EXECUTIVE SUMMARY

This executive summary is in compliance with the Request for Proposal [RFP] 06-X-37900 issued March 13, 2006 by the Department of Treasury, Division of Purchase and Property for the BPU Audit of UWNJ & UWTR. The RFP requires the draft of the final audit report to include a summary of the audit process and all recommendations.

THE AUDIT PROCESS

The audit process was initiated in the public arena with the issuance of the RFP on 03/13/06. The issuing agency was the Department of the Treasury, Department of Purchase & Property. The using agency was the Board of Public Utilities, Division of Audits. Two weeks for electronic submission of questions concerning the RFP was allowed and ended on 03/27/06. The proposals were due from consultants on 04/27/06. After a mandatory protest period, the contract was awarded on 10/01/06. The BPU held an administrative meeting 10/17/06. The audit was initiated on the United Water [UW] property on 11/01/06 with a comprehensive presentation of the company and the organizational position of the utilities in question.

The period November through early March saw interviews take place and several rounds of requests for data. Hard copies of responses to data requests were stored in a data room maintained in the UW corporate head quarters building. Electronic copies were posted to a secure commercial data base management system via internet communication. UW responded to data requests in two weeks or less and demonstrated a continuous attention to the audit process.

The consultants prepared a draft of their respective areas of functional responsibility. These drafts were crossed checked for consistency and given an initial edit. The functional chapters were emailed to the BPU where they were reviewed and critiqued by analysts who attended interviews with the consultants. BPU comments were evaluated and, where appropriate, included in the draft version of the report.

On approval of the BPU, a copy of the draft report was provided to UW. Comment by UW was presented to the BPU. The BPU discussed the UW comments and where errors of fact were noted, PMC made appropriate

changes to this final report, which was submitted on May 31, 2007 providing execution of Line Item One of the contract. On October 18, 2007, an exit conference was held and twenty copies of this report were ordered in compliance with Line Two of the contract.

RECOMMENDATIONS

EXECUTIVE MANGEMENT

- **Consider placing the responsibility for political contributions under the duties of the ethics officer.**

- **Conduct a formal review of the spans of control and consider functional reorganization.**

This process should include, but not necessarily be limited to, the overall organization of the Chief Operating Officer, the manager of UWNJ, and the creation of a fully staffed Rates and Regulatory Division to reflect expected activity to seek rate relief.

- **Revisit the concept of "two black line" reporting relationships in favor of a traditional matrix management or specific shared services organization.**

Having two masters is a less than optimal organization structure. In a matrix organization, functional experts offer their skills to the administrative/management/project team members. In a shared services approach, functional activity is purchased, in essence, on an as-needed basis.

HUMAN RESOURCES

- **Written position descriptions can be reformatted to expand their use.**

Written position descriptions may be clarified by indicating whether the position is exempt, non-exempt or is subject to a bargaining unit agreement, including the pay scale grade.

For scheduling review, revision, or additional responsibilities, it may be helpful to consistently include an effective date on all position descriptions. Of particular importance would be the need to update the Director, Compensation- and HRIS dated May 2001, to include current activities.

During the course of the audit, position description headings were changed to contain complete information reflecting its segment within the organization, i.e., the department, title the position reports to, and titles of any positions that report to it. Universal descriptions that appear in multiple segments or departments of the organization could be so noted.

- **The Company should explore a Part C Private Fee for Service to reduce retiree medical costs.**

The Director of Benefits may wish to investigate whether its medical plan administrator offers a Part C Private Fee for Service (PFFS) Plan in 2007, and, if so, whether this plan would financially benefit United Water's medical plan costs for some of its retirees.

- **UW should investigate the Pension Protection Act.**

On August 17, 2006, President Bush signed the Pension Protection Act (PPA) of 2006 into law, much of which applies to adequate private sector pension funding. A review of the funding requirements to avoid the requirement to pay additional insurance premiums may be appropriate, if applicable to United Water.

The federal government created an insurance system for businesses offering private pensions; the insurance is funded by premiums collected from these employers. The Pension Protection Act of 2006 requires companies that under-fund their pension plans to pay additional premiums. It further requires that companies measure the obligations of their plans more accurately and closes loopholes that allowed under-funded plans to skip pension payments. Also, it raises caps on the advances that employers can put into their pension plans. Lastly, it prevents companies with under-funded pension plans from promising extra benefits to their workers without paying for those promises up front.

- **Bargaining unit contract training would provide benefit to the Company.**

Formal training in the interpretation of the bargaining unit contract should be conducted. The objective is to minimize grievances due to contract mis-readings. (See the next section of this report.)

- **Upgrade the format and information of job descriptions.**

Inclusion of the date that a union position description was written or revised will provide a record of timeliness. The UWTR job descriptions should reflect the segment within the organization, the department, title the position reports to, the titles of any positions that report to it, and the bargaining unit, where applicable.

- **Establish a productivity system objective and design and implement a test case.**

The data responses did not contain a formal system for measurement of productivity. A broad-based productivity measurement system could be used to affirm staffing numbers and staff needs by location within the organization. This task would probably require outside sources to be available to assist in the development and/or assessment of such programs.

- **Include personnel files in the HRIS to provide managers with a tool to track goals and objectives achievement.**

United Water maintains a comprehensive Human Resource Information System. Direct access to subordinate personnel records would be of benefit to managers.

- **United Water should seek to achieve EEO/AA objectives.**

The data demonstrate little success in 2003, with only one minority hire and two female hires. In 2005, eleven minority hires and ten female hires show much improvement. The current partnership with the Department of Labor could be a successful expansion of attracting desired employees.

SYSTEM OPERATIONS

- **UWNJ and UWTR should hold an annual meeting where representatives from both companies as well as the central Engineering Department discuss design and construction issues.**

Several forums are currently available to provide design function personnel the opportunity and ability to communicate with field construction personnel. Additionally, design standards are maintained on a central server and are available to construction as well as engineering personnel in electronic and hard copy. However, given the recent centralization of engineering functions, more could be done to assure adequate communications are maintained in the new organizational structure. As a result, it would be valuable and prudent for UWNJ and UWTR, along with the central Engineering department, to conduct an annual meeting of design and construction personnel. The purpose of this meeting would be to discuss lessons learned during the year, review and/or suggest any planned changes to design and construction standards and practices, and provide a scheduled opportunity to improve communications and coordination among the two business units and the new Engineering department.

- **UWTR should adopt and implement UWNJ's KEY System to enhance its maintenance and construction work order system.**

UWTR's current system of paper-generated work orders and subsequent data entry into an Oracle database could be improved and streamlined by replacement with the KEY System in use at UWNJ. The maintenance and new business construction work-order history and tracking functionalities provided by KEY, along with its work management analysis and reporting capabilities, are superior to UWTR's current capabilities. Moreover, the KEY System can be used to document and record contractor work orders as well as those performed by in-house personnel. It should be noted that this will be included in the 2007 Information Technology master plan study.

Also of concern, are questions raised regarding the accuracy and completeness of UWTR's valve maintenance program. During interviews, the new management team was unable to say whether all 12" and larger

valves had been exercised within the past two years. The KEY System will provide an ongoing history and tracking of valve, as well as other, preventive maintenance programs.

- **UWTR should expedite and report on the assessment of its preventive maintenance programs to assure all valves have been, and are tested in full compliance with the NJBPU mandated valve-testing programs. Both UWTR and UWNJ should provide the BPU with annual attestation, signed by a corporate officer, that all mandated testing and inspection programs are current.**

During the course of this management audit, questions have arisen as to the status of UWTR's valve testing program. Review of UWTR's annual maintenance expenditures shows they have increased from $748,641 in 2003 to $1,462,808 in 2006. This rapid acceleration (an increase of 95%) suggests that maintenance funding in previous years was insufficient to meet the needs of the system.

While the new management team is focused on attainment of maintenance program goals, the exact status of its compliance assessment regarding valves and hydrants is not clear. Results of this assessment should be submitted to the NJBPU within 30 days, along with an accelerated compliance plan and schedule if found not to be currently in compliance.

- **The functional position responsible for Water Quality and Compliance at UWTR should be an employee of UWTR and a direct report to the Regional Manager.**

The new management structure at UWTR includes a position responsible for water quality and compliance. However, the incumbent in this position is not an employee of UWTR. The individual is an employee of UW Mid-Atlantic, and estimates spending on average about 20% of his time, or more when needed, on UWTR business. While this individual appears to be qualified and well conversant with the issues, he does not report directly to UWTR's Regional Manager, nor to the Director of Water Quality and Compliance for UWNJ. Additionally, there is no UWTR job description that details the duties and responsibilities of the position or specifies lines of authority and communication among these three positions. This does not

seem prudent, particularly in the aftermath of serious water quality reporting and compliance issues experienced by the previous management team.

- **UWNJ should design and implement a main replacement program.**

Although UWNJ has engaged in numerous efforts and activities aimed at reducing UFW, little if any improvement has been achieved. The UFW level continues to exceed 18% and shows no signs of decreasing despite the Company's goals and efforts. For year 2006, this is equal to nearly 7.4 billion gallons of water, or over half the Hackensack River Reservoir system capacity. Given the current main replacement rate of about 11,000 feet per year, it would take 1,000 years to replace the 2,092 miles of main comprising UWNJ's aging infrastructure. This does not seem appropriate in light of the UFW situation as well as the rate of water main breaks on the UWNJ system, which at 0.26 breaks per mile is five-times greater than the rate at UWTR.

A well-designed main replacement program should be prioritized to address the most vulnerable sections of the system first. Vulnerability is typically associated with predictive variables such as age of the main, history and clusters of main breaks, and heavily trafficked/vibration prone locations. The analysis, results, and impact of main replacements in high priority areas could be used determine the approach, timing, and need for driving the program into areas of lower priority. In any case, replacement programs are expensive undertakings that in some jurisdictions have been at least partially financed by surcharges to customer bills to cover the costs of infrastructure upgrades. For example, the Pennsylvania PUC instituted a Distribution System Improvement Charge (DSIC). This allows water companies to use the surcharge to fund more upgrades of aging infrastructure than would otherwise be feasible at a reasonable rate for customers.

- **UWTR should assess whether there is need for a main replacement program, particularly in older areas of the distribution system, and begin to plan and prepare for its eventuality.**

Although UWTR's distribution system is relatively young, with 70.4% of its mains less than 40 years old, there are some disturbing trends. As noted above, UFW has ranged from 12.40% to 15.04% during the past

five years, and registered 13.28% during year 2006. This level of UFW seems high for a young distribution system. Additionally, there are 88,723 feet of main (about 17 miles) whose installation date is unknown, except that it was installed prior to 1950. During the nine-year period 1998 – 2006, main breaks rose from 7 to 26 (3.7 times greater), while main breaks per mile increased from 0.0142 to 0.0498 (3.5 times greater).

While this was occurring, UWTR performed no main replacements during the past five years, and significantly under spent its capital budget during some of those years. Although the Company states that its capital plan for the period 2007 – 2011 includes 2,500 feet of main replacement per year, this equates to a 1,100-year time span to replace the current system, which is similar to UWNJ's current replacement rate. As a result, it seems prudent to assess the need for an appropriate main replacement program. This assessment should be performed in conjunction with the following recommendation regarding UFW benchmarking.

- **UWNJ and UWTR should participate in the AWWA, or equivalent, water industry benchmark survey to establish reasonable UFW goals and identify best practice companies.**

The AWWA year 2005 performance benchmark survey included the participation of 45 water and wastewater utilities. Among other performance indicators, the survey includes measures of distribution water loss, distribution system integrity, and operations and maintenance cost ratios. Both UWNJ and UWTR could use the survey to determine reasonable goals for UFW. More importantly, they could identify the best in class UFW companies and determine the best practices used by these companies to mitigate water loss.

UWNJ and UWTR systems have significant differences. These differences include:

a. age of the infrastructures;
b. size of systems and numbers of customers;
c. types of pipe materials installed,;
d. predominance of surface versus ground water supplies; and
e. subsurface soil conditions.

Therefore, each company would have its own target UFW, and the achievable level for UWNJ in all likelihood would not be as low as that for UWTR. As a result, each company should select its own reasonably similar subset of survey companies on which to base their individual

comparisons, goals, and best practices.

Since UWNJ and UWTR are members of the AWWA, the additional cost of participating in the benchmarking survey should be minimal.

- **UWNJ should perform a technical and economic feasibility study to determine the possibility of hydroelectric generation at the Dundee and Monksville dams.**

Although UWNJ is sensitive to renewable energy possibilities and has implemented programs such as buying day-ahead power, the Company currently incurs electric energy costs of over $10 million per year in order to power the continuous-consumption mode of much of the system's operating equipment. There appears to be opportunity to explore hydroelectric generation feasibility at the Dundee and Monksville dams, which are characterized as having significant elevation differentials and large flows. These facilities are co-owned with the North Jersey District Water Supply Commission.

In performing the technical and economic evaluation, consideration should be given to the possibility, and potential financial benefit, of selling excess power to the PSE&G grid. UWNJ states that it currently sells no power to the grid from its electric generation facilities because this is not allowed in the interconnection agreement with PSE&G.

CUSTOMER SERVICE

- **If cost effective, use UWNJ's meter shop for UWTR's meters.**

UWNJ has extensive testing capabilities. The convenience and cost to test UWTR meters in UWNJ should be compared to the cost of the outside source, Allied Meter Services, currently in use.

- **Pre-plan for all meter related personnel reallocation.**

In anticipation of the efficiencies resulting from completion of the conversion to reading meters by radio frequency and in addition to the

employee testing procedure instituted in January, 2007, to determine existing competencies, some planning concerning reallocation and training needs of existing staff should be examined.

- **Revisit the UBS meter reading billing lag and agreement.**

The four to five business day lag from read to billing is too long. Based on broad analysis, each calendar day represents $370,000(+) of revenue and each business day reflects $540,000 of revenue. A planned, four-day lag represents $1,480,000 in cash flow.

- **Use pre-sorted mailing of utility bills to take advantage of discounted mail rates.**

The postage cost of a first class USPS one-ounce letter is $0.39. A pre-sort by carrier route is discounted to $0.29. Discount for a sort by the five-digit zip code is $0.095 per unit. With an estimated 1 million bills per annum, presorting has the potential of reducing postage costs.

- **Adjust the due date on the bill to reflect 15 days from the planned postmark to encourage compliance.**

Another impact of a too extensive read-to-bill lag is compliance with the required 15-day grace period for payment. The payment period is to be 15 days at a minimum from the date of the postmark.

- **Change the dunning process to provide for earlier late notices.**

The Corporate Customer Service team is in the process of reviewing the dunning and collection activities with the Tom's River management team. Consideration should be given to the production of separate overdue notices versus overdue bill messages, and the use of calendar versus business days in dunning and disconnecting overdue accounts.

- **Make non-sufficient fund checks processing consistent.**

The tariff should be reviewed and revised to pass all NSF related charges

plus the processing fee to the customer.

EXTERNAL RELATIONS

- **Consider the coordination of regulatory relationships with the BPU.**

Officials from UWNJ and UWTR should make improving communications with the BPU staff and commissioners a high priority to restore the trust and belief that the staffs are well informed. It appears that since the companies have not requested a rate increase for 17 years, regular meetings with BPU Water Division staff has not been considered important.

Re-building the communications between the company officials and the Bureau of Water should include timely updates of situations that are, or have, the potential of negatively impacting communities the companies serve such as:

1. Major water main breaks;
2. Water allocation issues with the NJDEP;
3. Customer service complaints;
4. Potential litigation over system failures; and
5. Water quality issues.

- **Effort should be continued to promote consumer confidence in UWNJ's and UWTR's capability to supply potable water.**

The UWNJ and UWTR should continue their efforts to regain customer confidence in the quality of the water and system's continuity of service operations. Standardized documents should be available for emergency response teams to communicate with the media, regulators and local officials. A homeland defense plan should be created and distributed to the media, regulators and local officials to assure them UWNJ and UWTR is prepared. The companies may want to right size the corporate level Communications Departments considering the commonality of service problems, infrequent need for creative marketing and the already seasoned Community Education and Outreach Programs.

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SUPPORT SERVICES

- **A review of services and fees available from alternative brokers should be undertaken**

- **The high level of external costs suggests that the level of internal staff should be reviewed to assure that the most economical and effective combination of internal and external staff is being utilized. Consideration should be given to having the Legal Department become more involved with the legal portion of the rate making processes.**

- **The company should undertake a professional review of owned facilities to identify immediate and long term maintenance and repair needs of owned facilities. After the review is completed, a plan to meet the short and long-term facility needs should be developed and implemented.**

- **Complete the conversion of UWTR materials management to the corporate system as quickly as possible to acquire adequate management of this function.**

- **The company should take action to determine regulatory requirements and assure compliance with them.**

- **Alternative storage mediums should be studied to determine if there are more efficient and economical methods of record retention and storage.**

FINANCE

- **Management should direct internal audit to ascertain reasons why the collection of accounts over 60 days exceeds 25%.**

Having more than 25% of accounts receivable 60 days overdue, places the utility in a position of using more working capital. Based on annual revenues of $130 million, these overdue accounts require over $5.4 million in working capital.

- **Accounts Payable procedures should be refined to make payment practices consistent.**

Payment practices are commonly based on 30 day, or more, lags. For example, the State of New Jersey, in its general terms and conditions, states it has 60 days from receipt of a State Payment Voucher by the department of Treasury. Based on the dollar-day analysis, a $330,000 cash flow benefit could accrue to the regulated business unit.

I. EXECUTIVE MANAGEMENT

The Request For Proposal (RFP) defines the scope of this task as a "review [of] executive management [to] determine their abilities to direct [the utility] in an efficient and ethical manner." Five specific tasks are noted. Each is stated and then discussed.

I.A BOARD OF DIRECTORS

The RFP requires an assessment of Board of Directors [BOD] by reviewing "[t]he composition, size and performance of the Board of Directors of UWNJ and UWTR, as well as evaluate the methods of electing new Board members."

I.A.1 Findings and Conclusions

- **The BOD structure is unique.**

While United Water may be considered by many to be an American company and even a New Jersey one, the legal reality is that it is foreign-owned and part of a French corporation called Suez Environment. Suez Environment is one of two major subsidiaries of Suez. Suez is in the midst of merging with Gaz de France, a large French natural gas company. Consequently, United Water is a tertiary company and may be a fourth level company. Under these situations, subsidiary companies traditionally have a shared BOD with the ownership that may have particular local representation.

- **The size, composition, and performance of the BOD is unique and highly qualified.**

The composition of the BOD for United Water, Inc. clearly reflects New Jersey as the primary location of the largest utility operation; three directors are long-term New Jersey residents. The seven directors include two outside directors (the non-executive chairman and a respected New Jersey utility executive). A third director is termed "an independent non-executive", but is closely associated with the utility through prior employment and an ongoing consultancy contract.

These three non-executive directors have a unique set of skills and experiences. The chairman has prior water utility experience and has also chaired Sun Chemical and a Sun/Kodak joint venture in the competitive business arena.

The vice chairman has prior executive experience with the utility and has held numerous high level political appointments by governors of both parties. He also serves as Chairman of the Hackensack Medical Center.

The three remaining directors reflect the ownership of United Water, Inc. The immediate parent corporation, Suez Environmental North America, holds one directorship. The parent of the North American operations is Suez Environment, which holds two.

Performance of the BOD is best determined through its Committees. The committee structure has four specific groups: the Audit Committee, the Compensation Advisory Committee, the Executive Committee, and the Political Contributions Committee. The Audit Committee is chaired by the independent non-executive Chairman of the Board and has a second independent non-executive BOD member plus a representative from the parent ownership company. The Audit Committee has an internal sub-committee on ethics. This sub-committee has executive membership chaired by the general counsel.

The Compensation Advisory Committee is named to reflect the subsidiary nature of United Water within Suez Environmental North America. The Committee is composed of two non-executive directors with a director from the immediate parent. The senior vice president-human resources chairs a sub-committee on benefits and members are the chief operating officers, both regulated and contract services business units. The Chief Financial Officer of United Water, Inc., also serves on the subcommittee.

A third committee is the Political Contributions Committee. The BOD reviewed the structure of this committee during the course of the audit. The review was centered on whether this should continue as a full BOD committee. As now composed, the members are the COO for Regulated Business, the General Counsel, and the Vice President for External Affairs.

The final committee is the Executive Committee chaired by the sole executive director who is the Chief Executive Officer of United Water, Inc. The Chairman serves on this committee, as does a director representing the parent, Suez Environment.

- **The election of new BOD members is the responsibility of the parent, subject only to recommendations of the BOD**.

The nomination of candidates to join the BOD is an informal advisory process for the standing directors to the parent, Suez Environment. No nominating committee exists. No external directors have been added to the BOD since UW's acquisition by Suez. At that time, three directors representing the parent organizations were added. The current Chief Executive Officer was added to the BOD on his assumption of his duties.

I.A.2 Recommendations

- **Consider placing the responsibility for political contributions under the duties of the Ethics Officer.**

I.B EXECUTIVE COMPENSATION

The RFP requires a "[r]eview [of] UWNJ's and UWTR's executive compensation policy for generally accepted industry standards."

I.B.1 Findings and Conclusions

- **The executive compensation process is a thorough and high-level set of activities following standards expected in an effective program.**

The executive compensation program starts with the review of industry surveys of similarly defined positions. The surveys used are from recognized industry names: the Hay Executive Compensation Survey; the Towers Perrin Compensation Data Base; and the Investor Owned Water Utility Survey.

UW directs its comparative analysis toward aiming at the 50th percentile of the survey responses. Allowing for a ten percent variance around the median of each of nine executive positions, UW meets this objective with three exceptions where base pay is below the median.

Administratively, the Compensation Committee of the BOD reviews recommended compensation levels. Further, the Compensation Committee evaluates targeted total cash compensation and total direct compensation with surveyed comparisons.

- **Executive compensation has a developed incentive plan based primarily on controllable metrics.**

There are two incentive programs. The short-term incentive program is based on United Water financial success, which is the highest portion of the financial components; smaller portions are applied to results for Suez and Suez Environmental. There is also a component for personal objectives. Specific objectives expectantly include earnings before interest, taxes, depreciation and amortization (EBITDA).

The longer-term plan is a rolling, three-year effort. Emphasis is on EBITDA, but also includes customer service satisfaction as measured by a formal survey. In addition to financial goals, operating and customer service objectives are defined for both short and longer terms.

I.B.2 Recommendations

- **There are no recommendations.**

I.C CORPORATE GOVERNANCE

The RFP requires the consultant to "[d]etermine if UWNJ's and UWTR's corporate governance, organizational structure, corporate planning, corporate communications and administration facilitate the achievement of UWNJ's and UWTR's objectives." These five areas are separately addressed.

I.C.1 Findings and Conclusions

- **Corporate governance has been positively demonstrated in recent history.**

During the course of the audit, several situations of positive corporate governance were observed. Changes to the membership of a BOD committee were made, and the addition of an objective for managed

growth was added to the Vision and Objectives Statement.

Additionally, governance had addressed the issue of corporate ethics. On January 31, 2006, UW managers were presented a formal presentation on the Utility's commitment to ethics. Moreover, the Company Policy Manual devotes a specific section to the discussion and definition of ethics.

- **Corporate governance goes to the Vision and Objectives Statement.**

The Vision and Objectives Statement now covers four areas:

1. Customer service and value;
2. Business efficiency;
3. Employee development and motivation; and
4. Managed growth.

Of special note is the third vision area. Employee development has three stated objectives: create a business where the best people want to work and develop; encourage involvement and commitment to business success; and create a genuine health and safety culture.

Actual activities directed to establishing a positive work place include development programs such as project manager development, front line leadership and union executive leadership. Other training includes harassment prevention and community emergency response team training. Further, the parent provides "Suez University", which offers on-line training on topics such as business fundamentals, leadership, and change management.

- **The organization structure of the regulated business segment is characterized by broad spans of control.**

The Chief Operating Officer (COO) has ten direct reports, one "dotted line" relationship, and five shared services reports. Another large span of control lies with the General Manager of UWNJ. He has direct responsibility for five water operations plus four direct reports and two "dotted line" relationships to engineering and customer service.

- **The creation of the Mid Atlantic Utilities organization relieved span of control issues.**

The creation of the Mid Atlantic Utilities allowed specific attention to be directed at the improvement of Toms River operations. With new management, technical and compliance issues were addressed in what now seems to be an effective manner. Monthly meetings are held with Toms River and Berkeley Township engineers. Special interest groups such as the Citizens Action Committee for Children Cancer Cluster (CACCCC) are regularly briefed. Relationships with the DEP are now organized for regular contact, as are contacts with local police and fire departments.

Actual results of UWTR's reorganization include the CACCCC's acceptance of water quality data. The DEP has accepted analyses providing the firm capacity calculation and granted increased water allocation.

- **The concept of matrix management needs to be visited.**

Management refers to certain positions as having "double black lines" of reporting relationships. While employees may adjust to this type of organization, it is PMC's professionally opinion that an employee cannot have two masters. Consequently, the concept of matrix management should reflect single administrative responsibility and functional consistency.

- **UWNJ recognizes that upgrading the infrastructure is the primary objective of corporate planning.**

Depending on the assumptions applied, complete replacement of the infrastructure at the current pace would take 500-1000 years. No matter what the duration, such a magnitude of time is not acceptable. Consequently, UWNJ has no choice but to file a base rate case and seek mechanisms to provide the necessary funds for an adequate infrastructure replacement schedule.

- **The addition of managed growth to the vision and objectives statement recognizes the profit motive by increasing the customer base.**

The addition of new customers in New York State through the acquisition of a viable existing water system is an example of managed growth. Since UWNJ's service areas are mature and heavily residential, organic growth is limited and expansion of the customer base will be through acquisition of neighboring water systems and/or bulk sales contracts.

- **UW places great emphasis on communications.**

The communications function is headed by a corporate officer who is supported by a manager and two directors. The organization chart indicates four managers and one director "reporting directly to the Vice President (VP) of Communications and functionally to the utility/project VP/GM." Such a relationship supports the importance UW puts on effective communications. However, it is an example of the "double black line". A more appropriate reporting role would be functionally reporting to the VP Communications and directly reporting to the utility/project VP/GM.

- **Communications services are wide ranging, reflecting a featured role in the organization.**

The communication services offered include:

- advertising;
- audio-visual;
- brochures;
- business proposals;
- CEO/COO round tables;
- corporate identity;
- community relations;
- customer advisory panels;
- emergency communications plans;
- exhibits;
- feature articles;
- internal communications;
- internet;
- intranet;
- media training;

- outreach and education;
- philanthropy;
- presentations;
- press relations;
- special events;
- speeches;
- strategy and planning;
- tour programs;
- water conservation; and
- watershed recreation programs.

- **The performance metrics and related administrative procedures reflect the direct effort to meet the vision and objectives.**

Employee development and motivation has been previously discussed and we have noted the managed growth objective. The UWTR example clearly demonstrates a recovery from poor operating behavior to well-administered facilities and administration over communications. The correction of radionuclides to acceptable levels is a clear indication of "value-for-money" services. Gaining the acceptance of the CACCCC for UWTR water testing results promotes UWTR's role in public health. Further, the acceptance by the NJDEP of the analyses of water supply needs demonstrates properly administered management procedures.

I.C.2 Recommendations

- **Conduct a formal review of the spans of control and consider functional reorganization.**

This process should include, but not necessarily be limited to, the overall organization of the Chief Operating Officer, the General Manager of UWNJ, and the creation of a fully staffed Rates and Regulatory Division to reflect the expected and necessary activity to seek rate relief.

- **Revisit the concept of "two black line" reporting relationships in favor of a traditional matrix management or specific shared services organization.**

Having two masters is a less than optimal organization structure. In a matrix organization, functional experts offer their skills to the administrative/management/project team members. In a shared services approach, functional activity is purchased, in essence, on an as-needed basis.

I.D. AFFILIATE RELATIONS

The RFP asks the consultant to "[e]xamine UWNJ's and UWTR's relationships and transactions with their affiliates for compliance with affiliate relations rules.

I.D.1 Findings and Conclusions

- **A review of the cost allocation process demonstrates that allocation methodologies reflect appropriate mechanisms.**

Chapter VII Finance covers this area in detail. However, the services provided by the affiliates are from the UW Management & Services Company. When specific services can be directly charged, this is done so. Indirect charges are allocated according to appropriate metrics.

I.D.2 Recommendations

- **There are no recommendations.**

I.E COMPLIANCE

The RFP wishes the consultant to "[d]etermine if UWNJ and UWTR are in compliance with all applicable regulations, Sarbanes-Oxley requirements and corporate ethics standards".

I.E.1 Findings and Conclusions

- **The utility will perform a regulatory compliance audit in the summer of 2007.**

UW is compliant in most of its technical reporting, with the noted exception of its valve testing. This is further discussed in Chapter III System Operations. UW plans to complete a regulatory compliance review this summer.

- **UW has recently made changes to its tax department to continue its compliance with Sarbanes-Oxley.**

Beginning July 15, 2006, foreign private issuers (foreign companies registered with the Securities and Exchange Commission), such as Suez, are subject to Sarbanes-Oxley. In preparation, the Tax Department was reorganized to emphasize tax accounting and tax compliance. An outside accounting firm was engaged to implement changes to the Standard Tax Provision Workpapers. Funds have been budgeted to purchase third party tax accounting software in 2007. This was part of the implementation of the control and disclosure program [CODIS] in preparation for Sarbanes-Oxley reporting

- **UW has a defined ethics compliance program requiring annual attestation to compliance.**

As noted earlier, the UW BOD has an ethics subcommittee whose members are UW employees. This subcommittee provided all employees information on the UW Ethics Program in 2006. On an annual basis, employees are required to confirm their compliance with the UW Ethics Program.

UW joined Suez Environment in a partnership with Transparency International (TI), a leading ethics and accountability organization. As part of this partnership, TI will analyze UW's ethics code and procedures.

I.E.2 Recommendations

- **There are no recommendations.**

II. HUMAN RESOURCES

The review of human resources policies and procedures is defined to cover the following six areas addressing the effectiveness of the work force.

II.A COMPENSATION AND BENEFITS

The RFP requires the consultant to "[r]eview salary, wage, and compensation and benefits package practices."

II.A.1 Findings and Conclusions

- **While job descriptions are available, certain key positions are not updated.**

United Water's Director of Compensation and Human Resources Information Systems (HRIS) began employment as a compensation analyst seven years ago. Her current responsibilities include the design and oversight of compensation for all three segments of United Water Suez, including the regulated segment, except for the bargaining unit pay scales. In addition, she is responsible for the oversight of the HRIS and functions as the project manager for system enhancements. The position description for Director, Compensation and HRIS, dated May 22, 2001, details her responsibilities concerning the maintenance and administration of the HRIS, including liaison with the payroll function. However, it does not appear to detail her stated responsibilities concerning analysis and application of competitive salary surveys and oversight of recommended salary adjustments related to performance evaluations.

- **United Water (UW) uses accepted compensation surveys.**

Under the direction of the Director of Compensation Resources, United Water regularly participates in and/or subscribes to wage and salary surveys that encompass both comparable industries and utility industry practices. At least annually, the following recognized leading national competitive sources are used to determine newly required pay scales, as well as to validate or adjust existing pay scales applicable to non-union positions:

- AWWA Water Utility Compensation Survey
- Saje Investor-Owned Water Utility Compensation and Benefits Survey
- Towers Perrin General Industry Executive and Middle Management / Professional Surveys
- Hay Industrial and Local Surveys
- ERI Salary Assessor
- Northern Jersey Non-Exempt Salary Survey
- NJCA Non-Exempt Salary Survey

The Saje Utility Compensation, Towers Perrin and Hay surveys are the primary sources used for exempt and managerial position ranges at United Water. The latter two surveys above represent source information for the non-union, non-exempt positions. In addition, existing and potential pay practices are regularly compared with area utilities. The local market used as a benchmark is Harrington Park, with UWNJ's salary ranges at 100% and UWTR's ranging from 94-100%, depending on the local ability to fill vacancies. Non-bargaining unit employees are not compensated for overtime in cash or compensatory time off.

- **UW does a reasonable job of maintaining its job descriptions.**

In preparation for this process and to ensure its ability to both attract and retain qualified staff at all levels of the organization, United Water maintains current, comprehensive position descriptions. Position descriptions are reviewed for validity at least when a vacancy occurs and/or when the job being described has experienced other than a minor change. In addition, at each year-end, the Director of Human Resources and the Director of Compensation for the regulated segment coordinate a review of a designated group of job descriptions.

Sixty written non-union New Jersey position descriptions pertaining to the regulated segment were reviewed. Over 80% had been revised in 2002, with the remainder having been revised since then. Job descriptions also exist for all bargaining unit positions. Position descriptions use gender-neutral terms when describing a current or potential incumbent. The headcount at the time of the data request for UWNJ including UWTR was 254 bargaining unit members, 20 non-bargaining unit non-exempt, and 70 exempt employees, a total of 344. Of that number, 43 were employed at UWTR. Two temporary employees were included in that number. After receipt of the initial data request at the end of the third quarter of 2006, the December interview at the Hackensack meter shop revealed a total of four temporary bargaining

unit employees. These temporary employees are reading meters during the period when the regular full time employees are assigned to meter replacements to facilitate the conversion of their meter reading technology.

- **Recruitment practices follow acceptable methodologies.**

A personnel requisition forwarded to the corporate Human Resources staffing function begins the recruiting process. Upon receipt of a personnel requisition by the corporate Human Resources staff, in addition to the position description being reviewed by the immediate supervisor and department manager, the corporate compensation function reviews the job grade and subsequent salary range for currency. The salary range minimum to midpoint is generally used to determine the beginning compensation of a new hire. However, when it becomes difficult to locate a fully qualified incumbent for a higher-level position, approval may be given to hire above a salary range midpoint. This is limited to a situation wherein the selected applicant is subject to a strict development plan directed toward a higher level of responsibilities to be achieved within a defined time frame.

- **The benefit program compares favorably to industry practices.**

Annually, United Water participates in a national survey conducted by Mercer Health and Benefits LLC. This survey is representative of all US employers that have ten or more employees that offer health insurance. It encompasses healthcare plan costs, plan design, trends, and employer strategies for health program management. Medical, including prescription drug coverage, dental, and vision are covered in the survey. It is appropriate to note that the results of wage and salary and benefits surveys are provided at no cost to the utility in return for its participation.

United Water offers its employees a choice of three medical plans, all of which require employee contributions to a varying degree, depending upon the plan chosen by the employee and whether the employee's family members are also covered. Further, employee contribution levels are reviewed and, if necessary, revised annually at re-enrollment, based on risk experience history. The high deductible plan includes a Health Savings Plan. These plans are self-insured by United Water and were administered by United Health in 2006. In 2007, MetLife will administer the plans. United Water last requested competitive proposals from

outside medical plan administrators in 2003 and will do so again in 2007. The regulated segment of United Water continues to offer health care plans to its non-union retirees beginning at age 60, provided that they had completed a minimum of ten years active employment. The bargaining union retirees of UWNJ Local 375 are eligible for coverage at age 55. Pre-age 65 retirees are offered Freedom of Choice PPO/POS plans insured by United Water and administered by United HealthCare. Post age 65 retirees are offered a Medicare Supplement PPO Plan also administered by United HealthCare. Participation requires a contribution varying from 10% to 50% of employer cost if the participant retired prior to January of 2005. The contribution for those who retired after January 1, 2005 varies from 15% to 50%. Prescription drug coverage is included.

Under the new Medicare advantage program, insurance companies can offer another way to receive Medicare benefits, known as a Private Fee for Service Plan (PFFS). The insurance company must submit their plan to the centers for Medicare and Medicaid Services (CMS) for approval. The plan must provide beneficiaries with all Medicare benefits plus any additional benefits the company decides to provide. Once approved, the plan can be offered to Medicare eligible people. These plans usually require a co-payment. They do not require the insured to use a network of providers; however, the provider of medical services must agree to accept direct payment from the plan provider. These plans do not require a monthly premium such as the traditional Medicare supplement plans.

United Water's employees may opt for deductions into a Flexible Spending Account, which allows employees to pay for qualified health and dependent care expenses with pre-tax dollars.

Two dental plans are offered and are administered by Aetna. The vision plan also contains two options.

The utility provides each of its employees with three times annual base salary in-group term life insurance coverage through Met Life. The employee may also voluntarily purchase additional coverage and coverage for spouse and any dependent(s). United Water non-union retirees may also purchase group term life insurance up to a principal of $50,000.00.

Accidental death and dismemberment (AD&D) coverage is available to employees at their own cost for up to five times their annual base salary, not to exceed $500,000.00 in coverage.

The Hartford Group currently administers the short and long-term

disability plans offered by United Water. In 2007, the administration of this coverage will be assigned to Met Life and represents cost savings to the utility. Employees are provided seven sick days annually, which do not accrue from year to year. After exhausting accrued sick days, coverage continues under the self-insured short-term disability plan for the initial 26 weeks of disability. If required, short-term disability is followed by long-term disability (LTD) coverage. The LTD plan is self-insured by United Water and was administered by The Hartford in 2006. In 2007, MetLife will administer the LTD plan.

The Employee Assistance Program (EAP) provides employees with up to five telephonic counseling sessions per event. Thereafter, the employee is referred to their medical coverage if ongoing treatment is required.

- **Retirement income options are in line with industry comparisons.**

The Defined Benefit Pension Plan is funded by the employer and is not integrated with Social Security. The plan is in compliance with IRS limits and is equal to 1½ % of the five highest consecutive years of the last ten years of base salary times the years of service, not to exceed $250,000.00 annually. Employees may also participate in a 401(k) plan administered by Vanguard. The employee may contribute up to 50% of base salary, not to exceed $15,000.00, in 2006. (Higher compensated employees are limited to 12%.) The catch-up clause for employees age 50 or older allows an additional $ 5,000.00 in annual contributions in 2006 and 2007. The employer will match 50% of the first 6% of the employee's contributions to the 401(k) Plan. Plan participants have 18 investment options in the 401k plan and can change their investment option as frequently as every 60 days.

The funding levels for pensions and post-retirement benefits was such that no employer contributions were required for UWNJ in 2006, which represented over 93% of the assets. Contributions for UWTR in 2006 represented 7.8% of the fund's projected obligation and 10.4% of the value of the assets.

United Water Company's annual benefits plans re-enrollment is web-based and is conducted in mid-November. Each employee receives a personalized packet and is able to re-enroll on-line or with the assistance of the local Human Resources representative. With a password, the employee can also re-enroll from an off-site location, such as from their home computer.

Human Resources also conducts open enrollment meetings at most locations or, for small groups, one-on-one.

In addition to the benefits mentioned above, United Water offers paid vacation based on years of service, paid holidays, family medical leave, an employee fitness center and wellness programs. United Water's medical plan representatives offer on-site seminars that include diet and exercise and smoking cessation plans.

Survey results led United Water's Director of Benefits to believe that their package is "a bit less" than utility industry practices and "a bit better" when compared to other industries. It is also felt that the United Water cost of benefits is "a bit" above general industry costs because the age of 6-10% of United Water's employee population is in the forties (40-s). The cost of benefit programs provided in response to data request II.B.4-4 totaled $3,842,908 and were allocated approximately 90% to UWNJ and 10% to UWTR. The claims were based on the number of participants times the budget amount for level coverage and may differ from those booked by Finance to the General Ledger. The corporate Director of Benefits is one of the more senior members of the Human Resources staff, having eight years in this function, and also serves as Secretary and a non-voting member on the United Water Benefits Committee. She administers the benefits plans for all three segments of the organization, reporting to the Senior Vice President of Human Resources.

II.A.2 Recommendations

- **Written position descriptions can be reformatted to expand their use.**

Written position descriptions may be clarified by indicating whether the position is exempt, non-exempt or is subject to a bargaining unit agreement, including the pay scale grade.

For scheduling review, revision, or additional responsibilities, it may be helpful to consistently include an effective date on all position descriptions. Of particular importance would be the need to update the Director, Compensation- and HRIS dated May 2001, to include current activities.

During the course of the audit, position description headings were changed to contain complete information reflecting its segment within the organization, i.e., the department, title the position reports to, and titles of any positions that report to it. Universal descriptions that appear in multiple segments or departments of the organization could be so noted.

- **The Company should explore a Part C Private Fee for Service to reduce retiree medical costs.**

The Director of Benefits may wish to investigate whether its medical plan administrator offers a Part C Private Fee for Service (PFFS) Plan in 2007, and, if so, whether this plan would financially benefit United Water's medical plan costs for some of its retirees.

- **UW should investigate the Pension Protection Act.**

On August 17, 2006, President Bush signed the Pension Protection Act (PPA) of 2006 into law, much of which applies to adequate private sector pension funding. A review of the funding requirements to avoid the requirement to pay additional insurance premiums may be appropriate, if applicable to United Water.

The federal government created an insurance system for businesses offering private pensions; the insurance is funded by premiums collected from these employers. The Pension Protection Act of 2006 requires companies that under-fund their pension plans to pay additional premiums. It further requires that companies measure the obligations of their plans more accurately and closes loopholes that allowed under-funded plans to skip pension payments. Also, it raises caps on the advances that employers can put into their pension plans. Lastly, it prevents companies with under-funded pension plans from promising extra benefits to their workers without paying for those promises up front.

II. HUMAN RESOURCES

II.B EMPLOYEE DEVELOPMENT

The RFP requires the consultant to "[a]ssess the effectiveness of UWNJ and UWTR's development, training, and evaluation techniques."

II.B.1 Findings and Conclusions

- **Career pathing and training appear to be well instituted.**

The Director of Employee Development has been a member of the United Water staff since July, 1997, when she began in the Communications Department responsible for desktop publishing. Beginning in 2003, she handled Customer Relations, in cooperation with the New Jersey Board of
Public Utilities (BPU) and assisted with the training function. In May of 2006, she was assigned to Employee Development in the Human Resources Department. She schedules non-technical corporate training programs both internally and through third party, outside sources. She is responsible for ensuring that the learning, training, and development is in line with business requirements.

She states that she is largely responsible for the oversight of the succession planning, a written deliverable subject to annual review. The succession plan identifies potential candidates for key positions involving both planned succession and unplanned vacancies. No key executives are expected to retire within the next twelve months in the regulated segment.

She also facilitates individual development of employees in their current positions and to meet future company requirements. Within the limits of available resources, development planning is coordinated between the potential employee and the position manager. Upon analysis and recognition of the potential candidate's strengths and identification of any "learning gaps", a plan containing both on-job experience and training is developed and implemented for completion within the desired time frame.

During 2006 six corporate training programs were provided to 210 employees within UWNJ regulated business unit and 31 within that of UWTR. Both internal and outside training sources were used. Dale Carnegie was used to train ten front line managers in "soft skills" such as coaching, stress reduction, time organization, and verbal

communications. Ashford Consulting conducted the Project Managers Program for a single company employee. Harassment Prevention training was provided most frequently and included 162 UWNJ and 27 UWTR employees. Harassment training was conducted internally at multiple locations after the employee trainers were trained externally. Harassment training included the process to file a complaint, the complaint investigation process, and appropriate remedial action. These programs will continue to be offered on an on-going basis and/or as needed.

Non-managerial employees with various compatibility problems may also be assigned such training. Beginning with direct intervention followed by assistance from the appropriate Human Resources staff member, they may then be scheduled for soft skills training.

- **No formal program exists to interpret the bargaining unit agreements.**

No formal training program currently exists concerning the interpretation and application of the conditions of the bargaining unit agreements. However, first line supervisors and managers who interface with bargaining unit employees are informed when new contract conditions or grievance resolutions result in a change in the union working conditions.

A testing procedure for the union positions is scheduled to be instituted January 1, 2007. The test consists of five competencies and is conducted periodically. Any interested employee may take the test when offered. The test results are kept on file to be used in the event that an employee bids for a union position that requires any or all of these competencies. UWNJ does not anticipate any future layoffs or hiring freezes in the meter shop. Since all union positions are covered by a common agreement, any reduction in a given position allows the least senior incumbent to relocate to any other vacancy covered by the agreement for which he/she would be qualified.

- **The Reward and Recognition Training Program is an example of the implementation of the strategic objective of employee development and motivation.**

Included in the 2006 training was the recently instituted Reward and Recognition Training Program. A total of 38 managers and supervisors were initially trained in the program and in the communication of the program within their respective business units. The program encourages

all employees to nominate any other employee for special recognition for any
way in which the nominated employee has made a positive contribution to the work environment. The nominating employees may submit their recommendations orally or on-line and may direct their nominations to a manager.

- **The Education Assistance program is another example of following strategic objectives.**

United Water encourages and expects employees to further their job skills/capabilities or opportunities for advancement. United Water provides 100% reimbursement up to a maximum annual reimbursable amount of $5250 (the limit defined by IRS Code Sections 127 & 162) for its regular, full-time employees who have completed six months service. Employees must receive prior approval from their department head and the Director of Employee Development. The desired study must be work or business related and of value to the company, and attended on the employee's personal time. Half of the costs are provided up front and include tuition, university fees, lab fees, and books. Reimbursement is contingent upon successful completion with a course grade of "C" or better. Failure to complete the course work successfully requires that advanced funds be returned. The Education Assistance program is budgeted at the departmental level.

- **Pay for performance is well developed.**

The Director of Compensation and HRIS maintains the salary administration matrix that supports the performance evaluation system. The performance of all non-bargaining unit employees is evaluated annually. United Water does not give or base annual salary adjustments on the cost of living. Instead, employees, in concert with their managers, develop work-related objectives. These objectives may include one or more addressed to the development of the incumbent's skill base. Near the end of each year, an employee's performance is evaluated and a salary increase is recommended based on his/her performance level within the constraints of the salary administration matrix.

In addition, exempt employees and their managers develop objectives tied to on-job performance and the business unit and segment objectives. These objectives are reviewed for progress and adjusted, if deemed appropriate due to changes in organizational requirements, on a quarterly

basis. The short-term incentive program is rewarded for successful accomplishment with a cash bonus equal to a percentage of the incumbent's annual base salary. The budget for these bonuses is equal to 5.0% of the base salaries. Individual bonuses can range from zero to 200% of base salary. There is also a long-term cash incentive plan available to positions titled Director and above.

II.B.2 Recommendation

- **Bargaining unit contract training would provide benefit to the Company.**

  Correct interpretation of the bargaining unit contract could be assisted by formal training. The objective is to minimize grievances due to contract mis-readings. (See the next section of this report.)

II.C LABOR RELATIONS

The RFP requires the consultant to "[r]eview the current labor relations status and methodology."

II.C.1 Findings and Conclusions

- **United Waters Director of Labor Relations has broad experience in union contract administration.**

United Water's Director of Labor Relations for the regulated segment has been employed in this, or related functions, since early 1991. Over the last decade, his responsibilities have included numerous locations beyond New Jersey. His position has been at the Director level since April of 2005. The incumbent currently administers the bargaining unit agreements for nine units of the Utility Workers of America (UWA), including those pertaining to northern New Jersey and Tom's River.

UWNJ's Local 375 agreement is current and covers 225 employees for a three-year period beginning March 1, 2006. Local 581 covers UWTR's 30 bargaining unit employees for three years beginning February 1, 2006. With the agreement of the union and included in the data request response were two temporary employees in bargaining unit positions. By early

December, there were four temporary bargaining unit employees located at the Hackensack meter shop.

Union employee pay scales are not identical across local units. Rates vary for the same job title in UWNJ versus UWTR. These variances are based on surveys of Bergen, Hudson, and Ocean counties cost of living considerations. Further, bargaining unit employees begin employment at a lower pay scale. After completion of eight years of employment in the lesser B Schedule, employees advance to the equivalent or next higher step in the appropriate classification in the higher A Schedule of compensation. In addition to compensation advancement, based on their experience and expertise, bargaining unit employees may also advance from lower to higher pay scale jobs within the bargaining unit as vacancies occur. Such vacancies are posted throughout the organization, both on bulletin boards and on their intra-net for a period of two weeks. Many such vacancies require the successful completion of a test to exhibit the required qualifications to fill the posted position.

- **Bargaining unit job descriptions can be improved.**

UWNJ has 60 written bargaining unit job descriptions, 58 of which have been updated beginning in 2002. Two job descriptions did not have effective dates. UWTR has 14 written bargaining unit job descriptions, none of which exhibit the effective date. Position descriptions use gender-neutral terms when describing a current or potential incumbent. Bargaining unit job descriptions are updated when a significant change in the job duties is required and upon agreement between the union and the employer.

- **Bargaining unit benefits mirror the exempt employees' program.**

With the exception of bonus programs tied to the completion of job objectives within the exempt employee population, the benefits available to bargaining unit employees are identical to those of all other UWNJ employees. The one exception is that bargaining union retirees are eligible for medical coverage five years of age earlier than non-bargaining unit retirees providing they have completed a minimum of ten years employment.

- **While UWTR experienced no grievances in 2006, UWNJ had nine.**

UWNJ had nine grievances filed by bargaining unit employees in 2006, three of which were withdrawn by the union. Of the remaining six, two grievances were resolved and three were either scheduled for arbitration or to be heard before the New Jersey State Mediator in October of 2006. The remaining grievance was moving to the second step in October. UWTR did not experience any union employee grievances in 2006. Indications are that the relationship between union and employer is professional and reasonable and absent of animosity.

II.C.2 Recommendation

- **Upgrade the format and information of job descriptions.**

Inclusion of the date that a union position description was written or revised will provide a record of timeliness. The UWTR job descriptions should reflect the segment within the organization, the department, title the position reports to, the titles of any positions that report to it, and the bargaining unit, where applicable.

II.D WORK FORCE PRODUCTIVITY

The RFP requires the consultant to "[a]ssess the productivity level of UWNJ's and UWTR's workforces."

II.D.1 Findings And Conclusions

- **Early retirement programs have been used to reduce head count.**

United Water was founded as Hackensack Water in 1869. The company's name was changed to United Water New Jersey in 1995 to reflect the relationship with its then parent company, United Water Resources. In 2000, United Water became a wholly owned subsidiary of the Suez Group.

Early retirement programs were introduced in 2000 and 2002 to reduce headcount. In 2004, a new organizational structure was implemented. The structure went from seven hubs to four regions and then to the

present three segments: Regulated; Corporate; and Contract Services. Key staff members were infused from abroad from the parent company and the focus during 2004-2005 was not growth- but stabilization of the company.

- **The Shared Services concept is efficient.**

Under the current structure, specialists at the corporate level provide professional staff services to all segments of the organizations across multiple geographic locations. This structure negates duplication of staff and the accompanying expense across United Water's multiple locations. In addition consistency of policies, procedures, and the application of staff processes is assured.

- **Meter reading is benefiting from modern technology.**

The meter reading staff headquartered at the Hackensack meter shop currently includes four temporary positions covered by the bargaining agreement. These temporary union employees read approximately 25% of the meters that still require manual or touch reads. During this period, the regular Customer Service Field Representatives direct their efforts towards the completion of a four-year meter replacement project, converting to radio frequency equipped meters. In 2009, the temporary positions will be discontinued and the existing staff will be re-allocated to meet future operating needs.

- **The Human Resource manual is current.**

The Human Resources Manual was updated in September, 2002, is comprehensive, and is distributed to all employees. The personnel files are maintained in hard copy and contain a signed receipt for the manual. The policy manual is also available on the Intranet.

II.D.2 Recommendations

- **Investigate the applicability of work force productivity systems.**

The data responses did not contain a formal system for measurement of productivity. A broad-based productivity measurement system could be

used to affirm staffing numbers and staff needs by location within the organization. This task would probably require outside sources to be available to assist in the development and/or assessment of such programs.

II.E PERSONNEL INFORMATION SYSTEM

The RFP requires the consultant to "[a]ssess the human resources department's capacity to access personnel information and perform its assigned duties."

II.E.1 Findings and Conclusions

- **United Water maintains a comprehensive Human Resource Information System.**

United Water's Director of Compensation and Human Resources Information Systems (HRIS) serves as the Human Resources Information System administrator and establishes, documents, and maintains process flow. She directs one exempt employee in maintaining a process flow that documents data receipt, input into the system, output from the system and the preparation of data for payroll processing.

The HRIS documents employee data changes, new hires, rehires, terminations, and operator security. The Director is also responsible for system modifications and upgrades. She participates in related user groups and is the liaison with ADP, the offsite vendor for payroll processing. The HRIS has not been rolled out to provide individual managerial access yet. Personnel files are maintained in hard copy at this time.

II.E.2 Recommendations

- **Inclusion of personnel files in the HRIS would provide managers with a tool to track goals and objectives achievement.**

United Water maintains a comprehensive Human Resource Information System. Direct access to subordinate personnel records would be of benefit to managers.

II.F AFFIRMATIVE ACTION

The RFP requires the consultant to "[a]ssess the affirmative action and equal opportunity (AA/EEO) policies, procedures, and functions."

II.F.1 Findings and Conclusions

- **The UW Human Resources Corporate Policy Manual adequately covers AA/EEO issues.**

The Manager Corporate Human Resources and Staffing has been employed at United Water since January 2005. She has a background as a Human Resource generalist for a large New York employer. She states that she is responsible for the regulated and corporate segments of the organization. She manages the recruitment process for professional level positions. Her responsibilities include oversight of the annual government mandated reports such as EEO-1 and the annual updates of the Affirmative Action Plans nationwide. She provides guidance and support to segment Human Resource managers in the event of compliance reviews and/or audits.

The United Water Human Resources Corporate Policy Manual, section 2.1.1., contains the Equal Employment Opportunity (EEO) statement. United Water pledges to provide equal employment opportunity to all employees and applicants. The policy applies to all terms and conditions of employment, including but not limited to recruiting, hiring, placement, promotion, termination, layoff, recall, transfer and the provision of working conditions, compensation, benefits, training and opportunities for advancement. Further, United Water pledges to comply with all applicable federal, state and local laws prohibiting employment discrimination.

Section 2.1.2. further commits to take affirmative action to recruit, employ, and advance females, minorities, disabled individuals, disabled veterans, and veterans of the Vietnam era for all positions in which they are qualified to perform. The policy makes special note to identify and practice affirmative action in areas within the organization where under-utilization exists and intends to be consistent with Presidential Executive Order 11246. Section 2.1.3. pledges full compliance with the requirements of the Americans with Disabilities Act, including making reasonable accommodations to physical or mental limitations of qualified applicants or employees. All United Water employees are charged with these responsibilities.

- **Affirmative Action Plans are prepared by outside professionals.**

The Employer's Association of New Jersey (EANJ) prepares the Affirmative Actions Plans for eight business units of United Water. Each Plan's objectives reflect their recruiting area, area population and employee population. These plans were updated is 2004 to reflect the re-organization from seven hubs to four organizational regions, and then to the current structure of three segments.

- **United Water uses modern communications to recruit personnel.**

United Water utilizes a number of sources for recruitment of diverse professionals for utility positions. Positions below the Director level are posted on the company website, encouraging employees to apply and further their careers. Positions are posted on America's Job Bank, the Institute of Public Utilities in Michigan and seven Internet sites that list career opportunities. United Water has an annual contract with Hotjobs, a web-based system that allows them to post 25 job opportunities at a time. A proactive contact has been established with employment counselors and job order takers within the New Jersey Department of Labor in Bergen, Camden, and Middlesex Counties for operational positions. In 2007, UW plans to partner with the Department of Labor on a Positive Recruitment Initiative, hosting an information session and career fair to promote career opportunities and enhance the visibility of United Water. In addition, they are conducting research to identify local educational institutions with programs focused on United Water's targeted recruitment areas. They intend to increase their participation in area job fairs and currently partner with a local technical institute to offer relevant work experience to students.

- **Available data indicate that United Water is falling short of its EEO hiring objectives.**

The following data was submitted to illustrate the results of recruitment objectives for each EEO category for 2003 and 2005. The data for 2004 was omitted due to the corporate restructure, resulting in incomplete and inaccurate affirmative action data.

2003:	GOALS		HIRES	
	Minorities	Females	Minorities	Females
Officials & Managers	1	6	0	0
Professionals	5	3	1	1
Technicians	2	1	0	0
Sales Workers (not applicable)				
Office & Clerical – full minority utilization		15		
Craft Workers (skilled)	2	3	0	0
Operatives (semi-skilled)	19	4	0	0
Laborers – full minority utilization		1		0
Service Workers – full minority utilization		1		0

2005:	GOALS		HIRES	
	Minorities	Females	Minorities	Females
Officials & Managers	3	1	1	2
Professionals	3	2	1	2
Technicians	2	Full utilization	0	0
Sales Workers (not applicable)				
Office & Clerical – full minority utilization	2	1	6	6
Craft Workers (skilled)	7	21	1	0
Operatives (semi-skilled)	2	4	1	0
Laborers – full minority utilization	7	6	1	0
Service Workers – full minority utilization				0

While little progress was made in 2003 and no statistics were available for 2004, it appears that the programs put into effect had a positive impact on United Water's employee population. However, the data show improvement is necessary in the employment of qualified minorities. No statistics for 2006 were made available.

In compliance with the spirit of the local Affirmative Action Plan,

harassment prevention training was conducted internally at multiple locations. Select employees were trained externally in "train the trainer" programs in order to conduct internal training. During 2006, Harassment Prevention Training was administered to 162 UWNJ and 27 UWTR employees. Training included the process to file a complaint, complaint investigation, and appropriate remedial action. This program will continue to be offered on an on going basis and/or as needed.

II.F.2 Recommendations

- **United Water should seek to achieve EEO/AA objectives.**

The data demonstrate little success in 2003, with only one minority hire and two female hires. In 2005, eleven minority hires and ten female hires show much improvement. The current partnership with the Department of Labor could be a successful expansion of attracting desired employees.

III. SYSTEM OPERATIONS

The RFP requires that the "contractor shall review UWNJ's and UWTR's existing practices and perform a comparison with best practices and relevant benchmarks" in seven specific areas. Each of these areas is stated and followed by a conclusion and associated findings. Where necessary, recommendations are presented.

III.A SYSTEM DESIGN

The RFP requirement is to "[e]valuate the performance of UWNJ's and UWTR's design functions and their ability to communicate with field construction personnel."

III.A.1 Findings and Conclusions

- **The company makes a number of appropriate forums available to provide design functions the opportunity and ability to communicate with field construction personnel.**

Additionally, design standards are maintained on a central server and available to construction, as well as engineering, personnel in electronic and hard copy. It would be prudent for UWNJ and UWTR to consider an annual meeting of design and construction personnel to discuss lessons learned during the year, opportunities to improve communications and coordination, and to review any planned changes to design and construction standards.

The design functions reside in the Engineering Department, which is now a centralized organization, whereas field construction management and personnel are part of the System Maintenance Department.

Communications between and among these groups occurs in numerous forums and settings. For example, during the design of construction projects, engineering will meet and/or communicate with appropriate members of field construction to discuss the practical realities of field installation that may require design considerations. These interactions provide a forum for better mutual understanding of the design and field construction requirements, and can advance the overall success of construction projects. This communication process is facilitated by the geographic proximity of the two departments.

For larger projects, the Engineering Department includes UWNJ's construction and operations supervisors in the monthly project meetings. These meetings provide a forum for two-way communications regarding project status as well as upcoming engineering projects. For distribution projects, the distribution engineering staff is located at the Hackensack Yard with the Construction and Distribution Departments. This facilitates direct communications, as needed, in a timely manner for both planned and unplanned projects. Additionally, engineering is part of the emergency standby rotation program. As such, UW Engineering personnel develop a better understanding of field operations challenges that occur during off-hours.

Because UWTR is a relatively small company, engineering is effectively part of the operating team and involved in many aspects of operations. For example, main extensions are discussed by engineering and the T&D or construction inspector to determine how to best initiate service to new customers. Larger projects are discussed in the Regional Manager's weekly operations meeting with engineering and operations personnel in attendance. New projects as well as any problems occurring in the field are among the topics discussed.

UWNJ and UWTR use the latest version of industry standards for design and construction including the following:

- AWWA standards
- NJDEP standards
- BPU standards
- International Building Code standards
- The New Jersey Administrative Code
- 10-State standards

In addition, a number of design specifications and standards have been developed in-house that are customized to the specific needs of UWNJ and UWTR. Design standards are maintained on a central server and available to construction, as well as engineering, personnel in electronic and hard copy. This transparency and accessibility allows both functions to examine and discuss design issues from a common, documented design standards basis.

Another forum for communication and interaction among representatives from engineering and construction is the development of the capital budget. Capital construction projects are developed and compiled each year during the period of February through June. During this time frame, meetings are held among engineering and construction (as well as other

systems operations) personnel as needed to develop detailed project plans and requests, and to provide technical reviews. Subsequently, a project-by-project review is performed during the period of June through August. In addition, a technical and standards committee, chaired by engineering management maintains liaison and receives input from construction management personnel.

III.A.2 Recommendations

- **UWNJ and UWTR should hold an annual meeting where representatives from both companies as well as the central Engineering Department discuss design and construction issues.**

Several forums are currently available to provide design function personnel the opportunity and ability to communicate with field construction personnel. Additionally, design standards are maintained on a central server and are available to construction as well as engineering personnel in electronic and hard copy. However, given the recent centralization of engineering functions, more could be done to assure adequate communications are maintained in the new organizational structure. As a result, it would be valuable and prudent for UWNJ and UWTR, along with the central Engineering department, to conduct an annual meeting of design and construction personnel. The purpose of this meeting would be to discuss lessons learned during the year, review and/or suggest any planned changes to design and construction standards and practices, and provide a scheduled opportunity to improve communications and coordination among the two business units and the new Engineering department.

III.B EFFICIENCY

The RFP requires that the consultant "[r]eview planning procedures and make recommendations to create achievable short term and long-term efficiency goals that satisfy UWNJ's and UWTR's missions."

III.B.1 Findings and Conclusions

- **UWNJ and UWTR appear to have a sufficient compliment of long-term and short-term planning vehicles, driven by high-level corporate goals, and supported by close tracking of Key Performance Indicators (KPI).**

The long-term planning procedures include 5-year and 20-year time horizons. The short-term procedures include 1-year planning horizons with quarterly tracking, and documented daily/weekly/monthly KPI measurements reviewed every two weeks by the senior leadership team.

UWNJ and UWTR perform planning activities that address various planning horizons. These include:

- A 20-year master plan that considers all aspects of the system including source of supply, treatment, pumping, transmission and distribution;
- A 5-year capital plan, the first year of which is the detailed capital budget for the year, while the remaining four years provide detail for projects expected to be larger than $250,000; and
- An annual action plan summary describing annual challenges and goals for all system operations as well as other business unit departments, and specifying timelines for completion, activity champion (i.e., leader), and support personnel.

In addition to these planning procedures, UW executive management staff has established four corporate goals designed to provide a framework within which short and long-term efficiency goals are achieved. The goals are:

1) Customer service and value as provided through services that reflect their costs in value; through a strong local identity; through public health, environment and infrastructure leadership.
2) Employee development and motivation through creation of a business where the best people seek to work and grow; through the encouragement of business success; and the promotion of a health and safety culture.
3) Business efficiency through organization structure and management procedures including business reviews that assess the balance among performance, risk and cost.
4) Managed growth through a focus on tuck-in acquisitions that complement UW's existing portfolio, and through organic growth to increase revenue and add to profitability.

These goals become the basis for establishing objectives for the entire organization including the local business units. UWNJ and UWTR management is required to develop an annual Division Action Plan centered on the established corporate goals. From the Division Action Plan specific goals are developed and assigned to staff teams. To insure that these goals are met, they are closely monitored and reviewed regularly at operational meetings and quarterly employee reviews.

Control of fundamental aspects of system operations is achieved by monitoring and reviewing a number of KPIs. These indicators are reviewed on a daily/weekly basis by local management via defined Management Control and Reporting Systems (MCRS), and the most pertinent indicators are reviewed at the senior management level. Performance results are entered into the Performance Operational Database (POD), reviewed every two weeks by the Senior Leadership Team (SLT) and COO. Performance indicators are updated and enhanced as needed. Additionally, UWNJ and UWTR also maintain on Action Plan Summary for each goal, which is updated quarterly until completion.

III.B.2 Recommendations

- **There are no recommendations.**

III.C CONSTRUCTION PROJECTS

The RFP requires the consultant to "[r]eview past and current construction projects for performance in planning, scheduling, cost minimization and efficiency."

III.C.1 Findings and Conclusions

- **Based on the projects reviewed, it appears that the companies' tools and processes for project planning, scheduling, review of alternatives, and cost control practices and procedures are appropriate.**

While few projects of any complexity go exactly as planned with regard to cost and schedule, UWNJ and UWTR make systematic efforts to review and reconcile deviations between actual and planned

performance. This

process provides a lessons learned basis for continued improvement in project planning activities and heightened awareness of potential risks and opportunities.

PMC reviewed a number of past and current construction projects in the UWNJ and UWTR systems. The projects are planned, scheduled, and monitored subject to documented practices and procedures including:

- Monthly capital forecast reports;
- KPIs that measure the accuracy of cost estimates, project planning, and budget attainment; and
- Unit cost tracking for "blanket projects" (e.g., new and replacement hydrants, services, and meters)

Beginning in 2007, the companies are implementing a new capital construction project monitoring and control tool for each project with a budget greater than $100,000. Monthly reports will be generated summarizing:

- Project schedule, including major milestones;
- Actual versus planned expenditures;
- Actual materials installation versus planned quantities;
- Project manager comments including previous months achievements and upcoming activities; and
- Key project issues (e.g., risks and opportunities).

For UWNJ, the projects reviewed are shown in the following table.

Past Projects	Current Projects
Franklin Lakes Pipeline and Booster Stations	Haworth WTP Upgrade
Oradell Dam Overtopping Protection	Hillsdale Booster Station
Haworth WTP pH Adjustment Facility	Apple Ridge Road Main Replacement
	Monksville Dam Improvements

A summary review of three recently completed UWNJ construction projects follows.

1. Franklin Lakes Pipeline and Booster Stations

Project Description

This project included construction of a new transmission main and two pumping stations for the supply of water from the primary UWNJ system

to the Franklin Lakes system. The project allowed decommissioning of the Tice Road WTP, which had reached the end of its useful life and would no longer be permitted for operation by the NJDEP.

The transmission main consists of approximately 29,500 feet of 24-inch pipe installed from the Borough of Upper Saddle River and extending through Ramsey, Mahwah, and Franklin Lakes. The pipeline was chosen as a more cost-effective water supply solution over the construction of a new Tice Road WTP.

Project Costs
The initial cost estimate for construction was $9.3 million. Costs to date are $10.8 million. The variance of $1.5 million can be explained by the following factors:

1. Higher than originally estimated paving restoration costs caused by increased oil prices;
2. Higher than anticipated installation costs for both booster stations to meet local zoning regulations;
3. Increased easement related costs (Ramsey BOE and Library);
4. Transfer of design charges for the Tice Road WTP to this project;
5. Increased sheeting rental costs due to delivery delays.

Project Scheduling
The pipeline was completed in February 2006, approximately two months ahead of schedule.

The Franklin Lakes Booster Station construction was completed in June 2006, approximately one month behind schedule but in time to meet the NJDEP schedule for decommissioning of the Tice Road WTP. Delays were primarily due to fabrication delays at the manufacturer.

The Upper Saddle River Booster Station was substantially completed in August 2006, approximately three months behind schedule. Major fabrication delays and difficulties with transportation (i.e. the station was oversized and exceeded transportation weight limits) were experienced. The delays did not adversely affect customer service.

2. The Oradell Dam Overtopping Protection Improvements Project

Project Description
The purpose of this project was to provide a layer of concrete blanket and precast articulated concrete blocks on both the east and west

abutments of the dam structure, in accordance with current NJDEP dam safety standards. The new concrete protection will protect the dam and its abutments during high flow conditions where the dam may be overtopped with up to three feet of water. In addition, steel sheeting and cutoff wall were added at all edges of the new overlay concrete structure to eliminate any undermining issues during high flow conditions. New security fences and gates were installed as part of this project as well as landscaping to compensate for the removed trees. Temporary steel sheeting was used during construction.

Project Costs
The initial cost estimate for the project was $1.5 million. Final costs were $1.8 million. The variance of $0.3 million can be explained by the following:

- Unforeseen soil conditions required excavation in excess of plan and replacement of poor soils with concrete;
- The original estimate was based on using Portadams to control water during dewatering. Due to unforeseen site conditions, two rows of steel sheeting were required to control water and this added significantly to the overall project cost; and
- Change orders were added to the project.

Project Scheduling
Construction started in late 2004 and the project was completed in December 2005.

3. Haworth WTP pH Adjustment Facility

Project Description
This project included construction of a permanent sulfuric acid storage and feed system at the Haworth WTP in accordance with NJDEP requirements. During certain time periods (i.e. peak demand periods with high transfer from the Passaic River to Oradell Reservoir) excessively high pH levels are experienced making treatment difficult. The acid feed reduces the pH to more treatable levels and allows compliance with finished water quality standards

It was planned to start the construction in September 2005 and complete it in five months.

Project Costs
The initial cost estimate for the project was $2.5 million. Final costs were

$2.8 million. The variance of $0.3 million can be explained by the following:

- The final bid cost was more than the original estimate as a result of increased building material costs;
- Some unforeseen site conditions resulted in additional expenditure; and
- Change orders were added to the project.

Project Scheduling
The project was originally anticipated to be completed in December 2005; however regulatory delays resulted in a late start of the project. The project was finally completed in June 2006, in time for use during the peak demand period.

With regard to current construction, a summary review of four ongoing UWNJ construction projects follows.

1. Haworth WTP Upgrade Project

Background
Preliminary planning and engineering for this project has been taking place over the past few years. In 2005 and 2006, initial improvements (Phase 1) were made at the plant, including reservoir aeration and a new acid storage and feed system. In 2006, a comprehensive pilot plant was constructed and has been operational, testing a wide range of potential treatment options.

The framework of the improvements to the Haworth plant has been developed. Preliminary procurement activities are being managed with a tentative scope, schedule, and budget estimate. Project development costs are not expected to exceed $2,000,000 through May 2007.

Project Description
This project consists of treatment process upgrades to satisfy the following three main objectives that are driving the need for this investment:

(a) Regulatory compliance related to drinking water quality;
(b) Regulatory compliance related to process waste discharge to the Oradell Reservoir; and
(c) Operational constraints related to the age (condition and performance) of the existing ozone system.

The tentative scope of the project includes pretreatment improvements for pre-oxidation (through potassium permanganate, aeration, and/or chlorine dioxide), dissolved air flotation (DAF), chlorine contact disinfection, and granular activated carbon filtration. This technical solution has been developed as the most cost-effective plan to meet the objectives of the project and to meet all current and planned drinking water regulations.

The tentative schedule includes milestones for project procurement through May 2007, engineering through April 2008 and construction through the end of 2009. The major elements of the improvements are planned to be in-service by October 2008 to meet a regulatory deadline.

2. Hillsdale Booster Station (Northwest Bergen County Water Supply Project)

Project Description
This project includes the construction of a new 5-mgd underground booster pumping station in Hillsdale to replace an existing undersized 2-mgd station. The estimated project cost is $1,500,000 with expenditures planned as follows:

2006	-	$ 250,000
2007	-	$ 1,250,000

Purpose of Project
The additions of the Franklin Lakes pipeline and new wholesale water agreements with Ramsey, Mahwah, and Ridgewood have increased the water demand in the northwest portion of the UWNJ distribution system. To satisfy this demand, UWNJ has performed piping network improvements and has installed three new booster stations (i.e. Franklin Lakes, Upper Saddle River, and Western Reservoir).

The existing Hillsdale booster station has a 2-mgd capacity that is inadequately sized to work in conjunction with the three new booster stations. A temporary 5-mgd booster station was used in Hillsdale during the summer of 2006 to meet demands in the northwest. While affective, the use of temporary pumping is inefficient operationally and is an inconvenience for local residents. A properly sized permanent facility will alleviate these conditions.

The new station will be a prefabricated facility, designed for underground installation within the Hillsdale Avenue right-of-way. This

type of installation is cost effective and reduces the project schedule significantly by alleviating the need for property acquisition. The station is being

designed to meet all NJDEP requirements. The project schedule is being managed to ensure completion in time for the peak summer demand period in 2007.

3. Apple Ridge Road Main Replacement, Woodcliff Lake (Northwest Bergen County Water Supply Project)

Project Description
This project includes the replacement of 3,800 feet of 16-inch cast iron pipe along Apple Ridge Road with a new ductile iron pipe in order to improve customer service. The estimated project cost is $680,000 and is anticipated to be completed in 2006 after a four-week construction period.

Purpose of Project
The 16-inch main in Apple Ridge Road is critical in moving water from the Western Finished Water Storage Reservoir to the Montvale area to serve wholesale customers in northwest Bergen County. The main experienced an inordinate number of breaks within recent years and an engineering cost/benefit analysis demonstrated the cost benefit of replacement against expected failure rates.

Detail design and specifications have been completed to replace the cast iron main with 16 inch ductile iron pipe. The Capital Expenditure Authorization has been received. The contractor has been selected, in coordination with the Procurement Department. Construction was initiated and completed in December 2006.

4. Monksville Dam Improvements Project

Project Description
This project consists of the rehabilitation of the Monksville Dam in Ringwood, NJ. The Monksville Reservoir and Dam are owned by the Wanaque South Partners that consists of UW and the North Jersey District Water Supply Commission (NJDWSC) . The cost of the project will be shared 50/50 in accordance with the Partnership Agreement. NJDWSC is managing the project on behalf of the Partnership.

UW's share of the project total is estimated at $3,450,000 with expenditures planned as follows:

2006	-	$ 730,000
2007	-	$ 2,720,000

Purpose of Project
The improvements to the dam are to correct the deteriorated condition of the compacted concrete surface and improve the safety of the dam. Currently, the NJDWSC is responsible for the operation of the Monksville Dam and is coordinating the design and construction schedule. However, UW engineers are monitoring the progress of the dam construction to ensure the quality of work and construction progress. The project is being managed to ensure completion by July, 2007.

For UWTR, the projects reviewed are shown in the next table.

Past Projects	Current Projects
Radionuclide Treatment Facilities at Whitesville and Parkway Wells	Alternative Projects – Phase-out of Berkeley Radionuclide Treatment
Somerset Meadows Main Extension	
Auxiliary Power – Parkway Well #42	

A summary review of three recently completed UWTR construction projects follows.

1. Project Title: Radionuclide Treatment

Project Description
This project is to construct radionuclide treatment facilities at the Whitesville Well 31 for 500 gpm, Parkway Well 22 and 29 for 1000 gpm, and Berkeley Well 33 for 1000 gpm direct RSC (Radium Selective Complexer) radium removal facilities to meet SDWA water quality standards. All these well sites had elevated radium 226, radium 228 or gross alpha exceeding the current MCL. Treatment processes are required to remove Radium 226, Radium 228 and Gross Alpha to ensure that the water quality at each point of entry meets the current water quality standards.

Project Costs
The initial cost estimate for construction was $3,874,450. Final cost is $3,367,450.

Project Scheduling
The temporary radionuclide system for Whitesville was constructed and has been in operation since March 2006 and the temporary radionuclide

system for Parkway was constructed and has been in operation since June 2006.

2. Project Title: Water Main Extension to Service Somerset Meadows

Project Description
This project is for the installation of 80 LF- 12 inch ductile iron pipe, 260 LF- 12 inch PVC Pipe, 3,820 LF- 8 inch PVC pipe and six fire hydrants to provide water service to 50 residential customers in the Somerset Meadows development. The water main installation included 3,820 LF- 8 inch PVC pipe and six hydrants within the development. It also included 260 LF- 12" PVC pipe on Stevens Road with a tie-in at Whitesville Road. This water main extension work provided for the aerial crossing of existing drainage culvert with 80 LF- 12 inch ductile iron pipe on South side of bridge, all exposed ductile iron pipe to be wrapped in insulation and aluminum jacketing.

Project Costs
The initial cost estimate for construction was $160,520. Final cost of the project was $156,080.

Project Scheduling
The pipeline was started in September 2003 and completed in 2005 in order to match the development construction schedule.

3. Project Title: Auxiliary Power at Well 42 Parkway Well Field

Project Description
This project was to purchase and install a new 250 KW diesel powered auxiliary generator dedicated to allow the operation of Well 42 at the Parkway Station.

Project Costs
The initial cost estimate for the project was $126,500. Final cost was $141,860.

Project Scheduling
Construction started in 2005 and the project was completed in December 2005.

With regard to current construction, a summary review of three ongoing UWTR construction projects follows.

Project Title: Alternative Projects to Phase-Out Berkeley Radionuclide Treatment

a) Upgrading Wells at Holly and Parkway;
b) Iron Treatment at Holly and Parkway; and
c) Distribution system upgrades

Project Description
This project involves water supply improvements in the Tom's River system needed to meet regulatory requirements and to counteract service level deficiencies caused by the radionuclide contaminants at the current Berkeley supply.

Project Costs
The project cost is estimated at $12,000,000 with expenditures planned as follows:

2006	-	$ 100,000
2007	-	$ 8,000,000
2008	-	$ 4,000,000

Purpose of Project
UWTR is faced with high levels of radionuclides at the Berkeley well field site. To maintain compliance, treatment improvements have been evaluated. However, the Berkeley site has presented challenges due to its location in a residential neighborhood and limited site availability. The local residents are strongly opposed to the installation of the planned radionuclide treatment facility. In order to obtain the necessary approvals for the construction of this facility many years of legal actions would potentially be required. Alternatively, construction of the facility at a remote site has been considered, but the need of lengthy piping work and other improvements make this option cost prohibitive. As a result, alternative projects have been identified and evaluated.

The selected plan for Berkeley is to phase out the source of supply and replace it with other system improvements, in lieu of installing radionuclide removal treatment. This selected plan is more cost effective, it is within the control of the company, and it solves other water quality deficiencies in the system. In general, two current sources of supply (Holly and Parkway) will be improved for increased pumping capacity and increased treatment capacity for iron removal.

Distribution System Upgrades

The current operational strategy at these two sources of supply includes iron removal and blending, whereby iron is removed in part of the flow up to the capacity of the existing iron removal process and then blended with raw groundwater. During high water demands, this operation leads to many customer complaints related to high levels of iron. The planned improvements to phase out the Berkeley source will provide a dual benefit by replacing the current capacity of the Berkeley supply and increasing iron removal capacity.

Status and Schedule

Analysis of UWTR's distribution system concluded that the construction of two transmission mains and the replacement of one HS pump at Parkway were needed. The operations at the Berkeley site will be monitored on a monthly basis for radionuclide levels. Currently, the water supply is in compliance with regulations, but very close to the maximum contaminant level.

The selected plan for Berkeley was presented to the New Jersey DEP as a preliminary plan to seek comments and was viewed favorably. The three existing wells at Berkeley will be phased-out, with the suspected worst well first, then the remaining two. This phase-out will correspond with the project delivery schedule for the planned improvements through 2008.

III.C.2 Recommendations

- **There are no recommendations.**

III.D OPERATIONS AND MAINTENANCE

The RFP requires the consultant to "[e]valuate the accuracy of documentation, response time and performance of UWNJ's and UWTR's operations and maintenance."

III.D.1 Findings and Conclusions

- **The work management systems, supervisory reviews, computer support, and reports related to the documentation, response time, and performance of UWNJ's and UWTR's operations and maintenance work orders appear to be appropriate to provide a reasonable level of quality control and assurance of their accuracy.**

The KEY system used by UWNJ is preferable to the system used by UWTR. It could potentially provide an upgrade to the process and accuracy of documenting system maintenance and new business construction performance.

System maintenance documentation at UWNJ is tracked and recorded on the company's KEY system, which serves as its work management system. Maintenance work orders are created by the Central Service Bureau (CSB department) via the KEY system and dispatched to the appropriate field personnel. The field personnel make the on-site determination of what needs to be done, and refer the jobs accordingly. At the completion of each shift, field personnel timesheets are submitted to the CSB department. CSB will then update the job with the work performed and either refer it out if still ongoing or close it out if completed. Daily work records are reviewed by area superintendents to ensure accuracy in coding and reporting. Additionally, the CSB supervisor performs a random daily audit of the previous day's entries to ensure the CSB is following prescribed procedures for job tracking, accuracy, and quality assurance.

Response time is documented within the KEY system. The exact time that a job is created is captured by the system and added to the original issue or complaint. As the job is updated and referred, the actual work times are entered on these referrals as provided by the field personnel.

Job performance is tracked within the work management module of the KEY system. This information is also entered by CSB clerks. The system tracks both individual employee and crew performance taking into

account target time for the job, actual wrench time, and job delay codes. Target times for job performance, with benchmarks established by the company, are reviewed periodically by System Operations management. Work management also produces KPIs that measure the overall performance of the construction and distribution departments, and the KEY system generates hourly analysis reports for review by supervision.

Pumping maintenance activities are documented using the ABB PM-30 Plus Computerized Maintenance Management System (CMMS). Preventive maintenance work orders are automatically generated weekly by the web-based system and provided to supervision for assignment. As work orders are completed, they are entered into the system for tracking. Corrective maintenance work orders are often generated as a result of inspections. Supervision, control system operators, and other personnel can generate corrective and/or emergency maintenance work orders, as needed, which are entered into the CMMS. Supervision assigns the work to the appropriate personnel and reviews completed work orders for accuracy. An administrative assistant codes, enters, and closes completed work orders in the CMMS system.

The superintendent of maintenance is able to track work order completion status at any time using the web-based system. Formal reports are generated monthly and reviewed with the department director and supervision in order to correct any deficiencies or re-prioritize work orders.

At UWTR, an Oracle work order data base system and hard copy files track system maintenance documentation. Maintenance jobs are created by the System Maintenance Administrative Assistant and/or Customer Service Representative via a hard copy work order request that is sent to the System Maintenance Foreman who in turn dispatches the appropriate field personnel. The field personnel determine what needs to be done and complete the job accordingly. At the completion of each job, the field personnel complete the hard copy work order request with the activities and materials used to complete the job. Completed work orders are submitted to the System Maintenance Foreman at the end of each shift. The foreman reviews the daily work orders for completion and fills out a daily work summary sheet. The summary sheet along with all the work orders is then submitted to the Superintendent of System Maintenance for final review before database entry.

After the above-mentioned personnel complete all reviews, the daily work orders are provided to the GIS/Data Entry Tech for input into the Oracle database. A copy of each work order that required material usage

is provided to the Storekeeper for inventory adjustment. After all pertinent information from the work order is entered into the Oracle database and to UBS (UW's billing and customer service software), the original work order is filed in its appropriate jacket number. Each service location is assigned a unique number for this purpose.

III.D.2 Recommendations

- **UWTR should adopt and implement UWNJ's KEY system to enhance its maintenance and construction work order system.**

UWTR's current system of paper-generated work orders and subsequent data entry into an Oracle database could be improved and streamlined by replacement with the KEY system in use at UWNJ. The maintenance and new business construction work-order history and tracking functionalities provided by KEY, along with its work management analysis and reporting capabilities, are superior to UWTR's current capabilities. Moreover, the KEY system can be used to document and record contractor work orders as well as those performed by in-house personnel. It should be noted that this will be included in the 2007 Information Technology master plan study.

Also of concern, are questions raised regarding the accuracy and completeness of UWTR's valve maintenance program. During interviews, the new management team was unable to say whether all 12 inch and larger valves had been exercised within the past two years. The KEY System will provide an ongoing history and tracking of valve, as well as other, preventive maintenance programs.

- **UWTR should expedite and report on the assessment of its preventive maintenance programs to assure all valves have been, and are tested in full compliance with the BPU mandated valve-testing programs. Both UWTR and UWNJ should provide the BPU with annual attestation, signed by a corporate officer, that all mandated testing and inspection programs are current.**

During the course of this management audit, questions have arisen as to the status of UWTR's valve testing program. Review of UWTR's annual maintenance expenditures shows they have increased from $748,641 in 2003 to $1,462,808 in 2006. This rapid acceleration (an increase of 95%)

suggests that maintenance funding in previous years was insufficient to meet the needs of the system.
While the new management team is focused on attainment of maintenance program goals, the exact status of its compliance assessment regarding valves and hydrants is not clear. Results of this assessment should be submitted to the BPU in the third quarter of each year along with an accelerated compliance plan.

III.E SYSTEM RELIABILITY

The RFP requires the consultant to "[a]ssess the systems reliability in providing water that meets the requirements of the Safe Water Drinking Act (SWDA)."

III.E.1 Findings and Conclusions

- **The comprehensive Environmental Quality Assurance Program in place at UWNJ and UWTR appears to support an appropriate level of reliability in providing water that meets the requirements of the Safe Drinking Water Act.**

This program includes the networked OPS SQL system for automated compliance tracking and reporting, sign-off forms and on-site compliance documents, and NELAP-certified testing labs.

For both the UWNJ and UWTR systems, routine monitoring consisting of sample collection and analysis, per NJDEP requirements, is carried out on a daily, weekly or monthly basis, depending on the required frequency. Samples are collected from the watershed, source water (reservoir or wells), various stages of the treatment process, points of entry, and the distribution system. Adherence to the regulatory requirements was supported by the use of an Excel-based sampling and reporting tracking tool, which is updated each month and signed by the personnel that produce the various State reports, and by the Business Unit Manager.

During 2006, UWNJ and UWTR implemented OPS SQL, a new compliance monitoring and reporting system along with on-site compliance documents (OCD) as part of UW's comprehensive Environmental Compliance Assurance Program. The goals of the program are to assure compliance with all applicable regulation, promote compliance awareness, maintain transparency in compliance and

reporting, and prevent future non-compliance. All required sampling is performed in order to verify that the water provided to customers meets the requirements of the Safe Drinking Water Act. Capital improvements are planned and implemented when results of water quality samples indicate the need for treatment. Recent examples of this are the radionuclide treatment facilities installed at the Whitesville and Parkway Stations of UWTR in 2006.

For the UWNJ Haworth system, the Haworth Water Quality Laboratory directs the sampling and analysis for Safe Drinking Water Act parameters as specified by NJDEP. The Laboratory is nationally certified under the National Environmental Laboratory Approval Program (NELAP) to ensure that the data produced for those parameters analyzed by the Haworth Laboratory meet the strict quality assurance requirements specified by NJDEP. Analysis and testing of samples at UWTR is performed by Henderson Labs, which is also NELAP certified. The testing for radionuclides is performed by PCI Labs located in Pennsylvania.

The use of on-line monitoring and various alarm points is also employed to ensure compliance with water quality standards. Examples include turbidity monitoring of filters and finished water at the Haworth Plant, chlorine and pH. Careful tracking of chemical dosages and water quality is performed daily or more often if necessary. Maintenance of the filters at the Haworth Treatment Plant is ongoing, with biannual examination of media depth for each filter as well as “filter surveillance” and annual replenishment of media, when required. The “filter surveillance” process includes visual inspection of the filter for irregularities of the filter bed, media integrity, and proper backwash expansion. Cleaning of filter media, using hypochlorite, is employed to remove built up residue on the media, which can interfere with proper filter performance.

Monitoring of chlorine, bacteria levels, and corrosion control treatment (ortho-phosphate) in the distribution system is tracked through the use of charts, or other reports, which display the trends of these parameters. Charting of chlorine residual and Heterotrophic Plate Count (HPC – an indicator of bacteriological activity) at UWNJ, helps to indicate the areas in the system which may require flushing or other forms of maintenance to ensure safe drinking water. Periodic, routine flushing of the UWNJ and UWTR distribution systems is performed to remove sediment and color, and to ensure that the water is bacteriologically safe.

The Haworth Pilot Plant was placed in service in July 2006. This SCADA-controlled pilot facility is being used to determine the final

design of the Haworth Upgrade, which is expected to be completed in 2010. The pilot plant is also utilized to ensure that the proper treatment process is in place at the existing Haworth Plant facility.

III.E.2 Recommendations

- **The functional position responsible for Water Quality and Compliance at UWTR should be an employee of UWTR and a direct report to the Regional Manager.**

The new management structure at UWTR includes a position responsible for water quality and compliance. The incumbent in this position is not an employee of UWTR. The individual is an employee of UW Mid-Atlantic, and estimates spending, on average, about 20% of his time, or more when needed, on UWTR business. While this individual appears to be qualified and well conversant with the issues, his reporting relationship is another example of the "double black line" authority of UWTR's Regional Manager and the to the head of Mid Atlantic. Notably, there is no organizational relationship with the Director of Water Quality and Compliance for UWNJ. Additionally, there is no UWTR job description that details the duties and responsibilities of the position or specifies lines of authority and communication among these three positions. This omission does not seem prudent, particularly in the aftermath of serious water quality reporting and compliance issues experienced by the previous management team.

III.F ENGINEERING ECONOMICS

The RFP requires the consultant to "[e]valuate the engineering economics methodology and their ability to coordinate UWNJ's and UWTR's operations in an optimal manner."

III.F.1 Findings and Conclusions

- **UWNJ and UWTR appear to share a sufficiency of common engineering economics guidelines, methods, directives, planning forums, and processes to support their ability to coordinate operations in an optimal manner.**

Additionally, UWTR's new management team has implemented practices applicable to its operations from UWNJ, and continues to examine opportunities to adopt others. The centralized engineering function provides additional standardization to these activities.

The engineering function for UWNJ and UWTR was centralized and became part of UW in October 2006. The reorganization was intended to provide synergies and economies among UW's affiliated companies. It also facilitated the coordination and standardization of project engineering economics methodology, as well as, design and construction practices for both UWNJ and UWTR. With regard to design and construction practices, both Companies use the latest version of accepted industry standards and codes. With regard to engineering economics, a "whole life costs" analysis is generally performed. This approach considers both capital costs and long-term operation and maintenance expenses for the evaluation of alternatives. For example, the selection criteria for main replacement projects include a factor for the historic number and cost of main repairs on alternative pipe segments. Segments with higher repair costs are given higher priority (i.e., scheduled earlier in the plan).

For UWNJ and UWTR, engineering economics begins with a framework for prioritizing capital projects. Shown below are the detailed priority codes used by both companies, in descending order of priority.

PROJECT PRIORITY CODES

SELF-SUPPORTING PROJECTS
01 New Services, New Meters, New Sewer Laterals
02 Extensions to New Customers

03 Expense-Reducing Projects: Projects that produce a return on investment equal to that allowed in the Company's most recent rate filing. Rule of Thumb: annual expense saving = 15% of investment

04 Other Self-Supporting: Includes projects eligible for revenue surcharges, pass-throughs, etc.

PROJECTS MANDATED BY GOVERNMENTAL AGENCIES

11 Compliance with Environmental Regulations

12 Compliance with Safety Regulations

13 Compliance with Regulatory Commission Regulations or Orders

14 Projects required due to Highway Improvement Projects

15 Projects required by Municipal Agencies

16 Other Government Mandates

CORRECTION OF SERVICE DEFICIENCIES

20 Correction of Service Deficiencies

PREVENTION OF SERVICE DEFICIENCIES

31 Added Capacity

32 Infrastructure Replacement

33 Other Improvements

COST CONTAINMENT

40 Cost Containment: Includes replacement of tools and equipment that would result in higher O&M Expense if not replaced.

COST IMPROVEMENT

50 Cost Improvement: Includes projects that reduce O&M Expense, but not to the level required for Priority Code 03.

PRODUCTIVITY IMPROVEMENT

60 Productivity Improvement: Includes "modernization" projects whose benefits may not be easily quantified and are not immediate. Examples are projects that eliminate or delay the need for additional personnel at some future date.

99 ALL OTHERS

Although each capital project is evaluated on its own merit and prioritized per the above codes, it is necessary to assure that a level playing field and a standard approach to engineering economic justification is provided to both companies. This is primarily accomplished by the use of three planning guidelines and tools:

1. Capital Expenditures Policy Manual;
2. Project justification sheets; and
3. Budget workbook.

Individual project analysis and development generally includes the following steps:

- identification of project need;
- development of alternatives;
- cost/benefit analysis;
- selection of best alternative;
- detail design and specifications;
- preparation of cost estimate;
- CEA (Capital Expenditure Authorization) preparation and approval process; and
- procurement of material and contractor (coordinated through Supply Chain Management Department)

Project cost efficiency and minimization is supported by:

- adherence to corporate procurement guidelines (e.g., capital purchases exceeding $10,000 must be supported by three documented competitive bids);
- monthly project progress monitoring and expenditure forecasting, with review by corporate engineering; and
- monitoring of KPIs for accuracy of cost estimate, forecast accuracy, project planning accuracy, and budget attainment.

While the centralization of the engineering function along with the standardized approach to engineering economic methodology are factors that support coordination of UWNJ's and UWTR's system operations-related projects, it should be noted that the two water systems have significant differences. These differences include:

- age of the infrastructures;
- size of systems and numbers of customers;
- types of pipe materials installed;
  predominance of surface versus ground water supplies; and
- soil conditions.

Despite these differences, both UWNJ and UWTR are in the process of

developing a new 20-year master plan. UW initiated a centralized master planning function for UWNJ, UWTR, and its other regulated entities in October 2006, coincident with the reorganization of the Engineering Department. The master planning process is designed to take a long-term, structured view of the capital requirements of each company. The planning horizon is 20 years, and addresses needs including underground infrastructure, water supply, facilities, and all aspects of regulatory compliance. This effort is led by the Director, Master Planning, and requires significant participation and collaboration with systems operations management in all affected business units.

The master planning process for UWNJ begins in 2007 with data collection for each plan element. The 20-year plan will be completed in 2008. For UWTR, the process is further along, and the 20-year plan should be completed by the end if the first quarter of 2007. It is anticipated that the plan will be revisited every five years, more often if needed, and specific plan elements as needed.

III.F.2 Recommendations

- **There are no recommendations.**

III.G CONSERVATION

The RFP requires the consultant to "[e]valuate UWNJ's and UWTR's conservation efforts in comparison to other New Jersey Water Utilities and with the BPU's strategic plan, renewable energy, and conservation objectives 3.5 and 3.6."

III.G.1 Findings and Conclusions

- **While the company is sensitive to renewable energy possibilities, we note the significant electric energy costs incurred in order to power the continuous-consumption mode of much of the system's operating equipment.**

There may be an opportunity to explore hydroelectric generation feasibility at the Dundee and Monksville dams, which are characterized as having significant elevation differentials and large flows. These facilities are co-owned with the North Jersey District Water Supply Commission.

In 2002, UWNJ investigated the use of solar power at its largest treatment and pumping facility, the Haworth Water Treatment plant. At that time, the Company worked closely with a consultant contractor, Dome Tech Solar. UWNJ analyzed the project incorporating the energy rebate that would be received from the State of New Jersey and found that the project was not cost effective. The project was planned for power generation of 130 KW with a capital investment of over $500,000, for which UWNJ would realize savings of less than $10,000. To justify the capital, the company required over $70,000 in savings.

In 2005, UWNJ worked with Pennsylvania Power and Light (PPL) to co-generate and supply all the plant power needs during a normal demand load period. UWNJ now uses this on-site power generation and electrical power off the grid (i.e. PSE&G), to produce the most cost effective power use for UWNJ customers.

In 2005, PPL also performed a cursory review of providing solar power in the capacity of 500 KW at the Haworth facility, in order to prepare a proposal for UW's consideration. Due to limited available land area, costly roof mounting structures would be required, which adversely affected the economics of the project. Because of this limitation, PPL did not prepare a proposal.

PPL continues to work with UWNJ on this and other "Green Energy" issues. They are currently following up on additional funding/programs that may be available.

- **The company's efforts regarding water conservation education, communication, and outreach are appropriate to its mission and responsibility.**

UWNJ has a history of promoting water conservation to its customers. This message is an integral component of the Company's comprehensive communications plan. For many years United Water has offered a variety of programs aimed at both adult and youth audiences.

The company continues to build on this tradition. In 2006 UW, launched a new website, www.uwconserve.com, which is geared exclusively to conservation. The site is unique in that customers can purchase both indoor and outdoor conservation kits online at prices which are substantially lower than those charged at retail stores.

The company's outreach and education initiatives often focus on conservation-related programs. Examples include:

- *Project Wet,* an educational seminar for elementary school teachers; which stresses the importance of water education and conservation.
- *Xeriscape Garden*, planted in cooperation with the Rutgers; Cooperative Extension at the Haworth Water Treatment Plant to promote conservation gardening;
- *Customer Communications*, such as bill inserts and "messages on hold" include conservation tips on a timely basis; and
- *Advertising Campaigns* also promote conservation awareness on a periodic basis.

Other efforts, such as the storm drain marking program, the nature trail, plant tours, the watershed recreation program, and customer advisory panels (CAP) are also used as vehicles to promote conservation.

- **UWNJ and UWTR main replacement programs are inadequate and contribute to the poor unaccounted-for-water (UFW) statistics.**

Despite the many steps UWNJ has taken to address UFW in its service territory, the level of UAW has not been substantially reduced. The

company suggests that the age and size of its underground infrastructure is a likely cause of the stubbornness of the situation. The company has not presented benchmarks that support the reasonableness of 18.16% UFW in such systems. Nor has UWTR presented benchmarks supporting the reasonableness of 13.28% UFW. According to the APPA's 2005 benchmarking survey of 45 water utilities, the median distribution system water loss reported was 9%, while the median for Northeast companies was higher at 11% Neither UWNJ nor UWTR participate in the AWWA benchmarking survey but that is anticipated to change in 2007.

We also note that neither company has embarked on a scheduled main replacement program designed to systematically address areas of the system that may be in the greatest need of replacement. Such a program is potentially more urgent to the UWNJ system than that of UWTR.

As part of the conservation programs, UWNJ is required to meet a goal for UFW of 15% by 2010. The company believes this is an aggressive goal for a system the size and age of UWNJ. Shown in the following table is UWNJ's percentage of unaccounted for water during the 2002-2006 period. We do note that the AWWA has published benchmarks for UFW that they adjust for age and geographic location of a system; for UWNJ this translates to a 15% to 20% rate.

Year	% Unaccounted For
2002	16.17%
2003	18.42%
2004	18.67%
2005	17.46%
2006	18.16%

As can be seen from the table, UWNJ's UFW continues to remain in the 18% range with little improvement. This continues to the case despite the fact that during the past several years, the company has engaged in numerous efforts to address the issue of UFW. These efforts and activities include the following:

- Checking all interconnection meters and recording test dates and results (Allendale and Upper Saddle River meters – checking calculation for deducts between meters);
- Examinations of plant master meters test dates and results and reviews of testing procedures;

- Reviews of large meter consumption and re-size the meters if necessary (i.e. three inches and above meters);
- Reviews of customers with multiple meters and checks of the billing consumption calculations;
- Use of portable ultra sonic meters to spot check fire service lines to identify water loss through these lines;
- Obtaining main break and repair/replacement records with incorporation into GIS database;
- Reviews of monthly estimated meter readings (i.e. number of meters and total estimated volume) and accelerated HOMER replacement;
- Reviews of the leak detection program (i.e. number of leak detections performed and miles of main checked) and making this a KPI;
- Evaluations of sub-system water consumption to manage water usage in smaller areas with graphing of water usage and concentration of leak detection efforts in problem areas;
- Reviews of monthly UFW calculations;
- Examinations items developed or identified from Revenue Issue meetings;
- M-Log pilot program on customer service lines to detect water leaks in selected areas; and
- Examinations of T&D leak detection records

Although the company has employed numerous leak detection programs and systems, relatively small amounts of its aging main infrastructure have been replaced over the past five years. Shown in the table below is the annual number of feet of main replaced by year and material for the 2002-2006 period.

Size/Material	2002	2003	2004	2005	2006
6" Ductile	6,128'	2,046'	1,675'	-0-	5,220'
8" Ductile	670'	2,541'	-0-	700'	1,900'
12" Ductile	1,672'	5,538'	360'	-0-	3,700'
Total	8,470'	10,125'	2,035'	700'	10,820'

Assuming the company continued to replace main at the rate of 10,820 feet per year, the highest level of replacement in the past five years, it would take over 1,000 years to replace the 2,092 miles of main comprising the UWNJ infrastructure. This is obviously way in excess of the life expectancy of any main whether metal or plastic.

With regard to UWTR, shown in the following table is UWTR's percentage unaccounted-for during the 2002-2006 period.

Year	% Unaccounted For
2002	12.40%
2003	15.04%
2004	14.38%
2005	14.44%
2006	13.28%

As shown, UWTR has a current UFW of about 13%. The soil conditions in the system are sandy and the pipe used is mostly PVC. UWTR performs periodic leak detection using outside consultants. The company has not replaced any water main during the 2002-2006 period, but states that about 2,500 feet of main are scheduled for replacement annually during the 2007-2011 period. At that rate, it would take 1,100 years to replace the system, similar to the finding stated above for UWNJ.

Seventy percent of the UWTR mains are less than 40 years old with most of the system installed in the 1970s and 1980s. Additionally, the Company's 2006 main breaks-per-mile at 0.0498 is one fifth (20%) that of UWNJ's rate of 0.26. Although there are some old sections of main, UWTR states the bedding is excellent (i.e. sandy soil) and there are few main breaks on the older water mains. Additionally, a 20-year master plan for UWTR will be completed soon, and will address replacement needs and sections of the system that may require additional transmission lines.

III.G.2 Recommendations

- **UWNJ should design and implement a main replacement program.**

Although UWNJ has engaged in numerous efforts and activities aimed at reducing UFW, little if any improvement has been achieved. The UFW level continues to exceed 18% and shows no signs of decreasing despite the Company's goals and efforts. For 2006, this is equal to nearly 7.4 billion gallons of water, or over half the Hackensack River Reservoir system capacity. Given the current main replacement rate of about 11,000 feet per year, it would take 1,000 years to replace the 2,092 miles of main comprising UWNJ's aging infrastructure. This does not seem

appropriate in light of the UFW situation as well as the rate of water main breaks on the UWNJ system, which at 0.26 breaks per mile is five-times greater than the rate at UWTR.

A well-designed main replacement program should be prioritized to address the most vulnerable sections of the system first. Vulnerability is typically associated with predictive variables such as age of the main, history, clusters of main breaks, and heavily trafficked/vibration prone locations. The analysis, results, and impact of main replacements in high priority areas could be used to determine the approach, timing, and need for driving the program into areas of lower priority. In any case, replacement programs are expensive undertakings that in some jurisdictions have been at least partially financed by surcharges to customer bills to cover the costs of infrastructure upgrades. For example, the Pennsylvania PUC instituted a Distribution System Improvement Charge (DSIC). This allows water companies to use the surcharge to fund more upgrades of aging infrastructure than would otherwise be feasible at a reasonable base rate for customers.

It should be noted that UW faces substantial capital needs for infrastructure replacement as well as production quality improvements such as the Haworth Plant

- **UWTR should assess whether there is need for a main replacement program, particularly in older areas of the distribution system, and begin to plan and prepare for its eventuality.**

Although UWTR's distribution system is relatively young, with 70.4% of its mains less than 40 years old, there are some disturbing trends. As noted above, UFW has ranged from 12.40% to 15.04% during the past five years, and registered 13.28% during 2006. This level of UFW seems high for a young distribution system. Additionally, there are 88,723 feet of main (about 17 miles) whose installation date is unknown, except that it was installed prior to 1950. During the nine-year period 1998 – 2006, main breaks rose from 7 to 26 (3.7 times greater), while main breaks per mile increased from 0.0142 to 0.0498 (3.5 times greater).

While this was occurring, UWTR performed no main replacements during the past five years, and significantly under spent its capital budget during some of those years. Although the company states that its capital plan for the 2007 – 2011 period includes 2,500 feet of main replacement per year, this equates to a 1,100-year time span to replace the current system, which is similar to UWNJ's current replacement rate.

Consequently, it seems prudent to assess the need for an appropriate main replacement program. This assessment should be performed in conjunction with the following recommendation regarding UFW benchmarking.

- **UWNJ and UWTR should participate in the AWWA, or equivalent, water industry benchmark survey to establish reasonable UFW goals and identify best practice companies.**

The AWWA 2005 performance benchmark survey included the participation of 45 water and wastewater utilities. Among other performance indicators, the survey included measures of distribution water loss, distribution system integrity, and operations and maintenance cost ratios. Both UWNJ and UWTR could use the survey to determine reasonable goals for UFW. More importantly, they could identify the best in class UFW companies and determine the best practices used by these companies to mitigate water loss.

UWNJ and UWTR systems have significant differences. These differences include:

- age of the infrastructures;
- size of systems and numbers of customers;
- types of pipe materials installed,;
- predominance of surface versus ground water supplies; and
- subsurface soil conditions.

Each company would have its own target UFW, and the achievable level for UWNJ in all likelihood would not be as low as that for UWTR. As a result, each company should select its own reasonably similar subset of survey companies on which to base its individual comparisons, goals, and best practices.

Since UWNJ and UWTR are members of the AWWA, the additional cost of participating in the benchmarking survey should be minimal.

- **UWNJ should perform a technical and economic feasibility study to determine the possibility of hydroelectric generation at the Dundee and Monksville dams.**

Although UWNJ is sensitive to renewable energy possibilities and has implemented programs such as buying day-ahead power, the company currently incurs electric energy costs of over $10 million per year in

order to power the continuous-consumption mode of much of the system's operating equipment. There appears to be opportunity to explore hydroelectric generation feasibility at the Dundee and Monksville dams, which are characterized as having significant elevation differentials and large flows. These facilities are co-owned with the North Jersey District Water Supply Commission.

In performing the technical and economic evaluation, consideration should be given to the possibility, and potential financial benefit, of selling excess power to the PSE&G grid. UWNJ states that it currently sells no power to the grid from its electric generation facilities because the interconnection agreement with PSE&G specifically precludes this practice.

IV. CUSTOMER SERVICE

The RFP requires Customer Service to be reviewed with respect to "serving the best interests of their ratepayers". Two specific analyses are required.

IV.A METER READING

The RFP requires the consultant to "[a]ssess the accuracy and efficiency of meter reading."

IV.A.1 Findings and Conclusions

- **Customer Service functions are managed by experienced personnel.**

The Customer Service Structure consists of the Management Team, Customer Contact and Metering Services, and Revenue Management. The Vice President of Customer Service directs all three structures, and her subordinates may carry responsibilities in more than one structure. The Vice President has long term, international experience leading into Suez ownership and is in the United States under a three-year expatriate agreement.

The Director of New Jersey Customer Operations began her employment in April of 2004 managing the call center and was assigned to her current position in April 2006. She is responsible for the call center, the meter shop, and the customer relations functions. She directs the Manager Customer Service, the Manager Metering Services and the Supervisor Customer Relations.

United Water New Jersey's meter shop is headquartered in Hackensack and has been managed by a twenty-year employee since March of 2001. The Manager Metering Services began his employment as a water meter reader following completion of his military service. After two years of reading meters he installed and changed out meters for five years. He left positions covered by the bargaining unit agreement when he became Administrator of the Supervisory Control and Data Acquisition [SCADA] system. He then moved to Assistant Superintendent Construction and Distribution for five years before being appointed to his present position.

The objective of the metering function is the efficient and accurate measurement of customers' (water) consumption.

- **The Homer meter reading technology using landlines is technologically outmoded.**

UWNJ is in the midst of a four-year project to transition from Homer meter reading technology to meters that can be read by radio frequency (RF). The Homer system was installed between 1980 and 1985 and is no longer supported by the manufacturer. In addition, Homer is dependent upon Verizon telephone numbers. This became problematic as United Water customers changed both their landline telephone providers to other than Verizon and/or converted to cellular telephones.

In response to the Verizon dependent Homer methodology, the water meters were routed by telephone exchanges. Meters now need to be routed by geographic area, beginning with the high estimate distribution areas. Re-routing geographically is scheduled to begin in 2007 "on a progressive basis". The stated goal is to complete the transition to radio frequency installations and geographic routing by the end of 2008. Completion will require that 45,000 Neptune radio frequency meters be installed in 2007 and the remainder in 2008. By the end of 2008, all UWNJ water meters are scheduled to be equipped with radio frequency devices. The Hackensack location combines their purchase of water meters with multiple company locations.

- **Staffing levels are pre-planned to comply with needs under new technology placement.**

Reporting to the Manager Metering Services are three supervisors, thirty-one bargaining unit employees and four temporary bargaining unit employees. As agreed by the union, during the project to transition to radio frequency meters the meter reading staff includes temporary, full time employees. The temporary employees read approximately 25% of the meters that still require manual or touch reads. The regular Customer Service Field Representatives currently replace water meters equipped with Homer technology to meters that can be read by radio frequencies. In 2009 the temporary positions will be discontinued and the existing staff will be re-allocated to meet the future operating needs.

Other than the temporary employees, UWNJ does not anticipate any future layoffs or hiring freezes in the meter shop upon completion of this project. Since all union positions are covered by a common agreement, any reduction in a given position allows the least senior incumbent to relocate to any other vacancy covered by the agreement for which they would be qualified. In preparation for any resulting changes in job content a new testing procedure for the union positions has been instituted effective 01/01/2007. The test consists of five competencies and is conducted periodically. Any interested employee may take the test when offered. The test results are kept on file to be used in the event that an employee bids for a union position that requires any or all of these competencies.

UWNJ is currently operating three data collection units (DCU) - vans that gather radio frequency reads from the Neptune meters. The first meters emitting radio frequencies were installed in areas that historically experienced a high frequency of estimated reads. Because the meters are still routed by telephone exchanges, the DCU is limited to gathering between 2,500-3,000 reads per day. Ultimately, each DCU will be capable of recording up to 10,000 reads per day. The billing system can bill 10,000 plus meters daily.

- **Meter repair is an internal function.**

The meter shop located in Hackensack tests all large UWNJ and United Water New York (UWNY) water meters. The Field Meter Service and Repair Person performs all functions relating to the installation, removal, resetting, dismantling, cleaning, adjusting, repair and reassemble, and testing in the field or the meter shop for all types and sizes of water meters. Customer Service Field Representative responsibilities include meter reading, field meter testing and repair, and the installation of meters two-inch or less in size.

- **UWTR is independent of UWNJ meter function.**

UWTR maintains local responsibility for its meter reading, collections and disconnection of service. UWTR has 45 quarterly cycles encompassing its residential customers and two monthly cycles consisting of industrial and commercial customers. UWTR and UWNJ both use Neptune products and technology. Neptune meters provide high accuracy in registration and Automatic Meter Reading solutions. UWTR uses the CE5320X handheld and Advantage probe to read its meters. The

Probe has the ability to capture reads remotely via touch-pad from an encoder meter and transmits the reading to the Neptune handheld, where the reading is recorded. The handheld currently in use at UWTR also has the functionality to capture radio reads.

UWTR has a small radio frequency population installed within strategic areas where access is an issue. Unlike UWNJ, UWTR does not have Homer technology so it has no immediate need to move to the radio frequency technology. With their current technology, UWTR can install a radio frequency device independent of a meter change. UWTR will continue to strategize and install radio frequency devices in locations with difficulty in accessing the meter to obtain meter readings, but will continue with the automated AMR reading system via touch-pad. In the future, an assessment will be conducted to determine the benefits of the complete change out to radio frequency devices. Independently from radio frequency installations, UWTR will be looking at the efficiency of the current meter routes in 2007.

UWTR purchases its own water meters independent of UWNJ. UWTR uses an outside source, Allied Meter Services, to test their meters following regulatory standards for testing.

IV.A.2 Recommendations

- **If cost effective, use UWNJ's meter shop for UWTR's meters.**

UWNJ has extensive testing capabilities. The convenience and cost to test UWTR meters in UWNJ should be compared to the cost of the outside source, Allied Meter Services, currently in use.

- **Pre-plan for all meter related personnel reallocation.**

In anticipation of the efficiencies resulting from completion of the conversion to reading meters by radio frequency and in addition to the employee testing procedure instituted in January, 2007, to determine existing competencies, some planning concerning reallocation and training needs of existing staff should be examined.

IV. CUSTOMER SERVICE

IV.B CUSTOMER SERVICE EFFECTIVENESS

The RFP requires the consultant to "[e]valuate the effectiveness of UWNJ and UWTR in serving their customers."

IV.B.1 Findings and Conclusions

- **Management is well experienced in providing customer services.**

Under the Customer Service Revenue Management Structure the Director of Revenue Management reports to the Vice President Customer Service and directs the managers of Billing and Collections, and Revenue Assurance.

The Manager of Billing and Collections has been employed with UW for twenty-seven years. Initially, she spent nearly eight years in the accounting function, a short time in computer operations, the next ten years on the Homer project implementation and then with the implementation and support of the General Water Works customer information system. She remained in a supervisory capacity connected to Customer Service as the function transitioned through multiple structural changes and, since 2004, has managed the billing and collections functions. The stated objective of billing is to provide UW customers with timely, accurate and consistent bills for services. The objective of the collections function is to pursue outstanding charges diligently, thoroughly and fairly.

- **The meter read-billing cycle is excessive at up to six business days.**

UWNJ meter readings are transferred to UBS for bill calculation when a cycle of routes has been completed. The meter readings are two to three days old when sent to UBS overnight by a dedicated T-1 line. The bill is calculated the next business day, on average the fourth day after the meter reading was taken. The calculated bills are then transferred overnight to Total Billing for bill print the following business day morning. The printing of bills is completed and mailed that afternoon. The fixed production cost per bill for the next five years will be $0.93, plus postage.

We note that by the time of production of this report, RF installations were reducing the lag to two days.

- **During the course of the audit, UW addressed the consistency of time allowed for payment of utility bills.**

The prime date, also referred to as the bill date, is the date that the bills are calculated off-premise by UBS. The postmark would then be one to two days following the prime date. The due date was nineteen days from the prime date. According to the NJ Board of Public Utilities 14:3-7.12 Notice of Discontinuance, "The customer shall be given a period of at least 15 days for payment after the postmark date indicated on the envelope in which the bill was transmitted. In the absence of a postmark, the burden of proving the date of mailing shall be upon the utility."

Thus, both the monthly and quarterly UWNJ bills were due 19 days from the prime date to allow for the difference between the prime (calculation) date, bill print, any delays in mail delivery, and two days for processing. Since this information was offered during the interview process, the response to question 10 in data request II-B-6LW stated, "All bills, quarterly and monthly now have a due date of 15 days".

UWTR's monthly bills, according to data request II-B-6, were due fifteen days from the prime date. Their quarterly bills were due twenty-three days from the prime date. A January review implemented a due date fifteen days from the prime date for all monthly and quarterly bills.

- **UWTR and UWNJ are treated equally in bill processing costs.**

UWTR bills residential customers on a quarterly basis, and bills industrial and commercial customers on a monthly basis. They have 45 quarterly cycles and 2 monthly cycles. UWTR has four-meter readers and takes approximately three to four days to read the meters. The average bill for a quarterly account is $263.81, and the average bill for a monthly account is $1,189.57. The price per bill for UWTR is $0.93 plus postage. Postage is on average $0.39 per bill. This price is consistent for each bill issued whether quarterly or monthly.

- **Collection activities are inconsistent and allow too many days of arrears.**

UWNJ prints an overdue message (AR2) on their monthly (commercial) customer's bill "40 (business) days from the Bill Date with a past due balance of $75.01", which is approximately five calendar weeks past the original due date. Thus, the Past Due Balance bill message does not appear until the third monthly bill has been issued. The shut off process is also calculated on business days and is scheduled 55 days, or approximately ten weeks, from the bill date for accounts that have a past due balance of $150.00 or more. At this point the overdue balance is at least eight calendar weeks in arrears. Collection CSR's make outbound calls to those customers with overdue balances of $500.00 or more. These calls seek to set payment dates, make deferred payment arrangements, or attempt to resolve any other issues that have resulted in non-payment. These calls are currently made manually by the Customer Service Representatives. UWNJ intends to have these outbound calls automated sometime in 2007.

The New Jersey quarterly (residential) accounts are due 19 days from the prime date. A Past Due notice is generated 25 business days after the prime date requesting payment within fifteen days. Another set of Past Due notices is generated 40 business days from the bill date, depending on whether the overdue balance is more than $20.00 but greater than or less than $150.00. If the balance is greater than $150.00 the bill message includes a shut off notice. The Customer Service Representatives make outbound calls to customers with an overdue balance of $150.00 and above.

The Collection Customer Service Representatives set up work for the Customer Service Field Inspectors (CSFI) to post accounts or shut off service on balances of $150.00 and above. The CSFI will either collect past due balances or post a notice that the service is scheduled to be disconnected if the overdue balance is not paid within two weeks. The CSFI accepts cash, checks, or money orders. Customers with a history of non-sufficient funds checks are required to pay in cash or cash equivalent. The disconnect notice is delivered in person. If the customer is not available, a door hanger is left at the residence.

If the past due amount is not paid within two weeks from the posting the CSFI returns to disconnect the service and get a final meter reading or accept payment. It should also be noted that in June of 2006, UWNJ instituted collection procedures on Saturdays on a trial basis. Rental

property that is master metered receives special treatment. Each tenant receives a copy of the disconnect notice and the public health department is notified when the service is shut off for non-payment.

UWTR generates an overdue notice "16 Days from the Bill Date (Prime Date)" if the past due balance is greater than $20.00 on monthly accounts. These processes are on business days only and run by auto scheduler on business days. UWTR's shut off list is run 48 days from the Bill Date for monthly accounts with a past due balance of $21.00. Call outs are made on balances of $75.00 or more. The following week after the call outs accounts with balances of $200.00 or more are scheduled for shut-off. Shut-offs are scheduled on Tuesday and Thursday (except before a holiday).

The Corporate Customer Service team is in the process of reviewing the dunning and collection activities with the UWTR management team. UWNJ is in the process of reviewing timelines to shorten the shut-off process. Any changes will also be implemented in UWTR to maintain standardization with the UWNJ processes.

UWTR's quarterly bills were due 23 days after mailing, no overdue notices are sent out. Corporate Customer Service is in the process of reviewing collection activities with UWTR with the objective of standardizing the process wherever practicable and appropriate.

- **Accounts receivable reflect the weak collection cycle with over 30% 30 days or more in arrears.**

Twenty two percent of UW's customers pay with the first reminder, and seven percent of the customers are disconnected before they pay. For nine months year to date in 2006 UWNJ's accounts receivable were less than 65% current with 16% 31-60 days in arrears, 6.5% 61-90 days in arrears and almost 13% over 90 days in arrears (in round figures). A1.0% fraction of UWNJ accounts receivable represents an average of over $122,000.00. UWNJ stated that their goal was to have accounts receivable equal to or less than 10% over 60 days in arrears.

UWTR's accounts receivable for the same period were 68% current, 13% 31-60 days, 5% 61-90 days and 13% over 90 days (in round figures). 1.0% of UWTR's AR represents an average of $12,600.00. The UWTR goal is less than 10% over 60 days in arrears.

Averages	Current	Over 30 days	Over 60 days	Over 90 days
UWNJ 2005	63.7%	16.1%	6.5%	13.7%
2006 YTD	64.6%	16.1%	6.5%	12.7%
UWTR 2005	71.9%	13.3%	4.4%	10.4%
2006 YTD	68.0%	13.5%	5.3%	13.3%

UWTR's collection history, while considerably less in dollars, is slightly more current. This may be a reflection of its population of retirees. This may also be the result of the 15 day due date versus UWNJ's 19 day due date from the bill date for monthly residential accounts.

UWNJ and UWTR share a common lock box through which 98% of their utility bill payments are received. UWNJ customer service processes UWTR lock box payments. UWNJ no longer accepts walk-in payments. UWTR accepts walk-in payments in the form of a check or money order only, including reimbursement for non-sufficient funds (NSF) checks, but does not accept cash. Customer Service, given the caller's zip code, provides customers with local facilities that accept bill payments.

NSF checks are automatically submitted twice by the depository bank before being charged back to UWNJ. When UWNJ receives the NSF advice from the bank the customer account is debited in the amount of the check plus the NSF fee and bank charges as quoted in their tariff. Currently, UWNJ is charging a flat fee of $11.00. Mellon Bank is currently charging from $4.97 plus a redeposit fee of $4.85. Bank of America debits United Water's account $10.50 for returned items. The Collection Department either calls the customer or sends a Customer Service Field Inspectors (CSFI) to the customer's residence for reimbursement of returned payments. The CSFI will collect cash or cash equivalent. Based on the customer's history, the Customer Service Representative who makes the telephone call will accept a credit card over the telephone if this is the first time this customer has had a check returned.

- **The complaints and inquiries handled by Customer Service have an impressive record of improvement of the abandoned call rate.**

The Manager of Customer Service has been employed with UWNJ for over seven years. Following completing her degree in political science (pre-law) she began her employment as a Management Associate performing special projects for a variety of departments. She focused on customer service and corporate communications and, after approximately two years, was offered a position in Customer Service as Transition and Support Specialist auditing procedures and processes at the customer service center. In April 2006, she became the Manager Customer Service. She directs two supervisors, twenty-two full time and six part time customer service representatives.

UWNJ and UWTR service over 238,000 accounts in a population area of 922,000. New Jersey issues 800,000 bills and Toms River 200,000 bills annually. The call center handles over 125,000 calls and is available to customers from 8:00 AM to 4:30 PM, Monday through Friday except holidays. UWNJ uses the Erlang formulae to forecast the number of Customer Service Representatives required at specific time intervals and staffs the call center accordingly. A daily call statistics report is generated by fifteen-minute intervals to measure adherence to their performance targets. The automatic call directing system (ACD) documents the length of calls, the waiting time in queue and the abandoned calls, among other statistics, to adjust coverage accordingly. The goal is to answer all incoming calls within 45 seconds. In 2004, the average time to answer an incoming call was 80 seconds, 60 seconds in 2005 and in 2006 nine months year-to-date 61 seconds. The abandoned call rate target is less than 3.0%. In 2004, the average abandoned call rate was 6.0%. In 2005, it dropped to 4.0%, and for nine months year-to-date in 2006 the abandoned call rate was 3.8%.

- **The average response time to complaints was an impressive two days.**

The mission of the Customer Relations function is to establish an open, meaningful and ongoing dialogue with UW's customers, ensuring that they are offered a choice of services to meet their needs as individuals and that compliance with regulatory and contractual obligations are met. The Supervisor of Customer Relations began her employment ten years ago as a Customer Service Representative on the telephones. After approximately three years in that capacity, she participated in the testing

of the new billing system, WINS II. In 2003, she returned to the Customer Service function as supervisor and has been in her current capacity since May 2005. She is responsible for the investigation and resolution of customer complaints for the regulated segments of UWNJ and UWTR, among others. She represents United Water in all court proceedings relevant to billing disputes and is the primary interface with the Board of Public Utilities (BPU).

One of the customer service supervisors initially handles an oral customer complaint (Stage 1). If the supervisor is unable to resolve the issue, the complaint is referred to the Supervisor Customer Relations. The target response time is less than two days. Written complaints go directly to the Supervisor Customer Relations (Stage 2). The target response time is less than ten days. If the customer complaint is received by the BPU (Stage 3), it is referred to the Supervisor Customer Relations for response to the BPU. The target response time is less than five days. For eleven months, year to date 2006, a total of 211 complaints were received – 138 oral and 35 written complaints regarding UWNJ, and 28 oral and 10 written complaints regarding UWTR. The average response time in 2006 was two days.

- **The BPU complaint rate is the best in the State at less than 1 per 10,000 customers.**

The bulk of the customer complaints, 46.0%, were due to high bills, usually a function of consecutive estimates. Three or more consecutive estimated meter readings result in a bill message to the customer and every effort is made by field investigators to get an actual read and/or equip the meter with the ability to read by radio frequency. Frequently, the customer is also given a credit based on the circumstances and in line with the utility's regulatory responsibilities to provide actual meter readings. The next 23.0% of complaints have to due with billing issues other than a high bill, and 12.0% of the complaints are due to a leak. Less than 10% of the complaints have to do with the quality of service and/or the quality of the water. For the past three years, BPU complaints per 1,000 UWNJ customers have averaged well below 0.10. As reported by the BPU, this compares to other utility's complaints ranging from 0.26 to 1.28 per 1,000 customers.

- **Unaccounted for water (UFW) is unacceptably high.**

This section should be read coincidentally with Section II.G.1.

Under the Customer Service Revenue Management Structure, the Director of Revenue Management directs the managers of Billing and Collections, and Revenue Assurance. The Director of Revenue Management was appointed to her current responsibilities in 2004. She began her employment in 1996 as a customer service representative and subsequently progressed through each of the functional areas of customer service. The Manager of Revenue Assurance is expected to facilitate the strategic development of United Water services to customers in the Regulated Segment, acting as the main corporate liaison for all Customer Service Managers.

Monthly statistics expressed in thousands of gallons are kept for UWNJ recording metered water consumption and UFW, including hydrant use. In 2005 total system delivery totaled 42,089,317 gallons of which 17.46 is recorded as UFW.

UWTR averaged 13.1% unaccounted for water in 2005, and 11.7% for nine months year-to-date in 2006. Potential theft of service is monitored in New Jersey using three approaches. A report of zero consumption by account is referred to the meter shop for a field investigation to determine whether there is a stopped meter or a vacant property. Low readings that fall below the high-low parameters for that account are investigated in the field to determine whether meter tampering has occurred.

The UWNJ meter department is responsible for the statistical meter sampling and testing programs to ensure that the meters provide accurate bills to customers. The UWTR meters are picked up and tested weekly by Allied Meter Service. UWNJ owns, maintains and operates three high hazard Class I dams. These dams are inspected at least every two years in conformance with the New Jersey Department of Environmental Protection (NJDEP) guidelines. UWNJ personnel conduct general watershed inspections on a daily basis to protect the source water quality and the integrity of properties owned by UWNJ. The departments involved with watershed inspections, management and maintenance include environmental resources, system operations, corporate communications (watershed recreation program patrolling personnel) and water quality by the special sanitary inspector. In addition, UWNJ is subject to various routine inspections from several different Bureaus within the NJDEP specific to the environmental or regulatory program.

These inspections by the NJDEP include safe drinking water, toxic catastrophe prevention (TCPA), discharge prevention, containment, and countermeasures and discharge clean-up and removal (DPCC/DCR), pollution discharge elimination systems (NJPDES), sewer authority discharge (Bergen County), and fire prevention (municipal fire prevention bureau).

- **The marketing program promotes conservation.**

Beginning in 2006, UW began pursuing a more aggressive water conservation program for its customers. The program entails offering water conservation products to all residential customers in their service territory. Bill inserts offer individually metered customers water displacement products and leak detection dye tablets for toilets, low-flow showerheads, and low-flow bathroom and kitchen sink faucet aerators. UW has committed to offering as many or as few of these products as the customer desires, and has committed to offering only the highest quality products. Marketing efforts will also include print advertising, cable television, radio, posters, feature articles and a presence at community fairs and shows. A fulfillment company was engaged to handle the order processing, inventory, packaging and customer billing of premium items such as massaging or hand-held showerheads.

The second key element of UW's conservation program, the EvapoTranspiration (ET) lawn watering program, will launch in the spring of 2007 and focuses on outdoor water use. The ET program is a collaborative effort between UW and Rutgers University, Cornell University's Northeast Regional Climatic Center and the South Jersey Resources Conservation District and will provide a daily lawn-watering guide between May 15 and September 30 to encourage efficient and appropriate outdoor water usage.

UW also intends to conduct a number of activities focusing on its own use of water and to demonstrate its commitment to water conservation. These include retrofitting internal plumbing fixtures with water saving devices, co-development of a xeriscape demonstration garden at UWTR and the Haworth Water Treatment Plant and an internal audit of operations to determine whether water can be saved in the production and distribution processes. Beginning in 2007, outreach programs will include the development of advisory groups for both residential and non-residential customers and the development of a school curriculum for grades K-6.

United Water supports an extensive Internet site, currently under review, that includes the history of United Water, their conservation program, their water supply and site maps. They publish customer information including but not limited to the Customer Information Guide (15 pages), the Customer Bill of Rights (7 pages), and the Special Needs Code of Practice (12 pages). The Special Needs Code of Practice is a document that attempts provide assistance to any disabled customer. It is written in both English and Spanish. It provides for a procedure to access an interpreter. It provides for the request for Braille bills, special payment programs, and third party notifications. Special hardships, such as financial distress, senior citizen assistance, and medical hardships are discussed, and solutions suggested.

IV.B.2 Recommendations

- **Revisit the UBS meter reading billing lag and agreement.**

The four to five business day lag from read to billing is too long. Based on broad analysis, each calendar day represents $370,000(+) of revenue and each business day reflects $540,000 of revenue. A planned, four-day lag represents $2,300,000 in cash flow.

- **Use pre-sorted mailing of utility bills to take advantage of discounted mail rates.**

The postage cost of a first class USPS one-ounce letter is $0.39. A pre-sort by carrier route is discounted to $0.29. Discount for a sort by the five-digit zip code is $0.095 per unit. With an estimated 1 million bills per annum, presorting has the potential of reducing postage costs.

- **Adjust the due date on the bill to reflect 15 days from the planned postmark to encourage compliance.**

Another impact of a too extensive read-to-bill lag is compliance with the required 15-day grace period for payment. The payment period is to be 15 days at a minimum from the date of the postmark.

- **Change the dunning process to provide for earlier late notices.**

The Corporate Customer Service team is in the process of reviewing the dunning and collection activities with the Tom's River management team. Consideration should be given to the production of separate overdue notices versus overdue bill messages, and the use of calendar versus business days in dunning and disconnecting overdue accounts.

- **Make non-sufficient fund checks processing consistent.**

The tariff should be reviewed and revised to pass all NSF related charges plus the processing fee to the customer.

V. EXTERNAL RELATIONS

The RFP provides a clear direction for the audit of this function. It states "The contractor shall assess and make recommendations regarding the effect of UWNJ's and UWTR's management of the external relations function – the methods by which UWNJ and UWTR relate to their various stakeholders (i.e., customers, regulators, media, and investors) in the fulfillment of their corporate goals and objectives."

Although UW does not have a credo and associated governance guidelines, it does have a Vision and Objectives Statement that covers customer service and value, business efficiency and employee development. During the course of the audit, managed growth was added to the Vision as a stated fourth objective. Until added to the Vision Statement, managed growth had been part of the activities to meet the stated objectives.

PMC used several sources of information to research and analyze the utilities in order to perform the assessment: newspaper articles, press releases, data requests and in-depth interviews. The external relations effort over the past six years has been significant due to several issues that negatively impacted the various stakeholders' perception of the company. The primary issues identified in newspaper articles and company press releases emphasized UWTR issues and include:

1. Poor water quality and discoloration resulting in health and safety concerns by the public;
2. Low water pressure caused by wells shutting down and going unnoticed resulting in water boiling alerts and causing fire department officials to station water trucks in affected areas in case of fires;
3. Water allocations exceeded resulting in reduced growth and revenues losses by local governments;
4. Falsifying radiation levels on federal water quality reports resulting in company fines, employees being fined and licenses being removed, Municipality threatening litigation and threats by a city to revoke their franchise agreement; and
5. Cancer cluster agreement.

V. EXTERNAL RELATIONS

V.A OWNERSHIP

The RFP requires the consultant to "[a]ssess and make recommendations regarding the effect of UWNJ's and UWTR's management of the external relations function."

Ownership by Suez, a French company, raises the issue of stakeholder perception of foreign ownership of local assets.

V.A.1 Findings and Conclusions

- **Corporately, there is no perception of any negative impact on ratepayers.**

Queried directly, interviewees found no negative impact. When surveyed at the 2006 Regulated managers Conference, 88% of respondents agreed that Suez understands the challenges faced by the Regulated Segment.

At the Board Level, the directors and the French directors are keenly aware of the need to replace infrastructure. Access to Suez's assets is a definite benefit with the potential for long-term lower costs of borrowing.

- **The Regulator did suggest that ratepayers could be without understanding of the foreign ownership position.**

The question of whether foreign ownership has impacted New Jersey's ratepayers was asked of the BPU Water Division staff. Staff said that the BPU has received several letters from New Jersey residents complaining about foreign ownership of utility companies in general and that some were directed toward United Water of New Jersey. Staff felt it was more of a public perception problem, saying people stated their concerned that money was leaving the USA and going abroad to owners that could not understand what is going on here. Another issue raised by residents is a concern over job retention of those affected by the acquisition.

V.A.2 Recommendations

- There are no recommendations.

V. EXTERNAL RELATIONS

V.B REGULATORY RELATIONS

V.B.1 Findings and Conclusions

- **Although not a ground swell, the BPU voiced concern with their relationships with the Utility.**

Perhaps the most important relationship is that of state regulatory relationships. PMC has witnessed many examples of frustrated regulators who have found their regulated utilities wanting in communication. In addition, a data request indicated that the two companies are impacted by several state agencies and governmental bodies, i.e. DEP/EPA, Department of Community Affairs, NJ Legislature, NJDOT/US DOT, NJELEC, NJBPU, NJ Department of Human Services.

- **At the present time, Regulatory Affairs appear to be uncoordinated.**

While the relationships between the utilities and the BPU Audit Division are well established, the broader regulatory stakeholder relationships are not well defined. None of the United Water staff that was interviewed claimed to have formal or informal responsibility for communicating with the BPU. The General Manager of UWTR and the Manager of Outreach and Education did say they have regular interaction with the Department of Environmental Protection (DEP) on issues that pertain to water quality and water allocation issues. However UW recognized these facts and restructured Regulatory Relations under a senior vice president whose 2007 goals include the development and implementation of a regulatory relations and communications plan

The General Manager of UWTR indicated that she communicates with the DEP regularly on water allocations issues and that the company was successful at increasing the allocations by one billon gallons per year.

The Manager of Communications and Community Relations provides the DEP with UWNJ's Annual Water Quality Report and frequently communicates with the DEP staff by phone and email.

The Vice President of External Relations indicated that his department works with the DEP on water allocation and rural system operations. This comment by the Vice President of External Relations contradicts the

written response to a data request asking for a list of persons in the External Affairs Department responsible for agency contact and monitoring. The companies' response states that the External Affairs Department is not responsible for contacting agencies, only elected officials.

- **The BPU Water Division is concerned with the level of contact with UWNJ and UWTR management.**

During the interview with BPU Water Division, staff concerns were raised over the lack of communications with UWNJ and UWTR and that no company personnel were currently assigned to attend Board meetings.

- **The Utility set the height of the bar for BPU relationships in the recent past.**

Until the retirement of the specific employee, an ex-BPU staffer was a full time regulatory liaison for UW's subsidiaries. Present Water Division personnel benchmark their level of communication with this historic allocation of UW resources.

That individual regularly attended Board meetings and made a concerted effort to keep staff informed of important matters impacting the communities they serve. The primary issues that staff was most interested in are the following:

1. Better communication
2. Water allocation
3. Deferred litigation costs

Staff expressed concern that they heard about system failures and problems with elected officials in communities they serve after the fact by reading about problems in the newspapers. For instance, staff was not made aware of the '06 Memorial Day low water pressure incident in Toms River until they read about it in the newspaper the following week. Staff said they prefer to be made aware of problems that may become an issue with local governments well in advance of the media. Staff also wants to be made aware of any major water main breaks and wants to improve discussions with the companies pertaining to customer complaints.

Water Division staff mentioned a lack of structured communication between the BPU and UWNJ and UWTR about health and safety issues that are normally reported immediately to the DEP. The BPU staff said they normally do not get involved with health and safety issues until someone petitions the BPU.

Water Division staff was aware of the petition to revoke UWTR franchise agreement because the City of Toms River filed a motion before the BPU. This petition is currently under consideration.

Water Division staff said an area of growing concern is the high percentage of unaccounted for water, which is around 17 percent and should be closer to 10 percent.

When asked if UWNJ and UWTR are treating their rate payers fairly the Water Division staff said they are and that the companies are required to follow BPU rules and regulations.

V.B.2 Recommendations

- **Consider the coordination of regulatory relationships with the BPU.**

Officials from UWNJ and UWTR should make improving communications with the BPU staff and commissioners a high priority to restore the trust and belief that the staffs are well informed. It appears that since the companies have not requested a rate increase for 10 years, regular meetings with BPU Water Division staff has not been considered important.

Re-building the communications between the company officials and the Bureau of Water should include timely updates of situations that are, or have, the potential of negatively impacting communities the companies serve such as:

1. Major water main breaks;
2. Water allocation issues with the NJDEP;
3. Customer service complaints;
4. Potential litigation over system failures; and
5. Water quality issues.

V. EXTERNAL RELATIONS

V.C LEGISLATIVE AFFAIRS

The Vice President of External Affairs is solely responsible for State Legislative matters and primarily responsible for communications with elected Local Governmental Officials. This position reports to the person responsible for commercial development. The Department of External Affairs consists of a total of three employees, the Vice President with one and half employees assigned to New Jersey and an employee assigned half time to New York legislative matters. According to the VP External Affairs the 2007 External Affairs Department operates on a budget of $450,000, which pays for salaries, expenses and contract lobbyists in Pennsylvania and Delaware.

The 2005 annual budget broken down by line item indicates the External Affairs Department had a budget that year of $411,782.00. The 2005 salary expense totaled $120,082.00 but the breakdown of expenses does not indicate how many employees were paid out of the line item. The other highest categories of expense were for staff meetings, conferences and seminars totaling $126,000, club and professional dues totaling $35,000 and misc. G&A expenses totaling $119,250. Travel expense was $2,450 for the entire year in 2005. There is no budget or record of expenditures for the External Affairs Department prior to 2005 as the function was part of Corporate Communications.

V.C.1 Findings and Conclusions

- **The External Affairs Department maintains good oversight of legislative issues.**

The External Affairs Department monitors legislative bills that impact UWNJ and UWTR using a automated bill review that the Vice President keeps up to date with sponsors names, objective of the legislation, dates of prior and current related bills in both the House and Senate. The bills that are monitored are those that impact the companies either financially or operational. The Vice President indicated that most bills are knee jerk reactions such as a bill that would not allow location of call centers of New Jersey utilities to be located out of state.

The Vice President of External Affairs indicated that his department maintains active lobbying efforts, directly or through industry associations
such as the New Jersey State Chamber of Commerce and New Jersey Business and Industry Association.

The VP of External Affairs has a good understanding of the State and Local Governmental affairs environment and with only a staff of three appears to maintain good oversight of the bills impacting the companies and a good knowledge of the individuals serving in the legislature that sponsor bills impacting the water industry. The Vice President of External Affairs is actively involved with statewide associations and uses their resources to leverage the companies' influence over adverse legislation.

V.C.2 Recommendations

- **There are no recommendations.**

V.D FINANCIAL COMMUNITY

The parent company, Suez, trades American Depository Receipts (ADRs) on the New York Stock Exchange (NYSE). However, United Water delisted from the NYSE in July 2000. Consequently, UWNJ/UWTR no longer participate in analyst meetings.

V.E PUBLIC RELATIONS

Based on interviews with the Vice President of External Relations, the Vice President of Communications, the General Manager of UWTR and Manager Communications and Community Relations an active program to reach the general public is promoted by UWNJ & UWTR through Education Programs, Community Involvement, and Philanthropy in its service areas.

V.E.1 Findings and Conclusions

- **The Communications group has tied its key objectives and priorities for Action to the Corporate Vision and Objective Statement.**

The corporate Customer and Service and Value objective is clearly supported by the Communications group's objectives and activities.

At UWNJ and UWTR, Key Objectives and Priorities for Action in the following areas that are strongly linked to both the official communications activities of the companies and to the volunteer efforts of employees:

- Differentiate ourselves through the way we do business – provide excellent, value-for-money services with strong local identity:

    1. Understand all of our stakeholders' expectations;
    2. Encourage active involvement of United Water's businesses in their communities;
    3. Define consistent metrics for customer service, set clear targets;
    4. Continue with vigor the program of call center improvements; and
    5. Work with regulators as they link customer service levels and rate decisions.

- In all company activities, communicate the importance of water quality, public health, environment, and stewardship of the country's water infrastructure:

    1. Enhance United Water's image by communicating about successes and improved performance; and
    2. Maintain a presence in industry, trade, and professional organizations.

- Seek opportunities for additional services where appropriate:

    1. Maintain an open dialogue with stakeholders while the company strengthens its existing activities and prepares for growth in the future;

2. Closely monitor market needs and competitor activities;
3. Monitor proximity growth opportunities and act now to explore possibilities.

In the opinion of the Director of Communications, the programs which are most effective are: the Customer Advisory Panels; the Quarterly Bill Inserts, which pertains to seasonal information; the Recreational Program that customers can take advantage of at company facilities; and the Educational Programs at the companies' facilities. This position reports to the Vice President of Communications.

The Manager of Communications and Community Relations reports to the Vice President of Communication and has two employees; one assigned to New Jersey and a contract employee assigned to Toms River. The position description provided through a data request was not for Manager of Communications and Community Relations, but instead for the persons reporting to the position. Based on the interview the Manager of Communications and Community Relations, the position is primarily responsible for all external communications for all of New Jersey. Communications are achieved through participation in company programs and responses to media inquiries.

Several Company Programs exist that reach out to stakeholders in the service territories of both companies. Four Customer Advisory Panels are in existence, one each in New York, Bergen, Hudson County and Toms River. In each, the companies control the agendas, speakers and direct the monitors flow of feedback. The companies obtain members for the Customer Panels by advertising in the local newspapers and select members that represent a good cross section of the communities. People that are interested are told to contact the Manager of Communications and Community Relations.

The Manager of Communications and Community obtains the assistance of the Manager of communications when a new brochure is needed. All other publications have standard graphics and branding and do not change.

The Manager of Communications and Community Relations is responsible for recommending the levels of Philanthropic giving to the Vice President of Communications and for coordinating volunteer efforts by employees in its service areas. Levels of philanthropy of UWNJ were $125,000 in 2003, $150,000 in 2004, and $150,000 in 2005.

- **The communications area is amply staffed.**

The Vice President of Communications has a staff of 12 made up of 6 Area Mangers (PA, DE, ID, IN, MIL and New Jersey) and 6 staff including an Administrative Assistant and employees in the Director of Creative Services and Director of Communications Departments. The Communications Department in New Jersey has an annual budget of approximately $700,000 and Toms River budget is approximately $75,000 to $100,000. However, the area managers are not counted as direct reports. The Vice President oversees the Communications area for the entire United Water Organization and does so through an Annual Managers Conference; monthly meetings via teleconference and a weekly meeting with the Graphics Department.

- **UWTR has addressed recent operating issues with successful public relations.**

The General Manager of Toms River communicates with the media, regulators and local governmental leaders. Communication efforts are coordinated through the Manager of Communications and Community Relations and a contract employee assigned to Toms River. The Manager of Toms River has implemented new procedures and developed a master plan to identify needed system improvements. The General Manager has implemented a tracking system to monitor and record samples taken from water supplies, which is then entered into reports for regulators. Purification processes are successful with iron removal, radon removal and ph adjustments but do not detect arsenic or other potential poisons.

The General Manager has met with the local Fire Departments to introduce the new employees that were hired to replace the ones that are accused of falsifying DEP reports and to assure them UWTR has adequate water supplies for training and emergencies.

V.E.2 Recommendations

- **Effort should be continued to promote consumer confidence in UWNJ's and UWTR's capability to supply potable water.**

UWTR should continue efforts to regain customer confidence in the quality of the water and system's continuity of service operations. Standardized documents should be available for emergency response teams to communicate with the media, regulators and local officials. A homeland defense plan should be created and its synopsis distributed to

the media, regulators and local officials to assure them UWNJ and UWTR is prepared. The companies may want to right size the corporate level Communications Departments considering the commonality of service problems, infrequent need for creative marketing and the already seasoned Community Education and Outreach Programs.

VI. SUPPORT SERVICES

The proposal identifies this area of review as II.B.8 Task Six: Support Services.

VI.A RISK MANAGEMENT

Risk Management is the initial task in the proposal document. We cover the RFP's requirements to "Determine if UWNJ's and UWTR's insurance and claims policies provide clear risk management based on a current, quantitative evaluation of loss and premium alternatives."

VI.A.1 Findings and Conclusions

- **The Utility has had success at cost reduction.**

Risk management activities are carried out by personnel reporting to the General Counsel of the company. Insurance coverage is secured on a corporate-wide basis and maintained at an overall $500 million of liability limits to protect against catastrophic exposure such as the loss of a dam. The first $35 million is provided directly in the United States and the balance is provided through the parent company Suez.

UWNJ and UWTR provide proper strategy and management of risk management strategies. Loss prevention programs are in place to provide economic benefit. The strategic planning process provides the proper vehicle to evaluate insurance levels, premium costs and alternatives, and the quantitative evaluation of loss.

A strategic planning process is utilized to develop appropriate levels of coverage, competitive prices and corresponding deductible levels. The desired types and levels of coverage are offered to numerous insurance companies for competitive bidding. Companies may choose not to bid on some types of insurance but generally the company has several choices. A broker is hired on a fee basis for advice in these matters.

The company identifies a number of approaches to loss prevention and loss control. United Water utilizes a full time attorney to manage all litigation and claims for the entire organization, including UWNJ and UWTR. Standardized claims handling procedures for adjusters include claims review criteria and level of settlement authority. Defensive driving programs, progressive disciplinary practices, and safety training

are identified as significant practices utilized to reduce automotive liability. Safety training, ergonomics/body mechanics training safety management accident investigation training, and improved post injury management practices are identified as the various means to reduce workers compensation and employee injuries liability claims.

Numerous factors may be cited as reasons for reduced costs as shown in the following table. Amounts include premiums, paid losses within policy deductibles, and injury and damage reserve adjustments. Company control of premiums and claims are reflected in the 28% reduction over the past three years as shown below.

YEAR	2003	2004	2005
UWNJ	$3,025,684	$3,340,175	$2,270,043
UWTR	541,075	322,165	307,512
TOTAL	**$3,566,759**	**$3,642,340**	**$2,577,555**

- **Allocation methodology is formalized and consistent.**

Property and casualty insurance premiums, and deductible losses, are separated into four categories and assigned according to the following formulae:

- Automobile liability is purchased on a corporate-wide basis and premiums and deductible losses are assigned on the basis of the proportion of the particular entity's number of vehicles to the corporate-wide number of vehicles insured under the policy.

- Property insurance is secured on a corporate-wide basis and premiums are assigned based on the ratio of the net property plant and equipment of the business entity to that corporate wide. Losses within policy deductible are borne by the business entity.

- UWNJ is directly responsible for its own premiums for workers compensation. UWTR's workman's compensation insurance is centrally purchased and allocated based on payroll

- General excess and other insurance, and related deductible losses, are generally secured on a corporate wide basis and assigned to business entities based upon the value of assets, less cash, inter-company receivables, and investments in subsidiaries of the entity compared to its total asset value. Coverage secured

solely for an individual business entity is charged directly.

- Non-regulated entities are charged directly for their losses so regulated entities do not bear any portion of non-regulated operation deductible losses.

- The Utility has not competitively bid its insurance broker for over a decade. The company utilizes a broker, on a fee basis, to assist in securing appropriate types and levels of coverage. The study utilized to choose a broker was completed in 1995 and no subsequent study has been done.

VI.A.2 Recommendations

- **A review of services and fees available from alternative brokers should be undertaken.**

VI.B LEGAL

The RFP requires the consultant to: "Determine the efficiency of UWNJ's and UWTR's legal operations, measuring internal and external costs against the achievement of business objectives".

VI.B.1 Findings and Conclusions

- **The company effectively manages and controls legal costs.**

The Litigation and Procedures manual adequately provides for planning, tracking, and controlling external legal activities. The General Counsel controls external costs and provides timely reports to appropriate management. A majority of legal costs are charged directly to client operations. Allocation methodologies for indirect costs are properly reviewed and controlled and the basis of allocation is reasonable.

Legal Department staffing was downsized in 2003 to its present level of five attorneys. Two attorneys work on regulated business, one on non-regulated business and one attorney on litigation claims and administration. The department also employs four paralegals and two full time assistants.

As a general rule, an in-house attorney handles legal matters. The

decision to refer legal matters to outside counsel depends on the area of expertise required, internal staffing workload, requirements for a local presence, or the need for local knowledge that only an outsider can bring.

The General Counsel approves the hiring of all external legal services. The company has a comprehensive Litigation and Procedures manual that is used in the hiring and control process of external legal activities. External legal costs comprise 64% of total costs over the past three years as shown in the following table:

Year	2003	2004	2005	TOTAL
INTERNAL COSTS				
UWNJ	$246,483	$281,052	$198,768	$726,303
UWTR	50,301	29,829	$44,689	169,508
TOTAL INTERNAL	$296,784	$310,881	$243,457	$895,811
EXTERNAL COSTS				
UWNJ	$355,112	$437,883	$373,736	$1,166,732
UWTR	253,923	37,139	111,494	402,557
TOTAL EXTERNAL	$600,035	$475,042	$485,230	$1,569,389
TOTAL	$896,819	$785,923	$728,697	$2,466,200

External legal services are generally charged directly to the business unit. When costs are incurred on a system wide basis, or for the benefit of several business units, they are allocated. Litigation costs related to insurance claims, within the policy deductible, are billed by the carrier to United Water Management and Services (UWM&S). Regulated companies receive the previous quarter's costs based upon their proportion of corporate assets, less cash, inter-company receivables, and investments in subsidiaries.

- **Allocations and direct charge mechanisms are acceptable.**

Internal legal costs are directly charged to business units on timesheets. When costs cannot be identified as a direct benefit to a single business unit, they are assigned on the basis of the employee's functional responsibility. Administrative and general function areas are assigned equally by the ratio of employees, customers and the operation and maintenance expense of the business unit to the total business units benefited. Operations are assigned on the ratio of net utility plant (40%), volume of water delivered (40%), and fuel, power and chemical costs (20%). Engineering is assigned on the basis of construction capital projects. Customer service and communications functional areas are assigned based on the number of customers. Human Resources and Payroll are allocated based on the number of employees. Accounting, IT, Planning, and Treasury are assigned on the ratio of total capitalization. The monthly billing is reviewed and approved by senior management.

- **There is an opportunity to expand Legal into rate case preparation.**

Legal costs for the ratemaking activities have historically been handled outside of the legal department. Control over these costs appears adequate even though the Litigation and Procedures manual is not utilized for these activities. This separation of control over the legal activities for rate making is not unusual; however other businesses frequently make greater use of the internal legal department in assisting outside counsel.

VI.B.2 Recommendations

- **The high level of external legal costs suggests that the level of internal staff should be reviewed to assure that the most economical and effective combination of internal to external staff is being utilized. Consideration should be given to having the Legal Department become more involved with the legal portion of the rate making processes.**

VI.C FACILITIES MANAGEMENT

The RFP requires the consultant to "Evaluate the performance of

UWNJ's and UWTR's facilities management in providing a cost effective, flexible and efficient set of offices and facilities and to determine if UWNJ's and UWTR's land management and real estate land strategies ensure the acquisition and ownership of land consistent with the companies objectivities without any duplication of effort". Although separately stated in the RFP, we have combined RFP sections 3.4.6c and d, as shown below.

VI.C.1 Findings and Conclusions

- **The company's planning for facilities utilization is cost effective but maintenance is questionable.**

Preference for leased properties is a proper strategy for the company at the present time and allows for flexibility in the short term. As a result, funds have been provided principally for emergency repairs and minor maintenance. Inadequate identification of wear and tear and plans for long term repair and maintenance on the headquarters facility was noted.

The company prepares a Master Plan, which reflects long-term facilities needs. This plan was completed in 2005 and is periodically updated as needs are further identified or modified. The Manager of Facilities Management indicated that a space management study was completed in 2003, and a new study was expected to have been completed by the end of March of this year. The intent of this study is to review existing facilities, options to accommodate changes in number and type of employees, condition, location and costs of space. The Manager indicated that leased space is presently a more desirable option due to better economics, added flexibility and management's current preference.

UWNJ and UWTR own the majority of land and facilities used for pumping and treating operations. They own the Hackensack customer service office, the transportation/meter shop/maintenance facility, the UWTR office building and garage, and the corporate headquarters in Harrington Park. Identified leased facilities include the garage and meter repair facility in Hackensack, office space in Ordell and Hackensack and warehouse space in Franklin Lakes. Leases are usually for a five-year period with options to renew. Some leases contain options to buy the leased property.

Facility repair and maintenance needs are reported to the Facilities Manager by email or by facilities management's observation. Facility repair funds have been limited. Maintenance needs have not been

prioritized or scheduled and an overall assessment of condition and current and long term maintenance needs has not been done. The facilities manager is preparing a report to executive management to set up a three-year program to identify longer-term needs and then prepare a longer term planning program to manage these costs.

- **UWNJ is current with its land management.**

Several parcels of land were identified as excess land or currently underutilized. A report was provided showing the status and actions pertaining to their potential disposition or sale.

VI.C.2 Recommendations

- **The company should undertake a professional review of owned facilities to identify immediate and long term maintenance and repair needs. After the review is completed, a plan to meet the short and long-term facility needs should be developed and implemented.**

VI.D MATERIALS MANAGEMENT

The RFP requires the consultant to "Determine if UWNJ'S and UWTR'S materials management operations minimize costs, maintain appropriate service levels and control inventory levels."

VI.D.1 Findings and Conclusions

- **UWNJ's materials management provides control of inventory levels while maintaining service levels.**

UWNJ provided a materials manual containing policies for materials activities. Policies were provided for: materials purchasing, distribution and storage that required approval of varying levels of expenditures, competitive and non- competitive bidding, purchasing ethics (concerning conflict of interest situations), vendors and materials choices. Engineering has control over specifications of materials used in the system. Vendor choices are controlled by the Procurement Department. UWNJ also provided, for on site inspection and review, copies of policies/procedures and documents utilized in purchasing, moving

materials into and out of inventory, and moving materials to job activities.

Inventory costs have been controlled and excessive and obsolete inventory is being addressed. UWTR's processes are not acceptable and must be revised. The model for UWTR is the UWNJ process. Conversion to the corporate processes utilized by UWNJ by year-end is necessary to provide effective management and control. UWTR utilizes systems inherited from the previous organization and has not yet come under the same systems as provided under the Materials Manual. Conversion to the UWNJ systems and controls is underway and should be completed by the end of 2007.

- **Periodic audits of actual inventory to book/reported inventory are not excessive or out of tolerance.**

UW has two inventory locations; Hackensack (for UWNJ) and Toms River (for UWTR). The Hackensack location carries an inventory value of, $2,772,396, while the Toms River location is $205,065 as of October 26, 2006. The UWNJ location is neat and provides sufficient size and protection for the inventory controlled. In addition to the presence of company personnel, there is extensive use of security cameras. Smaller materials are stored inside while larger materials are stored in a fenced yard. A storekeeper controls materials. The materials systems provide automatic order points and provide proper methods and forms for receipt and disbursement of inventory. Truck inventories are standardized and replenished each morning based on the prior days work records.

The UWTR location is small and remotely located without a regular employee presence. Space is more than sufficient for the unit's needs and the perimeter is either fenced or protected by a river. There has been no security issue. There is a warehouse at the office which houses smaller inventory items. There is no full time storekeeper, but materials are received, controlled and distributed by supervisory personnel. Truck inventories are standardized and replenished when necessary. UWTR is in the process of moving its materials management under the corporate system utilized by UWNJ. It is expected that this conversion will be complete the end of 2007.

Excessive and obsolete inventory is identified and UWNJ is attempting to dispose of these items. The inventory turn ratio has improved from 265 days in 2003 to 202 days in 2005. Scrap materials are controlled and

periodically sold under contract at prevailing market prices. Management receives reports on inventory value, warehouse coverage and categories coverage.

VI.D.2 Recommendation

- **Complete the conversion of UWTR materials management to the corporate system as quickly as possible to acquire adequate management of this function.**

VI.E TRANSPORTATION

The RFP requires the consultants to "assess the transportation department's effectiveness in providing efficient transportation service, non-stationary equipment and vehicles".

VI.E.1 Findings and Conclusions

- **The UW transportation department provides effective, efficient transportation services for non-stationary equipment and vehicles.**

UW provided a vehicle policy manual, which identifies the following items:

- Employees eligible for company vehicles;
- Allowance for use of personal vehicles;
- Guidelines for insurance, reporting vehicle use to IRS; and
- Vehicle logs and reporting of vehicle use (including Internal Revenue Reporting).

The manual also provides sample forms for reporting information about vehicle usage. Appropriate forms and directions are available to report vehicle usage, the need for preventative maintenance or corrective maintenance, categorized usage costs by vehicle, and all other activities connected with fleet usage. UWNJ and UWTR lease all company vehicles. UWNJ has developed a standard design for new service trucks, which provides efficiencies to match company operations. UWNJ operates a garage to provide routine maintenance to automobiles and other rolling stock. The standard design of service vehicles including engines, etc. enables a reduction in needed inventory to provide

maintenance for the vehicles. Repair work done under vehicle warranty and other non-routine maintenance and body repair work are done by outside dealers.

UWTR follows corporate policies and procedures as to new purchases, unit replacements, positions receiving vehicles use of personal vehicles, and other related policies and procedures. UWTR does not have a corporate garage but has authorized several local providers for routine maintenance work.

VI.E.2 Recommendations

- **There are no recommendations.**

VI.F RECORDS MANAGEMENT

The RFP requires the consultant to "determine if the records management systems make information accessible in a complete and timely manner".

VI.F.1. Findings and Conclusions

- **The company's records management is outdated and has not received appropriate attention in recent years**.

Compliance with regulatory requirements has not been audited. The use of other types of information storage, other than paper records, has not been studied because of a belief that paper storage is the only acceptable medium. The lack of policies/procedures to deal with short-term storage likely requires excessive storage and expensive on-site storage facilities

The company indicates that an audit of record compliance has never been conducted. An audit of the New York business entity was conducted in 2004 with the result that a comprehensive document retention policy for all business unites outside of New York was not available. UW provided a Record Procedures Manual, which was last reviewed in November 1998. The company indicated that a review of their retention schedule for updates to comply with state and regulatory agencies is underway and should be completed by the third quarter of 2007.

The Facilities Manager is also responsible for records management. Records are in paper form because the manager believes the BPU requires this type of record storage. The manager has requested the Legal Department to provide the BPU requirements. The last time this review was completed was 1992.

There is no policy to purge office files and individual departments are expected to ascertain when file purges are necessary. Experience with other audits indicated that such file purges usually take place when space for additional filing cabinets becomes unavailable. There is intermediate storage in the basement of the headquarters building; otherwise records are sent to the company's off-site, long-term storage at the Iron Mountain facility.

- **Records management in the customer service area is reliant on an outside vendor.**

UW has outsourced the billing and customer service computer system to UBS. United Water employees have access to customer information from computer terminals provided by UBS. UBS updates the computer system on a regular basis. UBS provides:

1. Service inquiries;
2. Maintenance tickets; and
3. Dispatch Information.

- **Back up records management technology is not used.**

Scanning technology is not being used for large business applications such as accounts payable. UW plans to focus on the accounts payable function first to scan documents such as invoices and shipping slips so that this information can be rapidly reviewed in the case of a billing dispute.

VI.F.2 Recommendations

- **The company should take action to determine regulatory requirements and assure compliance with them.**

- **Alternative storage media should be studied to determine if there are more efficient and economical methods of record retention and storage.**

A policy/procedure should be developed and implemented to deal with short-term record storage and destruction.

VI.G INFORMATION TECHNOLOGY

The RFP requires that PMC "[d]etermine if the information technology structures meet UWNJ's and UWTR's current business needs and have the capacity to adapt to future requirement[s]"

VI.G.1 Findings and Conclusions

- **The process for internal application and system development provides for current business needs.**

The Information System Application (ISA) uses a 'System Development Life Cycle' (SDLC) process to address, plan, control, and develop new systems and improvements. The SDLC consists of five phases:

1. Project planning;
2. Requirements planning;
3. Design;
4. Development; and
5. Test and implementation.

The project planning phase is initiated by the business group meeting with ISA to define the project and ensure that it is consistent with business strategy. The authority to go forward is within the IT organization residing with the Director of Application Development.

The requirements phase includes the development team interviewing users and business process owners. This provides the system requirements and defines the application control requirements. The end product is a document providing details of system requirements.

The design phase is the development of the design process including the 'how to' for each component. At this point, the second control measure is enacted by approval of the Director of Application Development of the System Design document.

The development phase is primarily the writing of the necessary code. Each unit, or module, is individually tested. Integration is the next phase.

Testing and implementation works toward the integration of each module into a compiled program library. Together, the development and testing teams check for system functionality, integration interface, stress, load, and user acceptance. The results are documented. Where necessary, the database administrator performs a data conversion test for completeness, accuracy and validity.

A user acceptance test group is formed to validate the testing results after which the business process owner reviews these results. With acceptance, the application team moves the program into the production environment. Post-implementation review continues with evaluation of any problem tickets.

- **Controls for end user security are adequate.**

United Water performs re-certifications of end user identification and password date for computer security reasons. Each quarter, UW performs a re-certification of end user information. UW performs the review of highly privileged Active Directory user accounts showing proof that they have implemented security. Active Directory user accounts are automatically closed after the 120-day password cycle lapses. The remaining accounts are system accounts and are kept open.

- **The disaster recovery plan for the PeopleSoft system is adequate.**

The disaster recovery plan was tested, and passed, in September 2006, for the PeopleSoft 8.4© system.

- **The five servers in the Harrington Park data center have the capacity for future update.**

UW has five servers in its Information Technology data center in Harrington Park. All servers are Windows 2003 Standard.©

- **Data in the servers are properly protected.**

Data are protected using up-to-date technology called Storage Area Network (SAN).

The SAN in the field of information technology is focused on the

storage, protection, and retrieval of data in large-scale environments. It is differentiated from consumer storage in many practical ways, ranging from the size of the environment to the technologies used. The SAN has four focus areas, which are important to UW:

- Storage – On line random access storage and protection of data;
- Backup – Off line sequential access storage for data protection;
- Archiving – Off line storage of content, as opposed to data; and
- Disaster recovery – Protection of data from localized disasters focused on business continuity planning.

VI.G.2 Recommendations

- **There are no recommendations.**

VI.H SECURITY

The RFP requires the consultant to "assess the security department's abilities to provide a safe working environment".

VI.H.1 Findings and Conclusions

- **The company has taken the necessary steps to provide a safe working environment and to protect the public with enhanced security measures.**

UW supplied a confidential Security Position Paper dated October 5, 2006. This document discusses the company's attempt to dramatically increase security throughout the organization. The document states "Although we began to assess and further enhance security at our assets immediately after September 11, the signing of the Public Health Security and Bioterrorism Preparedness and Response Act in June 2003, further focused our energies toward this end. Considerable time and effort has been spent to further secure our systems to provide resiliency. We look for [an] all hazards approach when protecting our system".

The document discussed the company's involvement at the national, state and local level. The company has conducted vulnerability assessments at water sites, updated Emergency Response Plans through creation of a corporate template, developed security communication channels within utilities, developed a secure intranet site for posting and sharing

important documents, tools and forms, and developed and implemented a Security Pyramid which established active and effective security features that are required at all facilities and provided a measurement tool for compliance thereof. Secure communications channels have been established allowing for timely information to be available to identified personnel. The company participates in Security Task Forces and Local Emergency Planning committees; and routinely conducts exercises to test its plans, which includes an annual chemical emergency response drill.

UW provided catastrophic disaster plans for Toms River, the Haworth Water Treatment Plant, and for three reservoir dams. Security complaints are reported and tracked. Employees entering all company facilities complete a Facility Integrity Checklist form. If a security condition exists or is observed, it is noted on the form. The form is reviewed at the end of each day and it is determined if the condition warrants immediate attention. If not, a Repair Work Order is completed to take care of the condition. If the employee feels immediate attention is needed, contact is made with the supervisor by cell phone.

Safety complaints are reported to supervisors. If employees are uncomfortable dealing directly with their supervisor, they are encouraged to bring their concerns to members of the Joint Management/Union Safety Committee. This committee is staffed by labor personnel, supervisors and managers representing all departments. The committee meets monthly to address safety issues, review accidents and recommend remedial action. Action logs are maintained of all meetings and posted to the workplace.

Safety training is included in the company's 2006 UWNJ Action Plan. One of the "challenges" is to improve employee morale through ongoing bi-monthly "tailgate" meetings. Topics include safety and department operations. Every executive and manager has compensation-based incentives and goals to satisfy. The action plan calls for several new safety standards including a minimum of 15% improvement for both accident severity and frequency. Hours devoted to safety training have increased in recent years but the hours per employee per year have remained constant at just under 12 hours per year.

VI.H.2 Recommendations

- **Continue to identify objectives to provide expanded safety training to the workforce to further reduce accident severity and frequency.**

VII. FINANCE

The RFP requires five areas of review:

- Financial risk exposure from financial practices;
- Compliance with Generally Accepted Accounting Principles (GAAP);
- Rate structure;
- Internal Audit; and
- Cost allocation.

VII.A FINANCIAL RISK

The RFP requires the consultant to "Assess UWNJ's And UWTR's Cash Management, Corporate Finance And Cost Control Strategies And Their Effect On The Cost Of Capital, Liquidity, Financial Risk, Profitability, And Rates."

VII.A.1 Findings and Conclusions

- **Financial ratings are satisfactory.**

According to reports, Moody's gives United Water an outlook of stable and the senior unsecured debt of the company a rating of A3. Standard & Poors gives a credit rating of A-.

According to Moody's, the A3 senior unsecured rating primarily reflects the relatively stable and predictable earnings and cash flow generation of its diversified group of water utilities, constructive regulatory relationships and the inherent support of its larger and diversified parent, Suez Group. The ratings also incorporate the ongoing challenges of managing numerous regulatory proceedings (in many different states) to provide the rate relief associated with elevated capital investment requirements, most notably those associated with new water treatment facilities and main restoration.

Also according to Moody's, United Water appears to be moderately leveraged. Over the long term, it seeks to maintain a debt to capital ratio of approximately 50%. Moody's also states that the regulated water utility business in the US is highly capital intensive. United Water is currently undertaking a capital-spending program that is well in excess of its depreciation rates. A caution is given by Moody's; it is likely that

United Water would be rated outside of the "A" category without it parental support. Moody's cautions that United Water has several debt maturities due in 2007 and 2008 that will require financing.

- **The ownership by Suez provides a financial cushion to cover the decline in cash flow.**

Standard & Poors' analysis clearly relies on the parent Suez's financial condition in the evaluation of UW's financial health. PMC, therefore, prepared the chart below based upon outside auditor reports for the period of December 31, 2002 through December 31, 2005.

UWNJ Amounts are in thousands	**12/31/2005**	**12/31/2004**	**12/31/2003**	**12/31/2002**
Revenues	$130,585	$123,628	$120,709	$118.643
Operating Expenses	105,095	98,572	98,431	95,815
Operating Income	25,490	25,056	22,278	22,828
Dividends on Common Stock	17,200	17,200	18,513	18,799
End of Year, Retained Earnings	71,009	67,986	62,303	60,990
Net Cash	37,416	41,183	35,066	45,651
Additions to utility plant	35,437	30,728	16,951	28,461
Cash & Cash Equivalents	1,032	4,962	4,264	2,722
Total Long Term Debt	205,841	205,887	205,931	208,972
Total Capitalization	408,726	405,230	388,618	381,901

Independent audited financial statements were not yet available for the year 2006, but UW reports show that annual revenues fell to $126,986,000 down about $3.6 million for the year. Pumpage also fell about 3.2% from 2005 to 2006 reflecting almost the same reduction in revenues.

Revenues have outpaced the growth of expenses indicating management cost control strategies.

Net Cash Provided by Operating Activities has declined 18%. Also, the dividend to Suez has declined from $18,799,000 in 2002 to $17,200,000 in 2005.

- **There has been an aggressive growth in additions to utility plant.**

As noted in the above table, additions to utility plant show about a 25% growth from 2002 to 2005. The significant additions in the capital construction programs for utility plant for the years 2004 and 2005 did not cause increases to long-term debt. Cash and cash equivalents were affected negatively for the year ending December 31, 2005 by about an 80% reduction as compared to December 31, 2002.

- **United Water has an active cash management program.**

Cash management at United Water is a priority. Various strategies and techniques to enhance cash management involve these points:

- Execution of a more sophisticated, streamlined funds-management system;
- Optimization of float;
- Management of foreign currency risk;
- Utilization of Electronic Funds Transfer (EFT) and Electronic Data Interchange (EDI);
- Obtainment of unbiased evaluations of cash management services and products provided by banks; and
- Development of effective interest rate protection strategies.

United Water placed the accounts payable function into the Treasury Department and out of the Accounting Department. The idea supporting this organizational structure is to give Treasury the flexibility to delay payments based on calculated cash availability. Thus, cash management is positioned to be enhanced by Treasury having bill-paying responsibilities.

Each day, the Treasurer manages cash down to a $10,000 balance. Should there be “shortfall”, a “24 hour borrowing” occurs from Suez finance.

- **Invoice prepayments accounted for $330,000 during the month of June 2006.**

A dollar-day calculation was performed by PMC, which represents a 10% survey of the check register. UW performed a 100% review of the same period according to PMC’s methodology. Both procedures identified

invoice prepayment substantial enough to warrant improvement in accounts payable practices. Indeed, on any day of the month of June 2006, an average of $330,000 was in prepayment.

- **The collection of accounts receivable for UWNJ is a concern.**

Accounts Receivable represents money, which is owed to United Water by customers for water services provided. Accounts Receivable is treated as a current asset on a balance sheet. A specific sale is generally only treated as an account receivable after the customer is sent an invoice.

United Water prepared an aging of accounts receivable as of July 2006 for all UW utilities as shown in the below chart. UWNJ and UWTR have an issue with accounts that are past due with 25.7% and 28.3%, respectively, being 60 days late. Accounts over 120 days late equal 14%.

According to the United Water tariff page 28, all bills will be computed in accordance with the rates of the Company set forth in this Tariff. Rates are subject to changes as the Board of Public Utilities or any other state regulatory body having jurisdiction may require, authorize or allow. The Customer shall have at least 10 days to pay a valid bill for service from the date of receipt plus an additional 5 days are assumed for the bill to reach the customer. Payment may be paid in person, by mail at the Customer Service Office of the Company or at a designated agency of the territory served.

Aging Analysis (in days)								% over
July 2006		0 – 30	30 - 60	60 - 90	90 – 120	120 +	Total	60 days
BU100	UWNJ	7,275	2,174	743	682	1,837	12,711	25.7%
BU200	UWNY	2,276	421	300	268	311	3,576	24.6%
BU060	UWID	1,539	249	49	103		1,940	7.8%
BU002	UWPA	1,643	214	77	115		2,049	9.4%
BU004	UWAR	970	131	30	40		1,171	6.0%
BU053	UWNR	1,574	303	127	224		2,228	15.8%
BU027	UWDE	1,500	198	97	(39)		1,756	3.3%
BU044	UWTR	596	203	111	204		1,114	28.3%
	Top 8 DBO	17,373	3,893	1,534	1,597	2,148	26,545	19.9%

- **Long Term Debt (LTD) is stable and reduced on an amortization schedule.**

At 12/31/2005, Long Term Debt totaled almost $206 million. The New Jersey Board of Public Utilities (BPU) is the authority that must review and consider approval of new long-term debt of each regulated utility in New Jersey. Long-term debt comes in the form of a variety of instruments to enhance operational or capital requirements of the utility.

In purchasing bonds, bondholders provided United Water funds for operations. The bondholders are creditors not stockholders, they receive a prior claim on income and assets, have no control over the utility, and may receive an annuity of coupon payments plus a lump sum return of the principal.

Note		Balance O/S	Final
Description	Rate	12/31/2006	Maturity
EDA Bonds Ser. A	5.80%	20,000,000	3/1/2024
EDA Bonds Ser. B	5.90%	20,000,000	3/1/2024
EDA Bonds Ser. 1998	5.00%	35,000,000	11/1/2028
EDA Bonds Ser A	4.85%	80,000,000	11/1/2026
EDA Bonds Ser B	4.85%	20,000,000	11/1/2025
EDA Bonds Ser C	4.95%	30,000,000	11/1/2025
Preferred Stock Par $100	4.55%	6,000,000	
Preferred Stock Par $100	4.50%	3,000,000	
Preferred Stock Mand Redemp	5.00%	120,000	5/25/2008
Wanaque South	6.58%	622,976	1/1/2017
Wanaque South	6.30%	124,662	7/1/2024
Wanaque South	6.30%	93,000	4/1/2024
Preferred Stock		9,120,000	
Total LTD + Preferred		205,840,638	

VII.A.2 Recommendations

- **Management should direct internal audit to ascertain reasons why the collection of accounts over 60 days exceeds 25%.**

  Having more than 25% of accounts receivable 60 overdue, places the utility in a position of using more working capital. Based on annual revenues of $130 million, these overdue accounts require over $5.4 million in working capital.

- **Accounts Payable procedures should be refined to make payment practices consistent.**

Payment practices are commonly based on 30 day, or more lags. For example, the State of New Jersey, in its general terms and conditions, states it has 60 days from receipt of a State Payment Voucher by the department of Treasury. Based on the dollar-day analysis, a $330,000 cash flow benefit could accrue to the regulated business unit.

VII.B GAAP COMPLIANCE

The RFP requires the consultant to "Review UWNJ's And UWTR's Accounting Procedures For Compliance With Generally Accepted Accounting Principles (GAAP)".

VII.B.1Findings & Conclusions

- **The financial and managerial accounting system provides timely and accurate information.**

United Water uses Oracle's PeopleSoft Financial Management System version 8.4. The system provides visibility into business-critical information, strengthens financial discipline, and realizes efficiencies by automating and standardizing key business processes. These applications integrate with other solutions across departmental lines to help United Water implement departmental and industry best practices for all of their business processes.

- **Closings of financials are timely and complex.**

A 52-step process is used in the United Water Accounting Close Schedule. Corporate accounting keeps track of daily events by goal and actual result. Three status meetings are held at the end of each month with the last meeting occurring on the first day of the new month.

Internal and quarterly un-audited financial statements are prepared for management. United Water management receives:

1. Consolidated Balance Sheets;
2. Consolidated Statements of Income and Retained Earnings, and
3. Consolidated Statements of Cash Flows.

- **Unitization of assets to plant accounts has appropriate costs capitalized.**

The types of costs added to plant assets in the capitalization process for Utility Plant in Service includes the following:

1. Materials – including pipe, fittings, stone and other infrastructure materials;
2. Company Labor and related costs- Includes Company labor, Fringe Benefits and transportation costs;
3. Outside Contractor costs- costs associated with vendors outside of the local Business unit. This includes installation costs for mains, services, hydrants, plant equipment, etc;
4. Allowance for Funds used during Construction (AFUDC- Interest on projects that take longer then 30 days to complete and whose cost exceeds $50,000);
5. Overheads to Construction which are engineering and management time that cannot be directly charged to a particular project but which are none the less Capital related and are spread amongst all projects;
6. Equipment Costs which include computer and IT related equipment as well as tools and work equipment, transportation equipment, phone equipment, stores equipment, copiers and office equipment and furniture; and
7. Miscellaneous costs such as paving, expense reports, etc

- **Tax planning is a complex and continuing process.**

The Tax Department has the responsibility of ensuring that UW is in compliance with all the Federal, state and local tax laws. Major responsibilities include preparation and review of all in come tax return filings, ensure timely payments of taxes, tax accounting, monitor changes in tax laws, regulations and IRS positions, formulate tax strategies, implement tax procedures, keep management advised of tax implications, control all tax audits, prepare position papers, and to provide technical support for property, sales and use, payroll and excise tax compliance and audit assistance. Recent reorganization of tax into two sections of tax preparation and compliance are expected to strengthen tax performance.

Tax planning involves training of corporate accountants with the latest pronouncements on tax. Other requirements include:

- Business Unit accountants have a custodial responsibility over the tax accounts.
- The Tax Department provides technical guidance and shares the responsibility of assuring the correctness of the tax balances.
- Beginning in January and the first two months of every quarter, the tax department uses the previous quarter's effective tax rate to book the current and deferred income taxes for those periods.
- In September, the previous year's Federal income tax return is finalized and filed and in October, the (Federal) provision-to-return (PTR) analysis is prepared and booked by each business unit accountant. The Federal cash settlement, based on the return, is booked by the business unit accountants. Both the PTR and cash settlement (Federal) are provided by the Tax Department by the third week of October.
- By October, most of the States' income tax returns are finalized and filed. In November, the state provision-to-return analysis is prepared and booked by the business unit accountant.
- In January, the year's Federal and State income tax provision are finalized and the year-end tax provision work papers are finalized.

The Tax Department plays a key role in defending UW in tax audits. During a recent sales tax audit, the Tax department argued successfully that certain revenue was not subject to sales taxes.

- **The external auditor found compliance with GAAP.**

In our review of the outside auditor reports of Ernst & Young, we found unqualified opinions or compliance with GAAP for the years ending December 31, 2002 through December 31, 2005.

- **The accounting procedures used by UWNJ and UWTR clearly provide compliance with Generally Accepted Accounting Procedures (GAAP).**

The United Water Corporate Controller and Regulated Segment Controller are primarily responsible for ensuring that the United Water New Jersey and United Water Toms River Accounting staff record financial transactions in conformity with Generally Accepted Accounting Principles in the United States ("US GAAP"). The Company maintains a subscription with the Financial Accounting Standards Board ("FASB"). The Corporate Controller receives e-mails (i.e. invitations to comment on new standards, notifications of standards issued, etc.), newsletters and hard copies of all statements issued directly from the FASB, which is the best way to keep current as far as new accounting pronouncements. In addition, the Corporate Controller is a Certified Public Accountant ("CPA") and a member of both the American Institute of Certified Public Accountants ("AICPA") and the New Jersey Society of CPA's ("NJSCPA"). Both the AICPA and the NJSCPA provide valuable publications and information with respect to the activities of the FASB and other accounting bodies. The Corporate Controller reviews this pertinent information, and disseminates and oversees the implementation of standards applicable to United Water.

The CFO, Corporate Controller, VP – Taxes, and Director of Consolidations and Reporting also participate in weekly meetings with members of the Ernst & Young audit team and are apprised of any new accounting issues/standards that are applicable to the industry. The Corporate Controller communicates regularly and holds meeting when necessary to discuss relevant issues. The Regulated Segment Controller reviews the application and practice of US GAAP at United Water New Jersey and United Water Toms River. In addition, the Company subscribes to the Financial Management Network and holds monthly CPE

sessions to keep employees up-to-date on current US GAAP and other accounting issues. The Corporate Controller also completes a comprehensive US GAAP checklist in connection with the preparation of the annual audited financial statements to ensure compliance.

- **The budget process is formal and documented.**

The Director of Planning and Reporting is responsible for the budget and provides management reports on a monthly basis. The Director oversees all planning and reviews all documents to be sent to the Board of Directors and prepares the Chief Financial Officer report.

Financial planning is an ongoing, company-wide process that enables UW to better manage its financial performance and overall operations. UW follows a stringent planning calendar with deadlines and deliverables that must be observed for internal and external management purposes. These processes are established and monitored by the United Water Planning and Reporting Group.

At the beginning of the current year, the Executive Director of Planning and Reporting presents the planning summary for the year. This planning calendar is based upon the deadlines for monthly reporting, budgeting, medium term planning, business reviews as well as UW's internal requirements.

- **Exception reports provide corrective actions.**

Variance analysis of monthly results and recurring risk assessments including legal, human resource and financial/control exposures of all material business units and departments must be completed by the 12th day after the month end.

All revenue and expense line items that exceed a $10,000 limit and a 2% actual versus budget variance must be documented and explained as to the root causes of the said variance. This materiality threshold helps to ensure that all material monthly variances are systematically identified and reported by all business units/departments to senior management.

The Planning department presents its summarized monthly financial results and a summary analysis and management memorandum to Suez by the 15th calendar day after each month end.

The confidential and internal Management Report is issued monthly and contains a comprehensive analysis of year-to-date financial and operational results.

Budgets for M&S costs are prepared by each department director, then reviewed and approved by senior management (CEO, COO, CFO). Budget objectives are included in short-term incentive goals and departmental variances are analyzed monthly.

VII.B.2 Recommendations

- **There are no recommendations.**

VII.C RATE STRUCTURE

The RFP requires the consultant to "Determine If UWNJ's And UWTR's Rate Structure And Design Is Constructed In An Optimal Way For UWNJ, UWTR, And Their Ratepayers."

VII.C.1 Findings and Conclusions

- **United Water employs an industry accepted pricing process in their rate structure and design.**

UW recently filed its rate case with the BPU. In BPU Docket Number WR0702-0135, UW has at least 10 professionals testifying on the need to increase revenue. The base year is the 12 months ending April 30, 2007 reflecting 5 months of actual financial information and 7 months of budget. The test year consists of 12 months ended April 30, 2007 and the rate year consists of 12 months ending October 31, 2007. Various normalizing adjustments have been proposed to the test and rate years.

The rate case asks for common equity cost rate of 11.15% on the common equity financed portion of its jurisdictional rate base. Testimony is presented that a common equity cost rate of 11.15% results in an overall rate of return of 8.34%.

There are at least three common types of rates structures:

Inclining Block Rates: A pricing process where the price per unit of water increases with increased volume of usage.

Declining Block Rates: A pricing process where the price per unit of water decreases with increased volume of usage.

Level Rates: A pricing process where the price per unit remains the same irrespective of the volume of usage.

Many communities are moving toward 'inclining block' or 'level rates' and away from a declining block model. United Water currently has a level rate structure. Whatever rate structure is used, the design is intended to recover the costs associated with how much water the customer uses and the demand level at which the water is taken. "Demand level" means how much water a customer requires be delivered in a certain unit of time, such as an hour or a day.

Rate structures also include a “minimum charge” that may be known as a “base customer charge”. This type of charge generally covers costs associated with billing, collection and customer service that are allocated based upon the number of customer accounts. It is charged to any resident who is connected to the utility regardless of their volume of use, as it reflects the cost of maintaining a customer account. Some water utilities cover these costs by billing each customer for a minimum quantity of water in each billing period. This practice could encourage customers to use water they might otherwise conserve and therefore is likely to be changed.

- **United Water rates classes are regulated and appropriate.**

Shown below are United Water’s rate classes, the number of customers in each rate class and their demand quantities stated in water delivered per 100 cubic feet for the years 2003, 2004 and 2005.

Consumption stated in per 100 cubic feet is presented in the following table:

	2003		2004		2005	
	Consumption	Customers	Consumption	Customers	Consumption	Customers
General Metered Service (RS-1)	37,703,822	187,504	38,603,174	188,640	41,363,838	189,636
Sales For Resale (RS-2)	1,329,985	5	1,618,886	5	1,842,343	5
Unmeterd Building Sales (RS-5)	19,890	663	31,110	1,037	22,290	743
RS denotes the applicable Rate Schedule from the United Water New Jersey Tariff.						

General metered service has experienced a 10% growth in consumption with only a 1% growth in customers; a result primarily from weather variations and associated demand. The un-metered (RS-5) category of sales consists largely of water supply to construction sites while buildings are under construction, and before the meter is installed. The increase in this category in 2004 was due primarily to the increase in residential, but also, to a lesser degree, in commercial construction. This construction activity dropped off to more normal levels in 2005.

VII.C.2 Recommendations

- **There are no recommendations.**

VII.D INTERNAL AUDIT

The RFP requires the consultant to "[D]etermine The Effectiveness Of UWNJ's And UWTR's Internal Auditing In Ensuring The Continued Compliance With Applicable Accounting Rules And Regulations."

VII.D.1 Findings and Conclusions

- **Internal Audit provides qualified personnel to review operational as well as financial results.**

The Director of Internal Audit and her staff are well qualified. The Director progressed through the corporation prior to being promoted to the position. Each professional has experience in operational and financial areas in UW. Internal Audit is a career path position that cultivates knowledgeable professionals to eventually work in other departments in UW.

The Internal Audit Department is "process audit oriented." This process requires audits that will take the beginning step in a process and follow it through the entire corporation rather than just focusing on one part of the whole process.

- **UW Internal Audit is effective and properly structured.**

Internal Audit is an active organization used to ensure compliance, financial and performance auditing as exhibited in the department's detailed three-year internal audit plan, as approved by senior management and the Corporate Audit Committee.

The three-year plan consists of a risk assessment and audit planning for all business units. The three-year plan is an ideal plan and provides the number of resources required in order to complete the plan. On an annual basis, the audit plan is updated and approved by senior management and the Audit Committee. The annual audit plan includes those audits identified in the three-year plan; however, it provides a more accurate picture of the audits that can be completed using the actual number of audit resources available. Updates are made to the annual audit plan based upon changing risks and, in many cases, audits that were not completed from the prior year, which may be carried forward to the next year.

In 2005 and 2006, Sarbanes-Oxley Section 404, internally known as "control and disclosure" (CODIS), was implemented at United Water. This implementation and testing was a tremendous effort, which utilized more Internal Audit resources than was originally forecast. As a result of this implementation, several internal audits that were anticipated to be performed were postponed to a future timeframe. Internal Audit has utilized outside consultants in order to complete the CODIS testing.

- **Access to the Audit Committee is clearly documented.**

The Audit Committee reviews the three-year plan noted earlier in detail. The Audit Committee approves the scope of each audit. The three-year plan is also reviewed by Suez.

- **Tracking results of the Internal Audit Department are well documented.**

UW Internal Audit uses a spreadsheet that compares the three-year audit plan to the annual audit plan. The spreadsheet also provides a comparison to the actual audit work that was completed for the same timeframe.

- **The Internal Audit Department plays a significant role in assessing corporate conflicts of interest.**

Internal Audit processes the official company "conflict of interest" form. As required by Company policy, a statement entitled "Statement Concerning Conflict of Interest and Business Ethics" is distributed annually to employees that are supervisory level or above and to employees who are considered professional/confidential. This statement requires that those affected employees make a full disclosure to the Company, regarding information that is or could be considered a potential conflict of interest.

The Company requires the employee to complete and sign the statement, confirming to the Chairman of the Audit Committee of the BOD that all employee business transactions on behalf of or relating to the Company during the past year have been conducted in accordance with Company policy. The signed statement is then returned in an envelope pre-addressed to the Director - Internal Audit.

- **Internal audit testing of key controls for core and support processes is appropriate.**

Internal Audit testing of key controls began in March 2006 and is currently in progress. Internal Audit's testing is anticipated to conclude in early February. Internal Audit's test work papers have been provided to external auditors, Ernst and Young (E&Y). E&Y is in the process of reviewing Internal Audit's work, and will re-perform tests, where required. At the conclusion of testing, E&Y will provide an opinion regarding whether United Water is in compliance with CODIS (Sarbanes-Oxley). E&Y's opinion is anticipated in late February.

The following is a summary of the key control selection process, as well as the CODIS testing process:

- United Water's ultimate parent, Suez, provided a comprehensive list of key control objectives to be utilized as a guide in implementing the CODIS process. All CODIS process owners were to ensure that they had an adequate procedure in place to address each key control objective, relevant to their areas. The procedure, which would assist in meeting the key control objective, is referred to as the key control activity. In many cases, there were multiple key control activities that met one key control objective.

- Management, Internal Audit, and United Water's external auditors reviewed all of the key control activities that had been identified by process owners, and, jointly, came to an agreement regarding the final list of key control activities for testing purposes.

- Internal Audit developed the audit test programs and began the CODIS testing process in March 2006.

- The annual key controls are currently in the process of being tested. After testing is fully completed and E&Y has completed its review of Internal Audit's testing, as well as completed its own independent testing, where required; E&Y will provide an opinion regarding whether United Water has met the CODIS (Sarbanes §404) requirements.

- Internal Audit reports were satisfactory and management acted on their recommendations.

Internal audit reports that were reviewed in detail include:

- Sarbanes-Oxley Section 302 and 404
- United Water New Jersey Revenue Cycle
- United Water New Jersey Revenue Cycle Follow-up Audit

All reports were mindful of managerial, regulatory and financial issues and were well prepared by the Internal Audit department. In the reports, management provided comments and action plans to resolve issues.

VII.D.2 Recommendations

- **There are no recommendations.**

VII.E COST ALLOCATIONS

The RFP requires the consultant to "Determine If UWNJ And UWTR Are Maximizing Their Cost Allocation Efficiencies."

VII.E.1 Findings and Conclusions

- **Cost allocation methodologies reflect appropriate mechanisms.**

The United Water Controller oversees and updates all cost allocation factors.

United Water Management and Services (M&S) is a non-profit shared services entity, which provides professional services to its wholly own subsidiaries. The services delivered range from finance, legal, procurement, treasury, taxes and human resources to technical services, information technology, communications, rates, and customer service. The M&S inter-company agreements date back to 1974 and have been approved by eight state regulatory agencies.

The process that employees use to bill subsidiaries for their services is as follows:

- M&S employees bill for services rendered to a particular business unit (called a direct charge) and/or a group of business units (called an indirect charge or allocation level) on their respective timesheets.

- Timesheets are processed through the ADP Payroll system and the paid payroll distribution is posted to the PeopleSoft Financial system.

    - Direct charges are posted directly to the M&S fee account of the business unit billed for services rendered.

- Indirect charges are posted to the M&S Company, to be subsequently allocated by allocation level via the M&S allocation process described below.

- Additional cost components, such as the Accrued Payroll, Fringe Benefits, and Other M&S A&G (rent, utilities, etc.) are allocated based on Paid Payroll to account for the overhead on top of pay.

- Finally, the M&S allocation process allocates the indirect charges by allocation level.

  - An allocation level represents a group of business units billed for services rendered.

  - The Allocation factors have been agreed upon in the M&S Inter-Unit Agreement. They are based upon the employee functional responsibility.

Functional Area	**Allocation Method**
Administrative and General	Employees - 33 1/3% Customers - 33 1/3% O&M Expenses - 33 1/3%
Operations	Net Utility Plant - 40% Volume of Water Delivered - 40% Fuel, Power & Chemical Costs - 20%
Engineering	Construction Capital Projects – 100%
Customer Service and Communications	# of Customers
HR and Payroll	# of Employees
Accounting, IT, Planning, and Treasury	Total Capitalization

- **The Purchasing function is efficient.**

The Supply Chain Management Department seeks to procure goods and services at the best value for internal clients. The Department is responsible for the procurement of UW operating needs, capital projects, additional service agreements, inventory management, supply chain system and process administration.

Procurement of UW operating needs and capital projects include the management of major spending categories using an array of global, national and local contracts. Major areas include energy, chemicals,

sludge/residual disposal, network materials, contract services, engineering services, fleet, information technology, telecom, travel, uniform, office equipment and other items.

The Director of Supply Chain Management has employed cost-saving techniques through negotiation, process improvements and inventory replacement tactics that reflect efficient modern day technologies.

According to the UW Procurement Policy and Procedures, there are management requirements in the areas of competitive procurement rules, new suppliers, requisition approvals, purchasing cards, contracts and contract processes, supplier agreements, corporate credit cards, travel procedures, employee expenses, leased vehicles and change orders. Items over $10,000 require competitive procurement. Two quotes are the minimum, but UW prefers three bids or more.

Approval of the addition of new suppliers to the PeopleSoft system is the responsibility of certain designated procurement personnel. Procurement is charged with reducing the number of suppliers that UW conducts business with in order to leverage expenditures and thereby reduce the prices paid for materials and services. This policy in no way intends to limit competition, only to focus the spending of funds upon the intention of reducing prices. The Director of Supply Chain Management stressed that his department significantly tracks inventory levels to reduce inventory charges. He has required vendors to have good protocols for seasonal needs. Inventory is matched with seasonal requirements.

VII.E.2 Recommendations

- **There are no recommendations.**