."

³ See Recommendation IV-4

- Only two contracts with affiliates were competitively bid.⁴ In one of the two “competitive selections”, the affiliate was selected at a higher cost over the only other bid submitted.
- Performance measures do not actively address procurement activities such as number of competitive bids obtained, or renegotiation of existing contracts.

7. NJAW receives some AWWSC services at a reasonable cost.

- AWWSC performs biennial salary surveys to compare wages with other comparable companies. The salary is based on subscriptions to over 15 national data sources. AWWSC targets the 50 percentile in each job category from executive level to lowest paying staff level.
- Customer service costs are at approximately the 50 percentile of other utilities reported in a 2007 Market Cost Comparison of Service Company Charges.

8. While NJAW does not lease facilities from its affiliates, it is unclear whether NJAW has a lease with AWWSC for its use of space at the Delran Water Treatment Plant.

- NJAW occupies 22 facilities of which 20 are owned by NJAW. The remaining two facilities are leased from a non-affiliated third party.
- NJAW shares office space with one affiliate AWWSC at 131 Woodcrest Road, Cherry Hill. NJAW and AWWSC have separate leases with the third-party owner. The lease is the same for both companies.
- AWWSC occupies space at the NJAW Delran Water Treatment Plant. It is unclear if a lease exists.

9. AWWSC may double count some of the customers when it determines its cost allocations based on customer counts.

- AWK has eleven regulated utilities that are both water and wastewater service providers. In calculating number of customers, the number of water customers and wastewater customers are added together to create total customers for a utility.
- NJAW cannot identify how many wastewater customers are also water customers.
- If NJAW provides both services, the rationale for double counting a customer is questionable.

10. AWWSC employees’ time directly charged to NJAW in 2009 was appropriate.

- There are only three employees who charge full time to NJAW. These employees are associated with NJAW’s finance function.

⁴ See Exhibit IV-4

- There are thirteen other employees that charge over half their time to NJAW. They provide services in finance, legal, and operations.
- Other direct employee charges to NJAW are the result of either capital project support or activities specific to NJAW.

11. There are no prohibitions on the types of transactions that NJAW may enter into with its affiliates.

- While NJAW does not have affiliate transaction reporting requirements, transactions with affiliates are recorded and quantified by NJAW.
- The types of transactions between NJAW and its affiliates are consistent with those utilized by a water utility. They include professional services such as, wastewater treatment, business support services, residual waste technical services, residual water treatment byproduct disposal, and customer service.

12. AWWSC's time reporting practices are generally appropriate.

- AWWSC employees are trained in the importance of properly tracking and reporting their time. Employees report their time based on the input of formulas. However there are no controls limiting which formulas an employee may utilize.
- Weekly timesheets are approved by supervisors and AWWSC has analysts who review monthly charges. AWWSC hosts a monthly debriefing meeting where charges can be challenged.
- While there are no monthly exception reports concerning time reporting, a group is responsible for checking charges.
- In January 2009, IA completed a limited audit of AWWSC charges and found “non-material” errors in time reporting for two of the allocation codes used for NJAW.

13. NJAW's affiliate contract files lack key documents.

- While NJAW has 15 contracts or agreements with affiliates it only has copies of nine contracts and contract files for eight. NJAW has BPU approvals for only two of the contracts and copies of the approvals are not part of the contract files.
- Amendments or service level agreements to the contract with AWWSC, RFP, bid evaluations, award information, invoices and cost analyses are not found in the contract files.

14. Tier 1 and Tier 2 allocation percentages are correctly calculated and applied to hours charged to NJAW by AWWSC.

- Tier 1 charges which split regulated charges from non-regulated charges are calculated correctly. **Exhibit XIII-7** shows the allocations between the regulated and non-regulated pools by type of driver.
- Tier 2 charges which split regulated costs into company specific costs by customer are calculated correctly based on the information provided.
- A January 2009 internal audit of a small sample of allocation factors found the factors contain the necessary information to correctly calculate the factors and that they are calculated correctly.

**Exhibit XIII-7
Regulated vs. Non-Regulated Pools**

Drivers	Regulated Share (percent)	Formulas Utilizing the Tier 1 Split
3 Factor – Revenue, Employees, and Plant	91.68%	100003
2 Factor – Revenue and Employees	87.97	None applied to NJ
Revenue	88.39	None applied to NJ
Employees	90.06	100008

15. NJAW has little control over service company costs, or budget overruns, or a method of determining the value of services received from AWWSC.

- NJAW receives a monthly budget versus actual statement from the service company, where variances can be analyzed but overruns must be accepted. The monthly statement includes:
 - Total costs
 - Actual to forecast budget reports
 - Costs by business unit
 - Employees charging time
- NJAW can challenge mischarges and have them reversed.
- Invoices to NJAW do not itemize charges. Direct charges in dollars versus allocated charges in dollars are not differentiated. Costs for labor, overhead, materials and contracts are itemized. The monthly statement does not quantify or provide an itemized description of specific services received for the costs incurred from AWWSC.

- NJAW does not have effective service level agreements to cover its transactions with AWWSC.⁵

16. NJAW does not have independent business relationships with its affiliates.⁶

- NJAW has no requirement to maintain independent business negotiations.
- The corporate entities involved, managers executing agreements among affiliates, and resources performing the services are all organizationally interrelated.
- Services obtained from NJAW affiliates are not the result of competitive bidding or evaluation of alternatives.
- The AWWSC services agreement is the same for all AWK regulated utilities including NJAW, without considering unique operating requirements or needs.

17. The principal roles of AWWSC and American Water Capital Corp. (AWCC) are to provide internal support services to NJAW and other AWW affiliates.

- AWWSC and AWCC exist to provide internal support to the NJAW and other AWK affiliates.
- A number of affiliates provide services to NJAW on a contract basis. These affiliates also provide various wastewater, sewer, and water services to companies other than AWK. **Exhibit XIII-8** provides a list of NJAW affiliates and their primary purposes.

**Exhibit XIII-8
NJAW Affiliate Business Purposes**

Affiliate	Purpose
AAET, L.P.	Supplies carbon regeneration materials to water facilities in the US
American Anglian Canada Company	Water and/or wastewater management and operating services (IA)
American Lake Water Company	Water pipeline company
American Water Canada Corp.	Contracts for O&M of water and/or wastewater facilities in Canada
American Water Capital Corp.	Funding vehicle for AWW and its utility subsidiaries
American Water Carbon Services Corp.	Supplies carbon regeneration materials to water facilities in Canada
American Water Enterprises, Inc.	Holding company for the non-regulated business;
American Water Operations and Maintenance, Inc.	Design, building and/or operation of water and wastewater facilities & operations, maintenance and management facilities in the US
American Water-Pridesa LLC	Contract to remedy, operate & manage the Tampa Bay Seawater Desalination Plant
American Water Resources, Inc.	a) Homeowner Services Group –protection programs b) Carbon Services c) Leasing (NOT managed by AWEG)
American Water Services CDM, Inc.	Joint venture operating the Tolt water treatment fac. in Seattle, WA

⁵ See Recommendation III-7

⁶ See Recommendation IV-2

Affiliate	Purpose
American Water Services Underground Infrastructure Corp.	Contracts CCTV inspection of water and/or wastewater pipes
American Water Works Company, Inc.	Water and Wastewater-related product and services
American Water Works Service Company, Inc.	Professional water and/or wastewater services to AWK affiliates
Applied Wastewater Management, Inc.	Regulated wastewater company
Applied Wastewater Services, Inc.	Current projects for engineering, construction operations and services primarily in wastewater
Applied Water Management of Delaware, Inc.	Current contracts for water and/or wastewater services
Applied Water Management, Inc.	Current projects for engineering, construction operations and services primarily in wastewater
Braemar Acres Limited	Currently owns real property for storage of lime materials used by Terratec Environmental Ltd. in Canada
E'town Properties, Inc.	Set up by Elizabethtown Water Company entity to hold real estate for development and/or sale
E'town Services, LLC	Holds wastewater services contract among E'town Corp, Elizabeth, NJ and the Union County Improvement Authority
EA2 Systems, L.C.	Current contracts to provide water and/or wastewater management and operating services
Edison Water Company	Manage water contract for Township of Edison, NJ
Elizabethtown Water Services, LLC	Provides water and sewer line protection contracts to former E'town Corporation customers in New Jersey
EMC Batesville, LLC	Formed for improvements made to, & operation of, a wastewater treatment plant & water reuse system in Batesville, Arkansas.
EMC of St. Charles County, LLC	Reg. sewer utility providing sewer services St. Charles City, MO.
Environmental Management Corp.	Design, build & operation services for water and wastewater assets of industrial firms and municipalities in the US and other countries.
Hydro-Aerobics, Inc.	Designing, manufacturing wastewater equipment (IA)
Laurel Oak Properties Corporation	Entity to hold real estate for development and/or sale
Liberty Water Company	Manage water contract for City of Elizabeth, NJ
Mobile Residuals Management (USA), Inc.	Mobile bio-solids & residuals management: CA and NJ
OMI/Thames Water Stockton, Inc.	Water and/or wastewater services
Prism-Berlie (Windsor) Limited	Holds contract to operate pelletizing facility in Windsor, Ontario
PWT Waste Solutions, Inc.	Water and/or wastewater services (IA)
Terratec Environmental Ltd.	Contracts for bio-solids management land application and disposal
TWNA, Inc.	Water and/or wastewater services

E. Recommendations

1. Develop a monthly affiliate transaction financial report which lists and totals NJAW intercompany and affiliate transactions throughout AWK. The report should include product or service, cost quantity, and associate contract numbers as necessary. (Refers to Finding XIII-1)
2. Expand the use of direct charging of AWWSC employee time where feasible. Use causal factors to justify cost allocations. (Refers to Findings XIII-2, XIII-3 and XIII-5)
3. Assess the practice of applying two allocation factors for a single cost. If Tier 1 allocations are utilized, utilize them for the entire allocation of the cost. (Refers to Finding XIII-6)

4. Execute a lease for AWWSC's use of space at the Delran Water Treatment Plant. (Refers to Finding XIII-9)
5. Discontinue counting customers that receive both water and wastewater service as two customers when determining allocation factors. (Refers to Finding XIII-10)
6. Complete documentation of affiliate contract files. (Refers to Finding XIII-14)

XIV. COMPANY CONTRACTOR PERFORMANCE (3.12)

NorthStar's review of New Jersey American Water's (NJAW) management of contractors focused on the utility's management and utilization of its contractors. Particular emphasis was placed on management of the "locate and mark" contractor. The decision to use in-house resources or subcontractors to perform field activities is a critical part of the construction services process for a utility. Internal resources which are permanently located in geographical areas typically perform the following types of work:

- Customer connections, damage and failure repair, public requirements and other blanket work (i.e. small scale, large volume work).
- Infrastructure maintenance projects.
- Work which will involve direct public interface.

Major capital projects often tax internal resources and require contracting with outside contractors for design, construction and other services. It is important to evaluate the risks and benefits of various contracting strategies. Major project contracting strategy, balances internal capabilities, administrative requirements and costs, the existing level of project definition, the relative potential for cost saving, and the risk of cost overruns under various contracting alternatives. Contractors are generally used to supplement internal work crews and level internal staffing requirements. Contractors are typically used for the following types of projects:

- Multi-year work programs backed up with volumes of work packages.
- Large projects and multi-year programs which can be bundled into a fixed or unit priced bid packages.
- Work which is highly variable for seasonable, economic or other reasons.
- Work which requires a low-skill level or a skill set outside the core competencies of the utility.

A mark-out is the term used for identifying utility facilities. The most common means of marking-out are flags, paint and stakes. Mark-outs identify the location of utility facilities prior to an excavation or other subterranean work that might damage the facilities. The work load in mark-outs can be sporadic. Compared to other utility positions this work requires less training and reduced skill sets to complete the required work. This makes it an obvious outsourcing opportunity.

A. RFP Objectives

In its RFP for this audit, the BPU identified the following objectives for the review of company contractor performance:

- Evaluate NJAW's method of reviewing the effectiveness of its contracted services to comply with its obligation to locate and temporarily mark its underground water and sewer lines in accordance with the requirements of the NJ One Call Law, NJSA 48:2-73 and N.J.A.C. 14.2.
- Identify the type and frequency of random field audits that are performed.
- Evaluate the procedure for reviewing the accuracy and detail of mark-outs.
- Identify the frequency and scope of audits that are performed at the mark-out contractor's facilities.
- Identify NJAW's process for determining when there is a need to modify procedures when deficiencies are discovered.
- Evaluate NJAW's procedures for inspecting the work of mark-out contractors it has engaged to install new and replacement lines and services.
- Identify NJAW's process for reviewing the performance of its contracted services in installing new and replacement lines and services.
- Assess the procedures, percentage, and areas of jobs that are inspected on a daily basis.
- Identify and analyze the inspection forms that are used, and recommend any revisions.

B. Evaluative Criteria

In conducting our review of NJAW's company contractor performance, NorthStar used the following criteria:

- Does NJAW oversee mark-out and construction contractors' work effectively?
- Does NJAW have an effective process to manage the mark-out contractor?

C. Audit Tasks

To complete the review in this area, NorthStar performed the following tasks:

1. Obtained a schedule of outside contractors and payment amounts.

2. Evaluated NJAW's method of reviewing the effectiveness of its contracted mark out service to comply with its obligation to locate and temporarily mark its underground water facilities in accordance with regulations.
3. Assessed the type and frequency of random field audits that are performed on the mark-out contractor.
4. Evaluated the procedure for reviewing the accuracy and detail of mark-outs.
5. Evaluated the frequency and scope of audits that are performed at contractor facilities.
6. Evaluated NJAW's procedures for inspecting the work of contractors it has engaged to install new and replacement lines and services.
7. Identified NJAW's process for reviewing the performance of its contracted services in installing new and replacement lines and services.
8. Assessed the procedures, percentage and areas of jobs that are inspected on a daily basis.
9. Reviewed existing contract management procedures to ensure protection and leverage to the utility.
10. Reviewed the process and procedures for contractor oversight.
11. Reviewed a sample of contracts delineating the utility's oversight and audit rights and procedures.
12. Identified and analyzed the inspection forms that are used.

D. Findings and Conclusions

1. **NJAW does not comply with certain provisions of the New Jersey one-call regulations.**
 - On October 15, 2007, certain amendments to the BPU's rules regarding Underground Facilities: One-Call Damage Prevention System, N.J.A.C. 14:2 et seq., went into effect. These new rules imposed obligations of an underground facility operator including NJAW to mark out customer-side and customer-owned water lines to the meter. NJAW sought a waiver of certain of the amendments and a stay of the effectiveness of the regulations.
 - These customer-owned water lines are not owned by NJAW but are operated and controlled by NJAW under the one-call regulations. For the water lines and mains in the streets owned and operated by NJAW, the Company possesses maps and drawings showing the location of the facilities so that they can properly maintain and operate them. In contrast, NJAW does not have information regarding the location of

the customer-owned services, and in many instances, NJAW believes that it has no reasonable way of knowing or locating these services.

- NJAW has contended that locating and marking these services would cause NJAW and its ratepayers to assume additional costs to mark out non-owned property and would add potential legal liability should they be hit. NJAW will in some cases perform the mark-outs of customer-owned facilities but does not do so in all cases.
- NJAW is not the only utility seeking a waiver; other purveyors are contesting the interpretation of the term "control" as applied to the service lines owned and controlled by the customer. NJAW and other purveyors are contending that they do not have complete information regarding the customer-owned service lines.

2. NJAW has not performed an analysis to support its use of contractors or in-house resources for mark-outs.

- NJAW uses a contractor, Premier Utility Services LLC (Premier), to perform mark outs. The contract with Premier is currently operating under the second amendment entered into on May 30, 2010. Premier is part of the Infrastrux group which provides a variety of services for utility transmission and distribution operations throughout the US and overseas.
- Premier mark-out services are priced for regular hours and after hours “emergency” mark outs.
- Premier will participate in damage investigations in situations where their mark-out is linked to a damage report, as required under their contract with NJAW. The investigation work is also priced for regular hour and after hours. Both rates are the same in the second amendment but after hours call-outs require a two-hour minimum. An hourly rate for other services outside the scope of mark-outs and damage investigations is also provided. The contract provides that Premier will respond to mark-out requests in accordance with all state laws including N.J.S.A 48:2-73 Underground Facilities Protection Act.
- Approximately 30 percent of NJAW mark-outs are conducted by Premier. The other 70 percent are conducted by NJAW employees.

3. While NJAW’s mark-out contractor has a quality control program, NJAW does not routinely inspect the work of the contractor.

- Premier has a “Quality Control and Evaluation Program” (the program).
- The quality program is the contractor’s and is not specific to NJAW, the water industry or New Jersey.
- The program includes audits, audit logs, responsibilities and defined roles but there is no indication that any of this is actually done by the contractor for NJAW. NJAW does not independently audit the work of the contractor.

- All field locates are video-taped by the contractor and the tapes are kept for review or in case of a claim. All damaged facility reports are received by NJAW and tracked. All damaged facility claims are reviewed with Premier to determine the root cause. If an unacceptable quality trend is observed, NJAW takes appropriate corrective action. NJAW can terminate the contract for unacceptable quality.
- NJAW does not directly inspect the contractor's work nor does it have inspection forms for doing so.

4. NJAW has inadequate information on its mark-out program to make informed decisions regarding its ability to comply with regulations.

- NJAW needs additional information to determine the level of contracting and the actual costs of marking out customer-owned services whether they are marked by in-house or contractor crews.
- NJAW also lacks basic information on what the other AWK companies do in terms of mark-outs, contracting and costs.
- NJAW has contented to the BPU that the costs of customer-side mark-outs are prohibitive and that there is no practical means of doing so. Yet, the company has virtually no qualitative data or analysis to support these assertions.

5. NJAW does not track the division of main or service work that is performed by contractors.

- One of the first steps in analyzing contractor performance is to determine what work and what quantity of work is performed by contractors. These aggregate numbers and productivity can then be compared to the performance to of in-house crews.
- NJAW does not know the number of services or the miles of main that were installed by contractors for the years 2006, 2007 and 2008.
- NJAW makes extensive use of contractors for T&D work. NJAW uses contractors for main and service installation work. The amount paid to contractors for facilities work for capitalized construction in 2008 was \$131 million.

6. NJAW does not compare T&D contractor performance and productivity against other contractors or against in-house crews.

- NJAW does not collect, maintain or use productivity data that would enable it to convert work requirements into reliable estimates of the amount of resources required.
- While NJAW construction inspectors and T&D supervisors observe contractor work, NJAW does not collect or analyze data to make decisions about the use of the contractors.

7. NJAW does not have a quality control or inspection process for its main and service contractors.

- NJAW has an environmental policy pertaining to water quality.
- While NJAW observes contractor jobs, the observations are not done within any defined inspection process (inspections per month or items to be inspected).

E. Recommendations

1. Modify the mark-out process and practices to ensure compliance with NJ regulations. (Refers to Finding XIV-1)
2. Evaluate the actual costs of using the mark-out contractor versus using in-house resources. (Refers to Finding XIV-2)
3. Develop a program for inspecting mark-out work rather than relying on contractor self-inspection. (Refers to Finding XIV 3)
4. Collect and retain appropriate information on the mark-out process whether performed by contract or in-house crews. (Refers to Finding XIV-4)
5. Incorporate contractor work into the work management systems with particular emphasis on identifying the actual costs and resources required to do individual tasks. (Refers to Findings XIV-5 and XIV-6)
6. Develop a quality control and inspection process for main and service contractors. (Refers to Finding XIV-7)