New York City Water Board

Report on the Cost of Supplying Water to Upstate Customers for the 2011 Rate Year

June 18, 2010

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To the Members of the New York City Water Board:

The Amawalk Consulting Group LLC is pleased to submit its Report on the cost of supplying water to upstate customers of the City of New York's water system. The Report presents our findings on the cost of service and identifies the unit rate for Fiscal Year 2011 that is necessary to recover the anticipated cost of water supply service.

The Report presents the actual cost of water supply service for Fiscal Years 2007 through 2009. The methodology used to develop the cost of service for these years is consistent with that used in previous years. In addition, the anticipated cost of service is presented for Fiscal Years 2010 through 2014 (the "Projection Period").

The Report shows that the cost of water supply service will increase in each year of the Projection Period. The increases are primarily attributable to rising operating expenses, particularly in the property taxes levied on watershed properties, together with capital investments in water supply infrastructure. Significant investments have been made in the water supply system in recent years to protect the quality of the water supply, to enhance the integrity of the system and to achieve other water supply objectives. Additional capital investments will be made during the Projection Period. In addition to the projected increases in the cost of service, the unit rate for water supply service is impacted by recent declines in both upstate and in-City consumption and the expectation that system-wide water consumption will decline over the long-term.

We appreciate the opportunity to be of assistance to the Board and would be pleased to answer any questions you may have regarding the study methodology or findings. We also wish to acknowledge the assistance provided by representatives of the Office of Management and Budget, the Department of Environmental Protection, the Board, and the New York City Municipal Water Finance Authority in the preparation of this Report.

Should you have any questions or comments, please do not hesitate to contact the undersigned at (212) 361-0050.

Very truly yours,

Edward J. Markus
Amawalk Consulting Group LLC

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1.0 Introduction

1.1 Purpose

The purpose of this Report is to summarize the results of the study performed by the Amawalk Consulting Group LLC ("ACG") of the cost of providing water supply service to communities north of New York City (hereinafter, "the City"). The Report presents the proposed regulated rate for Fiscal Year 2011 to recover the cost of service. The Report also presents the calculated cost of service and rates for Fiscal Years 2007 through 2009; the anticipated cost of service and rate for 2010, the current year; and the projected cost of service and rates for 2012 through 2014.

1.2 Scope

The Report presents the findings of ACG regarding the revenue requirements for water supply service as well as water consumption by customers and a unit rate for calculating charges to upstate customers. The revenue requirements take into consideration the operation and maintenance expenses, principal and interest on bonds and other financial needs related to facilities north of the City. The Fiscal Year 2011 cost of service and unit rate are based, in part, on the calculated cost of service for the current Fiscal Year and prior years, which is presented herein. All years referred to in the Report reflect the fiscal year of the City that begins July 1 and ends June 30.

ACG has reviewed, to the extent practicable, the books, records, financial reports, and statistical data of the City, the New York City Water Board (the "Board') and the New York City Municipal Water Finance Authority (the "Authority"), and has conducted such other investigations and analyses as deemed necessary to assemble and analyze the cost of water supply service and rates. We have performed various financial tests and analyses necessary to support our findings and conclusions.

In analyzing the projection of future operations summarized in this Report, ACG has reviewed certain assumptions with respect to conditions, events and circumstances which may occur in the future. We believe that these assumptions are reasonable and attainable, although actual results may differ from those in the forecast as influenced by the conditions, events and circumstances which actually occur.

1.3 Background

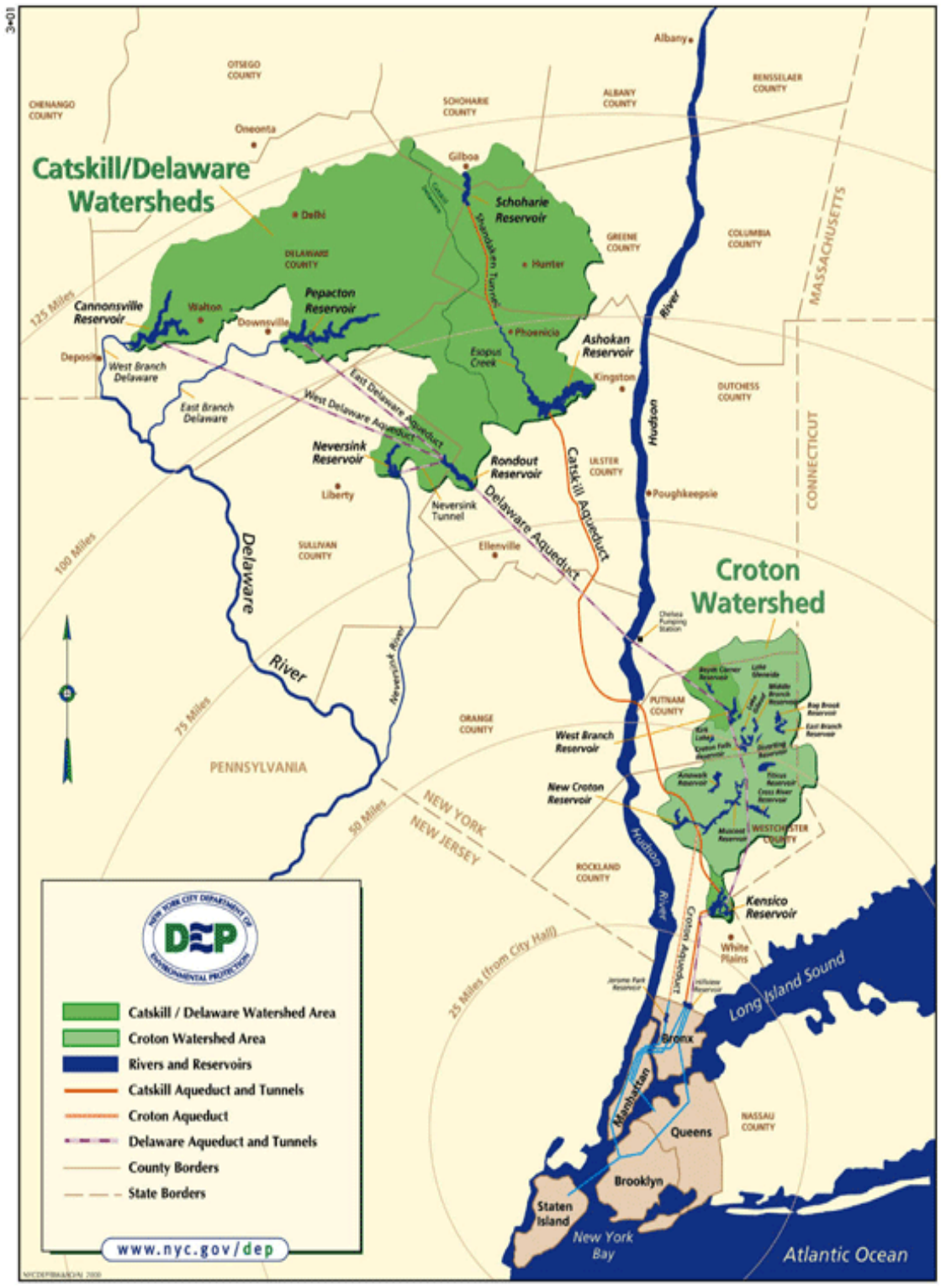
The City, through its Department of Environmental Protection (hereinafter, "DEP" or the "Department"), is responsible for developing and maintaining dependable sources of water supply and for providing drinking water to communities north of the City and to in-City consumers. The Department operates and maintains the water supply system (the "Water System" or the "System") and is responsible for planning, designing and constructing capital

improvements to the System. The Capital Improvement Program (the "CIP") of DEP identifies planned commitments for design, construction and construction-related work for the System by category of project in each year of the ten-year planning period.

1.3.1 The Water Supply System

Water for the System is derived from three upstate reservoir systems (Croton, Catskill and Delaware) and a system of wells in Queens that were acquired as part of the City's acquisition of the Jamaica Water Supply Company. The three regions include 18 reservoirs and 3 controlled lakes with a storage capacity of approximately 550 billion gallons. The water collection systems in each region were designed and built with various interconnections to permit the exchange of water from one system to another. This feature helps mitigate the effects of localized droughts and takes advantage of excess water in any of the three watersheds. An overview of the three watershed systems and the aqueducts is shown in Figure 1 and described herein.

Figure 1 Map of the Water Supply System



1.3.1.1 The Croton System

The Croton System consists of 12 reservoirs and 3 controlled lakes that are located on the Croton River, its 3 branches and 3 other tributaries. The watershed is divided into three subsystems: the West Branch, Croton Falls, and Muscoot. The watershed that supplies the Croton System has an area of 375 square miles. It lies almost entirely within the State of New York, approximately 45 miles north of lower Manhattan. A small portion of the watershed is located in the State of Connecticut. In 2005 and 2006, the Croton System provided less than 2% of the City's daily water supply due to repairs that were being made to the Croton Aqueduct. When operating at full capacity, the Croton System provides approximately 10% of the City's daily water supply and can provide substantially more of the daily water supply during drought conditions. Due to the abundance of higher quality water from the Catskill and Delaware Systems, the Croton System has not been operating at full capacity for several years. It was shut down entirely from the summer of 2007 to the fall of 2008 when it was briefly placed in service during planned maintenance of the Delaware System. It may be used intermittently and for short periods over the next few years. The completion of the Croton filtration plant is expected to eliminate the water quality problems of the Croton System water. With the completion of the Croton filtration plant, the Croton System will be able to operate at full capacity.

1.3.1.2 The Catskill System

The Catskill System occupies sparsely populated areas in the central and eastern portions of the Catskill Mountains and normally provides approximately 40% of the City's daily water supply. Water in the Catskill System comes from the Esopus and Schoharie Creek watersheds, located approximately 100 miles north of lower Manhattan and 35 miles west of the Hudson River. The Esopus Creek flows naturally into the Hudson River and drains an area of about 257 square miles. The Schoharie Creek flows into the Mohawk River and drains an area of 314 square miles. The greater part of the water from these two watershed areas is stored in the Ashokan Reservoir and the balance in the Schoharie Reservoir.

1.3.1.3 The Delaware System

The Delaware System is located approximately 125 miles north of lower Manhattan and typically provides about 50% of the City's daily water supply. Three Delaware System reservoirs collect water from a sparsely populated region on the branches of the Delaware River: Cannonsville Reservoir, Pepacton Reservoir, and Neversink Reservoir. Water from these reservoirs is conveyed eastward through separate rock tunnels: West Delaware, East Delaware, and Neversink; to Rondout Reservoir where the Delaware Aqueduct begins.

The Delaware System may be augmented by a standby pump station at Chelsea, New York (the "Chelsea Pump Station") that draws from the Hudson River. The Chelsea Pump Station has a capacity of 100 million gallons per day (mgd) and is connected to the Delaware Aqueduct. The Station pumped approximately 82 mgd of water from the River for almost five months during the 1985 drought and approximately 90 mgd in May of 1989.

1.3.1.4 The Well System

Wells in the Borough of Queens are capable of providing approximately 1% of the City's daily water supply. The wells have been off line since 2007 due to the availability of higher quality water from the Catskill and Delaware Systems. The wells could be used to supply more water during drought conditions. Unlike the rest of the City's water supply, which is a surface and gravity-supplied system originating in the network of reservoirs north of the City; well water is pumped from extensive underground aquifers. The acquisition of wells in Queens from Jamaica Water in 1996 represented the first new water supply source for the City since the 1960s when the Delaware surface water system initially came on line. DEP is currently planning improvements to the groundwater system which will augment the supply of water from underground aquifers.

1.3.1.5 The Catskill Aqueduct

The Catskill Aqueduct, which conveys water by gravity, is 92 miles long and extends from the Ashokan Reservoir to the Kensico and Hillview Reservoirs. The delivery capacity of the Catskill Aqueduct from the Ashokan Reservoir to the Kensico Reservoir is about 610 mgd. From Kensico Reservoir to the Hillview Reservoir, the Aqueduct has a capacity of approximately 800 mgd. The Catskill Aqueduct passes under the New Croton Reservoir. At this point it is possible to transfer water from Ashokan Reservoir to New Croton Reservoir.

1.3.1.6 The Delaware Aqueduct

The Delaware Aqueduct similarly carries water by gravity from Rondout Reservoir to West Branch Reservoir, in the Croton System, and from West Branch Reservoir to Kensico Reservoir and then on to Hillview Reservoir. Water entering the Aqueduct can be taken from the Rondout, Neversink, Pepacton, and Cannonsville Reservoirs. The capacity of the section that delivers water from Rondout Reservoir to West Branch Reservoir is about 890 mgd. The delivery capacity of the Delaware Aqueduct from West Branch Reservoir to Kensico Reservoir is about 1,045 mgd. The Aqueduct has a capacity of approximately 1,450 mgd from Kensico Reservoir to the Hillview Reservoir.

1.3.1.7 Long-Term System Capacity

Current demand and flow projections show that if conservation programs, including metering, toilet replacement, hydrant locking, leak detection and public information, remain effective there will be no immediate need for the City to find additional long-term water supply sources to meet normal demand under routine System operating conditions. However, as described herein, the Water Supply System currently requires and will continue to require capital improvements to maintain and enhance the long-term quality and reliability of the System.

1.3.2 Condition of the Water Supply System

The System has reliably served the City since 1842. Many additions and improvements have been made over the years to develop the system that exists today. On an overall basis, the condition of the water and wastewater system of the City has been rated "Adequate", the highest

rating of three categories, by AECOM USA, Inc. (formerly Metcalf & Eddy of New York, Inc.), the consulting engineer to the New York City Municipal Water Finance Authority ("the Authority"). Nonetheless, given the age of the system, circumstances that are specific to certain components of the system, and modern perspectives on reliability, security and other matters, DEP is pursuing a number of initiatives in the water supply system to enhance the long-term integrity of the system. An overview of several of these initiatives is presented in this part of the Report.

1.3.2.1 The Rondout-West Branch Tunnel

DEP regularly assesses the condition and integrity of the System's tunnels and aqueducts to determine the extent and effect of water loss. In particular, since the early 1990s, DEP has monitored the condition of the Rondout-West Branch Tunnel portion of the Delaware Aqueduct. The Rondout-West Branch Tunnel is 44.7 miles long and conveys water under the Hudson River and into the West Branch Reservoir. It normally conveys about 50% of the City's water supply. It is unique in that it has the highest pressures and the highest velocities in the System. In addition, a portion of the tunnel crosses a fractured rock formation, which is potentially subject to greater stress than the deep rock tunnels located in the City.

As a result of DEP's flow tests, visual observations and other analyses, it has been determined that approximately 15 mgd to 36 mgd of water is being lost from the tunnel and is surfacing in the form of springs or seeps in the area. The losses amount to approximately 4% of the daily volume of water provided by the tunnel under peak flow conditions. DEP has initiated the engineering work to determine the nature and extent of the repairs which may be necessary to remedy the water loss. DEP has also determined that the situation in the tunnel and the amount of water loss is stable. In the opinion of the professional engineering firm retained by DEP in conjunction with that investigation, there is very little immediate risk of failure of the tunnel. DEP intends to make the necessary repairs. The costs to perform such repairs could be substantial depending on the nature of the required repair. To perform the repair work, the tunnel will have to be shut down and de-watered for a period of up to four years. During any such period, it will be necessary for the City and its water supply customers north of the City to increase their reliance on other water supplies and to implement more stringent measures to encourage conservation and decrease demand. Under an extended shutdown of this tunnel, water quality in the remaining reservoirs could potentially suffer as storage volumes are drawn down. In general, the Delaware System continues to demonstrate a high degree of reliability after 55 years of continuous service. Nevertheless, DEP considers it prudent to conduct regular tunnel and aqueduct inspections and surveys to detect problems that might arise so that corrective actions can be taken if needed.

1.3.2.2 The Gilboa Dam

Gilboa Dam, part of the Catskill water supply system, is comprised of an earthen dam and a concrete gravity dam, with the concrete portion also acting as the spillway. The dam impounds the waters of Schoharie Creek, creating Schoharie Reservoir. In 2005, an engineering analysis of the dam showed that the spillway had lost some mass over time and that the dam did not meet New York State Department of Environmental Conservation ("NYSDEC") safety guidelines

applicable to the reconstruction of existing dams. In December 2006, DEP completed a series of interim steps to bring the dam into compliance with NYSDEC safety guidelines for the reconstruction of existing dams.

Although there is no evidence that the dam is facing imminent risk of failure, DEP has determined that the rehabilitation of the dam should be advanced. Work has been initiated on the crest gates, which will increase DEP's ability to monitor the Schoharie Reservoir and maintain it at proper levels. This work is scheduled to be completed by June 2010. Site preparation work began in September 2009, and full reconstruction, which is anticipated to bring the dam up to compliance with NYSDEC safety guidelines for new dams, is expected to begin in FY 2011. The estimated cost to complete the rehabilitation is $543 million, $434 million of which is currently included in the CIP.

1.3.3 The Dependability Program

The System has evolved over a period of more than 150 years since the Croton supply was first put on line in the 1840s. That evolution had been driven in the past by the need to expand the System to provide more water for the growth of the City. The evolution of the System is now about to enter the next phase; however, this time it will be driven by the need for long-term rehabilitation and enhancement of the System's existing facilities. The next phase is termed the Dependability Program.

The existing System provides some amount of flexibility to take more water from one component part and less from others when reservoir levels or water quality so warrant; or even to take the smallest part of the System (the Croton System) out of service for extended periods of time. Nevertheless, there are some parts of the System that can only be taken out of service for brief periods of time. Although the City's water supply planners purposely built durability into many of the City's facilities, some of these critical, yet aging, parts of the System will have to be taken out of service for rehabilitation and/or upgrading to modern design standards. In order to take such facilities out of service without jeopardizing the Department's ability to deliver water, alternative sources of water supply must be found.

DEP has begun to evaluate additional strategies and projects for improving the dependability of water supplies, which could entail the development of additional or interim supplies to meet demands during periods of extended facility outages due to planned or unplanned inspection, repair or rehabilitation. DEP has retained a consultant to develop a long-term dependability plan. DEP intends to evaluate various alternative projects which, when combined, could allow for any portion of the System to be taken out of service for a period of up to four years. Elements of that plan may include: interconnections with other neighboring jurisdictions; increased use of groundwater supplies; storage and recovery of existing supplies within underground aquifers; increased storage at existing reservoirs; withdrawals and treatment from other surface waters; hydraulic improvements to existing aqueducts; and additional tunnels.

Kensico-City Tunnel. The Kensico-City Tunnel will be a 16 mile long tunnel from the Kensico Reservoir to the Van Cortlandt Park Valve Chamber of City Tunnel 3, Stage I, bypassing the Hillview Reservoir. The design work for the tunnel is estimated to cost $119 million. The estimated cost to design and construct the tunnel is expected to be between $4 billion and $6 billion, most of which would be incurred in the years beyond the CIP. The amount currently included in the CIP for this project is $75 million. This tunnel will provide redundancy for the sections of the Catskill and Delaware Aqueducts that run from the Kensico Reservoir to the City.

1.3.4 Water Quality and Treatment

Pursuant to the Safe Drinking Water Act (the "SDWA"), the United States Environmental Protection Agency ("USEPA") has promulgated nationwide drinking water regulations which specify the maximum level of harmful contaminants allowed in drinking water and which govern the construction, operation, and maintenance of the System. USEPA has also promulgated filtration treatment regulations, known as the federal Surface Water Treatment Rule ("SWTR"), that prescribe guidelines concerning studies to be performed, programs to be implemented, timetables to be met and any other actions necessary to insure compliance with the regulations' terms. Enforcement of SDWA and its related regulations, including SWTR, was delegated by USEPA to the New York State Department of Health ("NYSDOH"). With respect to the Catskill and Delaware systems, the City believes that under the SWTR promulgated by the USEPA it will continue to be able to meet the criteria for non-filtered supplies.

1.3.4.1 Filtration in the Croton System

Because of the quality of the System's water and the long periods of retention in the reservoirs, it has not been necessary to filter water from the System. The only treatment procedures routinely employed by DEP are screening, detention, disinfection, flouridation, and the addition of caustic soda and phosphoric acid for corrosion control. Additions of copper sulfate for algae control and alum for turbidity control are made only when needed. Historically, this level of treatment proved to be more than sufficient to maintain water quality standards throughout the entire Water System. However, more stringent federal standards for surface water treatment in the 1980s and 1990s led to a 1992 stipulation with NYSDOH, which has been superseded by a 1998 federal court consent decree, as supplemented in 2002 and 2005 (the ''Croton Filter Consent Decree''). The Croton Filter Consent Decree mandates the construction of a full scale water treatment facility to filter Croton System water.

After an extensive study, DEP identified the Mosholu Golf Course in the Bronx as its preferred site for the treatment facility and began work at the site in late 2004. The Croton Filter Consent Decree sets forth milestones, including commencement of operations of the facility on October 31, 2011.

From time to time, the Croton System has failed to meet the water quality standard for haloacetic acids, a disinfection by-product regulated by USEPA. Pursuant to a USEPA Administrative Order issued in June 2003, DEP has evaluated feasible and cost-effective interim measures that could be taken to reduce haloacetic acid levels in Croton water until the Croton filtration plant is

completed. It is anticipated that the Croton System will be used only intermittently and for short periods over the next few years. As such, DEP has determined that implementation of such interim measures is not needed at present due to the very limited use of the Croton system.

1.3.4.2 Watershed Protection/Filtration Avoidance in the Catskill and Delaware Systems

On January 21, 1997, the City and the State executed a Watershed Memorandum of Agreement with the communities in the Catskill, Delaware, and Croton watersheds, USEPA, and several environmental groups. The Watershed Memorandum of Agreement supplemented the City's existing watershed protection program with approximately $400 million in additional funding for economic-environmental partnership programs with upstate communities. Most of this funding has been provided through the issuance of Authority bonds. As provided under the Watershed Memorandum of Agreement, the State has issued a land acquisition permit to the City to acquire water quality sensitive land in the watershed until January 2012, and has approved the City's revised rules and regulations governing certain aspects of land use in the watershed.

Since 1993, USEPA has been issuing Filtration Avoidance Determinations ("FADs") pursuant to which the City is not required to filter water from the Catskill and Delaware Systems. If the City were to have to filter water from the Catskill and Delaware Systems, the current estimate of the construction costs to provide for such filtration is between $6 billion to $8 billion. In July 2007, USEPA issued a new FAD (the "2007 FAD") which supersedes previous determinations and has a term of 10 years, divided into two five-year periods. The 2007 FAD requires the City to take certain actions to protect the Catskill and Delaware water supplies. These actions include the continuation and enhancement of certain environmental and economic partnership programs established under the Watershed Memorandum of Agreement, and the creation of new programs.

Since 1997, the FAD has required that the City solicit property from owners of land in the watershed and actually acquire (with certain limited exceptions) title to or conservation easements on any solicited land if the owner accepts the City's purchase price. The 2007 FAD requires the City to allocate a total of $300 million for land acquisition during its ten year term, including approximately $59 million of unspent funds remaining from moneys set aside for land acquisition under the Watershed Memorandum of Agreement and the previous FAD and $241 million in new funding. In addition, the City is obligated to develop and implement a strategy to augment its land acquisition efforts through increased participation of land trusts and other non-governmental organizations in identifying and helping the City acquire eligible lands. As of February 24, 2010, title to or conservation easements on approximately 105,800 acres of land in the Catskill and Delaware watersheds at a cost of approximately $359 million have either been acquired or are under contract for acquisition. The current NYSDEC land acquisition permit allowing the City to continue its watershed land acquisition program expires in early 2012. It will be necessary for DEP to obtain a new permit in order to continue acquiring watershed land during the second five years of the 2007 FAD. DEP has applied for a new permit in order to continue acquiring watershed land during the second five years of the 2007 FAD. Other stakeholders will have the opportunity, as part of the permitting process, to oppose the issuance

of the permit or to request the inclusion of conditions or limitations on such permit. A failure to obtain such a permit will impact DEP's ability to comply with the 2007 FAD.

The 2007 FAD also calls for the continuation, during its first five years, of many of the City's other successful watershed protection programs that were part of the previous FAD, with additional enhancements to several programs including the Community Wastewater Management Program and the Stream Management Program. Prior to commencement of the second five years of the 2007 FAD, the City will need to reach agreement with USEPA and NYSDOH on which of such programs should be further continued into the second five-year period, whether and how any such programs to be further continued should be modified, and/or whether additional programs are needed to justify continuation of the 2007 FAD into the second five years of its term. To assist in making these decisions and reaching an agreement, DEP will prepare a Revised Long Term Watershed Protection Program, to be submitted to USEPA/ NYSDOH by December 15, 2011. Additional funding will be required in the CIP for Fiscal Years 2013 through 2017 to support the FAD Program for the second five years once the program is negotiated.

There has been increased interest in natural gas drilling in southeastern New York State, including the watershed. DEP hired a geological consultant and has been monitoring the situation to understand what impact such exploration may have on the System, including any potential impact on water quality. NYSDEC issued a Draft Supplemental Generic Environmental Impact Statement ("dSGEIS") relating to natural gas drilling on September 30, 2009. On December 23, 2009, DEP released its final impact assessment of natural gas drilling within the watershed and submitted detailed comments on the dSGEIS. The City believes the dSGEIS is seriously flawed in many respects and requested that NYSDEC withdraw the document. The City also called for a prohibition on drilling in the watershed due to the potential for natural gas drilling as currently practiced to harm water quality and jeopardize the City's FAD. USEPA also submitted comments on the dSGEIS in which it expressed concerns about the failure of the analysis to fully consider the impacts of natural gas drilling and that such concerns be addressed prior to the completion of the environmental review process. To date, no permits have been filed to drill for natural gas in the watershed.

In April 2010, NYSDEC indicated that natural gas drilling cannot proceed in the watershed based on the information available today. Case by case environmental reviews will have to be conducted before natural gas drilling can be explored in the watershed.

1.3.4.3 Disinfection Requirements

In January, 2006, USEPA issued final versions of two drinking water supply regulations, developed pursuant to the SDWA: the Long Term 2 Surface Water Treatment Rule ("LT2") and the Stage 2 Disinfection/Disinfectant-Byproducts Rule ("DBP2"). Compliance with these regulations may require additional capital costs, not all of which are currently included in the CIP.

The purpose of LT2 is to reduce the incidence of waterborne disease by mandating certain levels of inactivation and/or the removal of certain microorganisms from water supply systems, including the Catskill and Delaware Systems. DEP anticipates achieving compliance with such levels through the construction and operation of its planned ultraviolet treatment facility (the "UV Facility"). LT2 also mandates that uncovered finished water storage facilities, which include the Hillview Reservoir, be covered or that water from such facilities be treated. DEP is already a party to an Administrative Order with NYSDOH ("Hillview Administrative Order") which requires, among other things, that the City install or construct a cover for the Hillview Reservoir. DEP is seeking a schedule modification relating to the LT2 requirement that Hillview Reservoir be covered as a finished water storage facility, which, if granted, would provide DEP additional time to cover the reservoir. There can be no assurance that such a schedule modification will be obtained. The cost of covering the Hillview Reservoir is expected to be approximately $1.6 billion, $250 million of which is included in the CIP.

DEP is continuing to investigate less costly alternatives to a concrete cover, including a floating cover, which would require the consent of NYSDOH. Installation of a floating cover would require additional design work and may cause DEP to miss the October 31, 2016 construction completion date mandated under the Hillview Administrative Order. DEP has also requested that the deadline for covering the reservoir be modified to give DEP additional time to meet the requirement.

The UV Facility will provide treatment for Catskill and Delaware water by achieving certain levels of inactivation of cryptosporidium. The 2002 FAD, as initially issued, called for the UV Facility to be operable by September 2009. There have since been a number of delays attributable to design changes and permitting issues. In January 2007, DEP entered into an Administrative Order on Consent ("UV Order"), with USEPA, pursuant to USEPA's authority under LT2. The UV Order establishes a revised schedule of milestones for the construction of the UV Facility including a final completion date of October 29, 2012. The milestones in the UV Order have been incorporated into the 2007 FAD. The cost to complete the UV Facility is fully funded in the CIP. The plant is currently under construction.

The purpose of DBP2 is to reduce the potential health risks associated with disinfection byproducts, which are chemical compounds formed when disinfectants such as chlorine are added to drinking water. Based on preliminary assessments, DEP believes that the mandated level of disinfection byproducts set forth by DBP2 may be exceeded in certain parts of the System under certain conditions. DEP hired a consultant to study the matter and issue a report recommending steps to be taken by DEP. The final report was issued in October 2008. The report does not suggest switching to chloramination (an alternative form of disinfectant) at this time, but does recommend that DEP leave space available at its facilities to accommodate the use of chloramination in the event that a change in disinfection is necessary in the future. The report also makes certain recommendations regarding DEP's operation of the water supply system, which will improve DEP's ability to achieve compliance with DBP2. There are no significant capital improvement issues related to the recommendations set forth in the report.

1.3.5 Water Quality Monitoring

DEP has historically monitored key locations in its distribution system for over 40 individual water quality parameters, including lead. The monitoring program meets or exceeds federal and State requirements and has the capability to meet potentially more stringent requirements. The System has multiple laboratories employing bacteriologists, engineers, chemists, hydrologists and limnologists to monitor water quality. In addition to the monitoring program, DEP watershed inspectors maintain surveillance of the watersheds.

The SDWA requires that utilities prepare and distribute to their consumers a brief annual water quality report, referred to as the Consumer Confidence Report (the "CCR"). The City's 2008 CCR covering the calendar year 2008, the most recent such report, demonstrates that the quality of the City's drinking water remains high. The CCR noted several exceedences of color, as well as several turbidity Tier 3 violations for failure to collect a repeat sample in the Croton sample. None of these exceedences are considered by DEP to be harmful to public health.

1.3.6 Governmental Regulation

The System is subject to federal, State, interstate and municipal regulation. At the federal level regulatory jurisdiction is vested in USEPA; at the State level in NYSDEC and NYSDOH; at the interstate level in the Delaware River Basin Commission ("DRBC") and the Interstate Environmental Commission and at the municipal level in DEP, the New York City Department of Health and Mental Hygiene ("NYCDOH"), Department of Buildings ("DOB") and the Department of Small Business Services, and to a limited degree, in municipalities and districts located in eight counties north of the City. Water quality standards are enforced within the watershed areas north of the City through a network of overlapping governmental jurisdictions. Participating in that network, among others, are NYSDEC and NYSDOH, county, municipal and district police, engineers and inspectors; and City personnel from DEP. The various jurisdictions maintain physical security, take water samples, monitor construction activities and wastewater treatment in the watershed, and generally oversee the physical condition of, activity on and the operation of water supply lands and facilities. Portions of the overall legislative and regulatory framework governing the watersheds may be found in the City's Administrative Code, Health Code and Water Supply Regulations. Regulatory enforcement within City limits is almost exclusively accomplished through City personnel. Provisions incorporating and augmenting the substance of the federal Safe Drinking Water Act ("SDWA"), related regulations and the Sanitary Code, are contained in the Health Code, Water Supply Regulations and the City's Building and Building Construction Codes. These provisions are enforced by personnel from DEP, NYCDOH and DOB.

1.3.7 Drought Management

From time to time the Water System experiences drought conditions caused by significantly below-normal precipitation in the watershed areas. The most recent drought was in 2002. As of May 24, 2010, the System's reservoirs were filled to 98.3% of capacity. Normal levels at this time of year are approximately 100% of capacity.

The Water System relies upon a surface water supply, and is sensitive to major fluctuations in precipitation. Throughout even the worst droughts, the Water System has continued to supply sufficient amounts of water to the City and its water supply customers north of the City. To ensure adequate water supply during drought conditions, DEP, in conjunction with other City, State and interstate agencies, maintains a Drought Management Plan. The Drought Management Plan defines various drought phases that trigger specific management and operational action. Three defined phases are: "Drought Watch," "Drought Warning," and "Drought Emergency." A Drought Emergency is further subdivided in four stages based on the projected severity of the drought and provides increasingly stringent and restrictive measures.

A Drought Watch is declared when there is less than a 50% probability, based on the existing record since 1927, that either the Catskill or Delaware reservoir system will be filled by the following June 1. This phase initiates the pumping of water from the Croton System. In addition, during this phase a public awareness program begins and users, including upstate communities taking water from the System, are requested to initiate conservation measures. New York State Department of Health ("NYSDOH"), NYSDEC, and the DRBC are advised of the Water System's status, and discussions are held with City agencies concerning their prospective participation in the event of a declaration of a Drought Warning.

A Drought Warning is declared when there is less than a 33% probability that either the Catskill or Delaware reservoir system will fill by June 1. All previous efforts are continued or expanded and additional programs are initiated, including the coordination of specific water saving measures by other City agencies.

A Drought Emergency is declared when it becomes necessary to reduce consumption by imposing even more stringent measures. In addition to the imposition of restrictions, DEP may enhance existing System management and public awareness programs, expand its inspection force and perform additional leak and waste surveys in public and private buildings. DEP may also require communities outside of the City that are served by the System to adopt similar conservation measures.

1.3.8 Pending Litigation

The following paragraphs describe certain legal proceedings and claims against the Water Supply System. The ultimate outcome of these proceedings and other claims is unpredictable and could result in substantial judgments that would have to be borne by all customers of the System.

As a result of federal litigation resulting in a determination that a SPDES permit is required for water transfers such as the City's transfer of water through the Shandaken Tunnel, DEP applied for and obtained a SPDES permit for the Shandaken Tunnel. The SPDES permit issued by NYSDEC requires, among other things, that DEP submit a report for approval indicating what short-term and long-term structural measures it intends to undertake to achieve compliance with the permit's temperature and turbidity limits. DEP submitted its report in December 2006, which analyzed several alternatives including construction of a multiple level intake (with an estimated cost of between $74 million and $360 million depending on location), and modification of existing operations at Schoharie Reservoir (from which water is diverted into the Shandaken Tunnel), using a highly sophisticated water simulation tool (with an estimated cost of $6.2 million). The report recommends that DEP implement the latter alternative.

On September 22, 2006, the plaintiffs in the federal litigation commenced a proceeding against NYSDEC and DEP under Article 78 of the Civil Practice Law and Rules, in State Supreme Court in Ulster County, seeking to overturn the SPDES permit issued by NYSDEC on September 1, 2006. In August, 2008, the court issued a decision essentially granting the underlying Article 78 petition, finding that the "exemptions" in the permit are not authorized under the Clean Water Act and directing the City to apply for variances. The court allowed the current permit to remain in effect during that regulatory process. The Appellate Division, Third Department, affirmed the Supreme Court's decision in January 2010. The City filed a motion in the Third Department for leave to appeal to the New York Court of Appeals (the "Court of Appeals") which was denied by the Third Department in March 2010. The City intends to seek leave from the Court of Appeals to appeal to the Court of Appeals.

A complaint representing approximately 178 plaintiffs has been filed against the City due to flooding allegedly caused by the City's operation of the Neversink Dam in April 2005. The complaint seeks compensation of approximately $9 million associated with alleged property damage. In April 2007, the plaintiffs filed an amended complaint in the United States District Court for the Southern District of New York. The amended complaint adds claims under the Endangered Species Act and the Clean Water Act. The City is vigorously defending all of these claims.

On September, 2007, the Coalition of Watershed Towns and three individual towns in the watershed filed a petition for review in the Federal Circuit Court of Appeals for the Second Circuit, challenging the USEPA's issuance of the 2007 FAD on both procedural and substantive grounds. The petition was denied, as was a petition for rehearing en banc, and in June 2009, a petition for a Writ of Certiorari was denied by the United States Supreme Court, thereby concluding the litigation in federal court. The Coalition of Watershed Towns and two individual towns in the watershed have filed a proceeding in State Court against the City and NYSDOH challenging the environmental review of the 2007 FAD. That litigation has been suspended pending settlement discussion, which is focused primarily on terms for the continuation of the City's land acquisition program beyond January 2012, when the City's current land acquisition

permit expires. On January 21, 2010, the City applied for a new land acquisition permit, to take effect in January 2012. The application reflects a number of terms that have been discussed in the ongoing settlement negotiations.

1.3.9 Court-Appointed Monitor

Pursuant to a plea agreement, DEP developed a comprehensive environmental, health and safety ("EH&S") compliance program with respect to the water supply system and its upstate wastewater treatment plants, aimed at detecting and preventing violations of environmental health and safety laws. A federal monitor was appointed to oversee DEP's compliance with the plea agreement, including the development and implementation of the aforementioned EH&S compliance program. In recognition of progress made by DEP in developing and implementing its compliance program, the Federal District Court terminated DEP's probation effective January 1, 2010. As a result, the oversight of the federal monitor has ended.

1.4 Water Conservation

Drought situations have necessitated measures to reduce water use by all customers and, at times, have required the use of the Hudson River as an alternative source of supply. DEP has initiated programs to reduce water use to achieve several goals, including the avoidance of the cost and implementation considerations associated with developing new sources of water supply.

The Department initiated a universal metering program in 1988; presently approximately 94% of customer accounts in the City are billed on a metered basis. Certain other accounts are billed on the basis of a series of flat rate charges but water consumption is being monitored through meters that have been installed in such properties. The Department also promotes water audits with the objective of identifying opportunities to reduce water consumption. DEP completed a program in the 1990s to replace older toilets in the City using 5 to 7 gallons per flush with low-flow toilets using 1.6 gallons per flush. DEP committed $310 million to this program to reimburse homeowners up to $240 for each toilet they replaced. Over 1.3 million toilets were replaced. Significant long-term reductions in water use have been achieved due to both the metering and toilet retrofit programs.

As indicated previously, the Dependability Program will be examining additional long-term water supply sources as well as further measures to enhance water conservation. Additional information concerning water conservation initiatives is provided in 4.8.2 of this Report.

1.5 The Roles of the Authority, the Board and the City in the Water Supply System

Through mid-1985, capital improvements to the water and sewer system of the City were financed through general obligation bonds of the City. In 1984, State law authorized the creation of the Authority and the New York City Water Board ("the Board"). The Authority's function is

to issue revenue bonds, the proceeds of which are used to finance capital improvements to the water and sewer system, including the water supply system. The Board sets rates and charges to meet the annual revenue requirements of the water and sewer system. The revenue requirements include debt service (principal and interest) on outstanding bonds of the City and the Authority as well as the operation and maintenance expenses of the City. Under an agreement between the Authority, the Board and the City, the City continues to operate and maintain the water and sewer system and is responsible for implementing capital improvements to the system.

The Authority issued its first revenue bonds in December 1985. As of the date of this Report, the Authority has over $10.3 billion in principal outstanding for its First Resolution revenue bonds and $13.2 billion in principal outstanding for its Second Resolution revenue bonds for the water and sewer system of the City. In addition, the Authority currently has a $1 billion commercial paper program. Included within the Second Resolution debt are loans obtained by the Authority at below market interest rates from the State Revolving Fund ("SRF"). The SRF Program is administered by the New York State Environmental Facilities Corporation ("NYSEFC").

A portion of the proceeds of the Authority's bonds and the SRF loans has been used to finance capital improvements for water supply projects in upstate regions. Section 4.2.2 of the Report provides information concerning previous capital investments in the water supply system. Under the CIP, additional capital improvements are ongoing and planned for the future to preserve the water supply system for all customers.

2.0 The Sale of Water to Customers North of the City

2.1 Background

The New York State Water Supply Act of 1905 ("The Act") and subsequent amendments granted the City permission to develop the Catskill and Delaware watershed systems. In return for these development rights, the City was required, upon request, to furnish supplies of fresh water to municipalities and water districts in northern counties in which City water supply facilities and watersheds are located. The Act limits the quantity of water that may be taken or received to the quantity calculated by multiplying the number of inhabitants in the municipality or water district as shown by the last United States, state or official municipal census by the daily per capita consumption in the City.

Water is supplied to customers north of the City (hereinafter, "upstate customers") on a wholesale basis, i.e., the City delivers water to one or more central locations and the customers (typically municipalities or water districts) are responsible for distributing the water to individual users such as residential buildings and commercial properties. For the period of 1985 through 2009 inclusive, the City provided an average of 43,802 million gallons per year of water to upstate customers, or 119.9 mgd. This represented approximately 8.73% of all water supplied to both in-City and upstate customers. The percentage of the water supply being used by upstate customers has generally been increasing in recent years, averaging 9.79% in 2007 through 2009.

Upstate consumption is affected by the continuing expansion of the areas served by City water as other changes occurring within the service area. Among the changes are the increases in water consumption in the vicinity of Stewart International Airport to accommodate commercial development at the Airport.

2.2 Rates and Charges for Upstate Customers

The regulated rate for water service to upstate municipalities and water districts is determined on the basis of the actual total cost of water to the City after deducting the capital and operating costs incurred within the City limits in connection with the distribution and delivery of water within the City. In no event may the regulated rate exceed the rate charged to customers within the City. The Board implemented rate increases for upstate customers starting in 1993. Prior to that increase, the upstate water rates had not been changed since 1973. The historical water rates charged to upstate customers for the period 1973 through 2009 are provided in the table on the following page. The final NYSDEC determination and approval has been made for the rates for fiscal years 1993 through 1995. In response to a request for a review of the regulated rate for water service by upstate petitioners led by the Village of Scarsdale, the NYSDEC Administrative Law Judge stated that he will consider the petitioners' request for a review only of the 2005 regulated rate, and not for any other previous years.

Fiscal Year	Rate per Million Gallons (MG) (a)	
	Billed to Upstate Customers[1]	Computed Cost to the Board
1973-1992	76.87 or 103.72	
1993 (b)	143.84	198.33
1994 (b)	165.23	211.6
1995 (b)	174.18	229.87
1996	174.18	247.28
1997	227.95	309.55
1998	274.93	338.79
1999	342.97	348.31
2000	383.78	385.25
2001	414.37	414.88
2002	448.83	462.24
2003	485.71	522.99 (c)
2004	542.36	529.85 (c)
2005	591.21	591.91
2006	617.79	623.47
2007	691.91	691.83
2008	798.62	703.73
2009	900.31	882.91
2010 (Current)	922.23	879.20

[1] NYSDEC revised the rate per million gallons for the years 1993 through 1995 as noted in (b) below.

(a) From 1973 to 1992, customers using Croton water were charged $76.87 per million gallons and customers using Catskill/Delaware water were charged $103.72 per million gallons. Prior to the 1993 rate increase, communities using water from the Croton System were billed at a different regulated rate than communities using water from the Catskill/Delaware System. Since 1993, a uniform rate has been used for all upstate customers.

(b) The rates approved by NYSDEC were: $137.73 per million gallons for 1993, $158.31 for 1994 and $175.69 for 1995.

(c) The computed cost to the Board as shown above for 2003 and 2004 does not take into consideration the upstate share of the costs of defeasance of certain Authority bonds. The costs of defeasance were not included in the projected cost of service and regulated rate at the time of rate-setting. Including the effects of the cost of defeasance, the rate per million gallons is $549.32 in 2003 and $560.58 in 2004. The City reserves the right to include such costs in the cost of service and the regulated rate. The basis for these costs is explained in Section 4 of the Report.

(d) The rates shown above for 2005 and 2006 include the costs of defeasance in those years. There were no costs for defeasance in 2007 through 2010.

As illustrated above, the unit rates in Fiscal Years 1997 and 1998 significantly understated the unit cost to the Board of supplying water to customers. This occurred because the unit rates for

1997 and 1998 were based on historical costs and did not reflect the increasing actual cost of service. In order to develop a rate that more appropriately reflected the cost of water supply, the 2000 through 2010 unit rates were developed based on the anticipated cost of service in the upcoming fiscal years.

The actual calculated unit rate for 2009 is lower than the unit rate that was implemented by the Board. The principal reasons for the decline are lower than expected debt service and no capital cash payments of the Authority resulting in a decrease in the cost of service which serves to reduce the unit rate. This report proposes that a credit or "true-up" be applied towards the cost of service in 2011 to reflect the calculated difference between the 2009 actual cost of service and the actual costs recovered which are computed by multiplying the unit rate charged by the Board in 2009 times system-wide water consumption. The calculation of this proposed credit is presented in Section 4.7 of the report.

As of the date of this Report, the table also shows that the calculated 2010 unit rate is expected to lower than the unit rate currently in effect. Among the reasons for the decline in the calculated unit rate for 2010 are estimated debt service and capital cash payments that are lower than previously projected. The Authority has successfully sold bonds and commercial paper in the current fiscal year at average interest rates that are lower than those previously assumed. Although the calculated unit rate for FY 2010 is currently estimated to be lower than the unit rate being charged, the calculated rate is based the estimated annual costs divided by the full-year water consumption estimate that is derived from the 10-year regression. Based on year-to-date water consumption through March 31, 2010, it is anticipated that the actual full-year water demand will be lower than the projected usage based on the 10-year regression. As a result, if the water demand is lower, the unit rate will increase. The actual cost of service and the actual unit rate for the supply of water for 2010 will not be known until after the fall of 2010.

3.0 Cost of Service Methodology

3.1 Overview

This Section of the Report provides a summary of the steps that were followed to calculate the cost of service for water supply. The cost of service is calculated in accordance with the cash basis methodology used by and approved by the NYSDEC in 1972 and 1995. The methodology is also consistent with that used to calculate the regulated rates which were adopted for 1993 through 2010. Pursuant to the Act, the cost of service methodology excludes all capital and operating costs incurred for transmission and distribution mains, repair yards, tunnels, shafts, and related facilities within the City in connection with the distribution and delivery of water within the City. The cost of service takes into account offsetting revenues from hydropower and permit fees.

3.2 Procedures for Calculating the Cost of Service

Several steps are required to calculate the total cost of providing water to upstate customers and the regulated rate. These steps account for the many types of costs incurred by the City in establishing and maintaining reliable sources of drinking water. The approach that is used in this Report, as required by the 1905 Act, specifically excludes costs incurred within the City that are associated with the transmission and distribution of water in the City.

The six (6) steps that were followed in developing the cost of service and the proposed regulated rate for upstate water supply are outlined herein. The first five steps relate to the computation of the cost of service and regulated rate for 2007 through 2009. The sixth step includes the development of the projected cost of service and regulated rates for 2010 (the current year) and 2011. In addition, this Report includes a preliminary projection of the regulated rate for water supply service for the years 2012 through 2014. The projections are preliminary and subject to change. Reductions in system-wide water consumption as well as assumptions concerning increased costs for property taxes, watershed protection, required capital improvements and other factors have been taken into consideration in developing the projected cost of service and rates. Nonetheless, rising commodity prices and other factors affecting operating expenses and capital costs as well as changes in consumption may result in a larger increase in the cost of water supply in future years than is currently reflected in the 2011 projection and the preliminary projections for 2012 through 2014. The water supply system costs, offsetting revenues and related information corresponding to each of the steps can be found in Section 4.0 and the Appendix of this Report.

3.2.1 Step A

The initial step includes the determination of all direct costs and offsetting revenues that relate solely to facilities located north of the City.

The components of this analysis include the following:

1. Other Than Personal Services (OTPS)
2. Debt Service
3. Judgments and Claims
4. Miscellaneous Revenue
5. Personal Services (PS), which include:
   a. Field Personnel
   b. Executive and Administrative Personnel

3.2.2 Step B

The second step includes the calculation of the allocation percentages to be used in Steps C and D. The allocation percentages are based upon personnel headcount, or total salaries or expenses, depending upon which allocation methodology is most appropriate to the costs being allocated. The methodologies used in the allocation process have previously been accepted by the USEPA and the NYSDEC in connection with the federal and state grant program for wastewater treatment facilities. The methodology was also accepted by NYSDEC in its 1995 decision and upheld by the Appellate Division of the Third Department concerning the regulated rates of $137.73 and $158.31 per million gallons for 1993 and 1994, respectively.

3.2.3 Step C

The next step in the cost of service process is to determine the costs of DEP support services and other essential functions that must be allocated to the cost of supplying water. These costs fall into two categories:

1. Personal Services (PS)
2. Other Than Personal Services (OTPS)

The cost of support services and related functions of the DEP must be shared by all customers who benefit from its services. Therefore, the costs must be allocated to facilities located north of the City using the appropriate allocation percentage calculated in Step B.

3.2.4 Step D

The fourth step involves the identification of the City's Central Service costs that must be allocated to the cost of water supply. The City's Central Services provide services and benefits to the water supply system as well as to DEP as a whole and to other City agencies. Therefore, these costs are allocated first among all City departments. The DEP share (calculated using an allocation percentage developed in Step B) is then allocated to facilities located north of the City.

3.2.5 Step E

The total cost of supplying water to both in-City and upstate customers, exclusive of in-City distribution costs, is determined by adding the cost of service elements which are calculated in Steps A, C and D. Dividing the total cost of service by total water consumption determines the unit cost per million gallons (MG) related to the supply of water. The upstate water consumption times the unit cost or regulated rate per MG results in the total costs attributable to upstate customers.

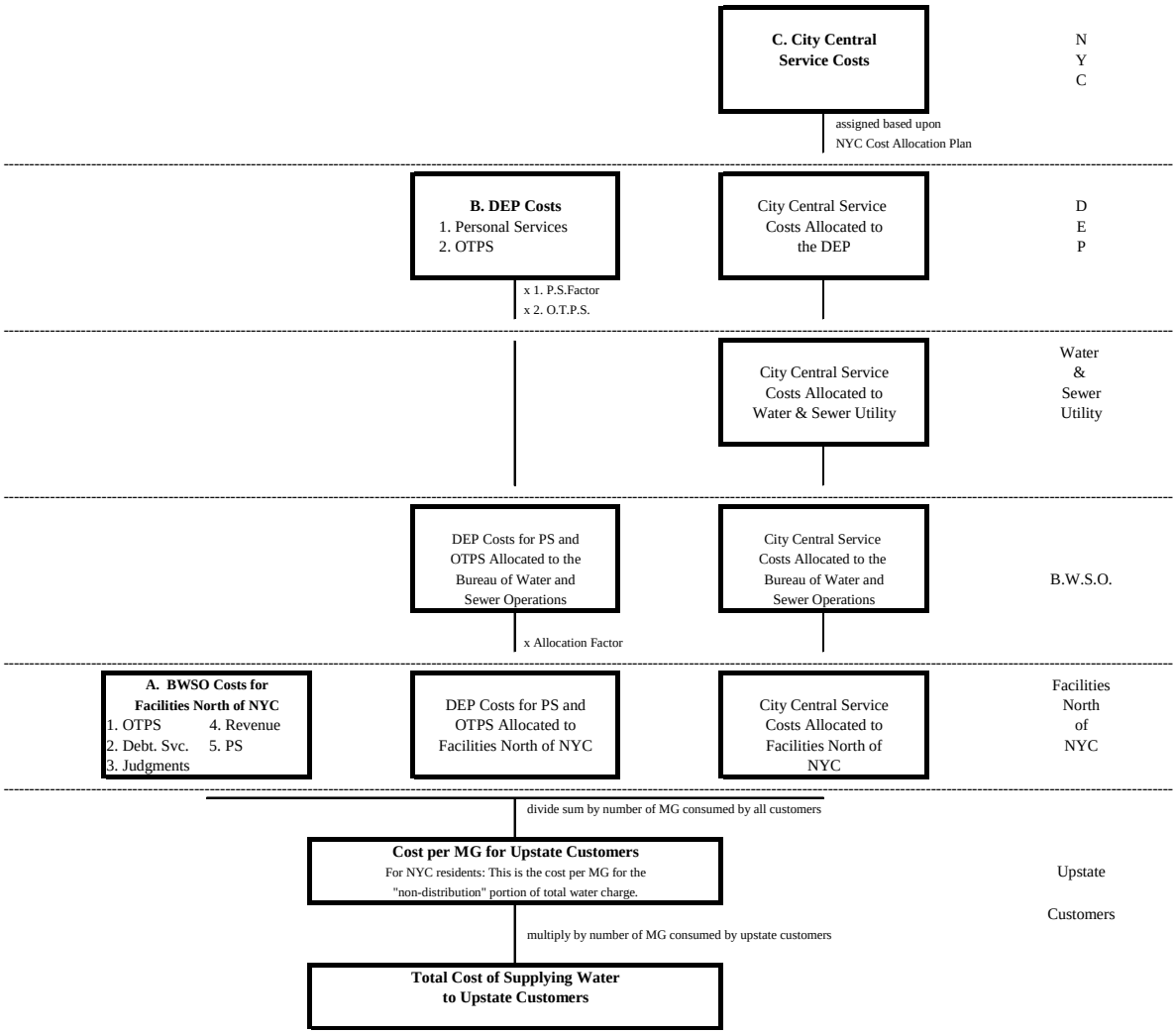
3.2.6 Step F

Steps A through E are primarily used to develop the actual cash basis cost of service for 2007 through 2009. To develop the projected cost of service for 2010 (the current year) and 2011, known debt service costs are added to anticipated future debt service plus anticipated operation and maintenance expenses, less expected offsetting revenues. Projections of future expenses and revenues are based on historical experience as well as known changes in programs and costs that are expected in 2010 and 2011. This is a standard and accepted practice in the industry and is consistent with the methodology used to develop water and sewer rates for in-City customers. The projected cost of service is divided by the estimated water consumption to determine the regulated rate. Step F is carried out simultaneously with the work performed in Steps A through E.

3.2.7 Graphical Overview

Figure 2 on the following page provides a graphical presentation of how various components of the cost of service are allocated in the development of the cost of providing water to upstate customers.

Figure 2 Diagram of Calculation



3.3 Computation of the Regulated Rate

The regulated rate per million gallons of water use is computed on the basis of the total cost of service divided by the total water consumption:

Total Cost of Service *divided by* Total Water Consumption = Unit Cost of Service or Regulated Rate

The costs, and thus the revenue requirements, attributable to upstate customers are computed on the basis of the total annual quantity of water use by upstate customers multiplied by the unit rate per million gallons:

Upstate Consumption *multiplied by* Unit Cost of Service or Regulated Rate = Upstate Cost of Service

The total cost of service for water supply, or revenue requirements, would be allocated between upstate and in-City customers as follows:

Upstate: **Total Cost of Water Supply Service *multiplied by*:** $\frac{\text{Upstate Consumption}}{\text{Total System Consumption}}$

In-City: **Total Cost of Water Supply Service *multiplied by:*** $\frac{\text{In-City Consumption}}{\text{Total System Consumption}}$

3.4 Sources of Data and Basis of Presentation

Information presented in this report was obtained from records of the City. The City utilizes a modified accrual basis of accounting for its costs. Operation and maintenance expense information including cost allocation factors was provided by DEP. Debt service information was obtained from the Authority. Pension and fringe benefit cost factors were provided by the New York City Office of Management and Budget. Water consumption information was provided by DEP.

4.0 Computation of the Cost of Service and the Regulated Rate

4.1 Introduction

This Section of the Report describes the individual elements of the cost of service and presents the computed cost of service and regulated rate for 2007 through 2009. The 2009 Fiscal Year is the most recent year for which complete information is available. The anticipated cost of service for 2010 and 2011 is presented using the following components of cost: actual debt service for these years, the anticipated debt service from additional bonds of the Authority, and projections of operating expenses and all other components of the cost of service. Additional bonds reflect the expected issuance of debt by the Authority in 2010 and 2011, the proceeds of which will be used, in part, to fund capital improvements in the water supply system. The projected debt service reflects the expected portion of the bond proceeds that will be used for the water supply system. The findings of each significant step of the analysis are presented in this Section and the basis for projecting the cost of service for 2010 and 2011 is also provided. Where appropriate (e.g., chemical expenses, property taxes, and debt service), we have normalized the cost of service to take into consideration one-time or recurring increases or decreases in costs. Supporting tables for each step of the analysis are referenced in this Section and presented in detail in the Appendix to the Report.

4.2 Bureau of Water Supply Costs Related to Facilities Located North of the City - Step A

The Bureau of Water Supply (the "Bureau" or "BWS") of DEP has the responsibility to operate and maintain the water supply system of the City. This responsibility also includes the development and implementation of capital improvements to the system so that a reliable supply of quality water can be maintained for customers both within the City and in upstate communities.

The Bureau carries out its water supply responsibilities through personnel and equipment located at facilities throughout the watershed. Bureau personnel include engineers, laboratory technicians, security personnel, water quality experts, and management and support personnel.

The vast majority of the water supply costs presented in this Report relate solely to facilities located north of the City. In the subsequent parts of this Section, additional Department and City costs will be allocated to facilities located north of the City.

The individual categories of costs that relate solely to facilities located north of the City are listed below:

1. Other Than Personal Services (OTPS)
2. Debt Service
3. Judgments and Claims
4. Miscellaneous Revenue
5. Personal Services (PS)
   a. Field Worker Personnel
   b. Executive and Administrative Personnel

Each of the above categories is discussed further in the paragraphs that follow in this section of the report.

4.2.1 Other Than Personal Services Costs

By definition, Other Than Personal Services (OTPS) costs include all operating expenses other than labor including, but not limited to: supplies, equipment, contracted maintenance and repairs, power, chemicals, real estate taxes paid to upstate communities and other purchased goods and services. With the exception of 2004 when expenses relating to the Watershed Memorandum of Agreement declined significantly, direct OTPS costs have steadily increased over the years, as illustrated below:

Fiscal Year	OTPS Expense ($)	Annual Increase (%)
1992	54,391,121	
1993	57,132,786	5.0%
1994	59,533,840	4.2%
1995	64,767,041	8.8%
1996	69,176,240	6.8%
1997	81,763,877	18.2%
1998	83,248,590	1.8%
1999	85,308,061	2.5%
2000	96,400,404	13.0%
2001	100,559,467	4.3%
2002	105,285,931	4.7%
2003	112,322,431	6.7%
2004	104,373,092	-7.1%
2005	118,531,353	13.6%
2006	133,134,219	12.3%
2007	138,068,007	3.7%
2008	150,982,178	9.4%
2009	171,280,256	13.4%

The average annual increase from 1992 to 2009 is 7%. The expenses in each of the above years include the estimated costs associated with Hillview Reservoir, which were approved by NYSDEC for inclusion in the cost of service in April 1997. In 1997, OTPS costs increased due to the beginning of the enhancements to the watershed protection program. Such enhancements were required pursuant to the Watershed Memorandum of Agreement between the City and upstate communities to protect water quality throughout the watershed. As noted previously, the decline in expenses in 2004 was primarily due to the completion of certain expenses related to the Watershed Memorandum of Agreement. The rate of increase from 2007 to 2008 was 9.4% due primarily to increases in property taxes, chemicals, fuels and supplies and materials compared to prior years. The increase in OTPS expenses between 2008 and 2009 is 13.4% and is attributable to significant increases in chemical prices (for the watershed in general and Hillview Reservoir in particular) as well as increases in property taxes. Property taxes have increased steadily each year and constituted about 67% of total OTPS costs in 2009. Annual increases in property tax rates are the principal cause of increasing property taxes. To protect water quality in the watershed, the City is required to significantly increase the number of acres of land that are either owned by the City or otherwise restricted in terms of land use. The annual increase in OTPS expenses is expected to continue in the future due to rising property taxes and increases in other costs.

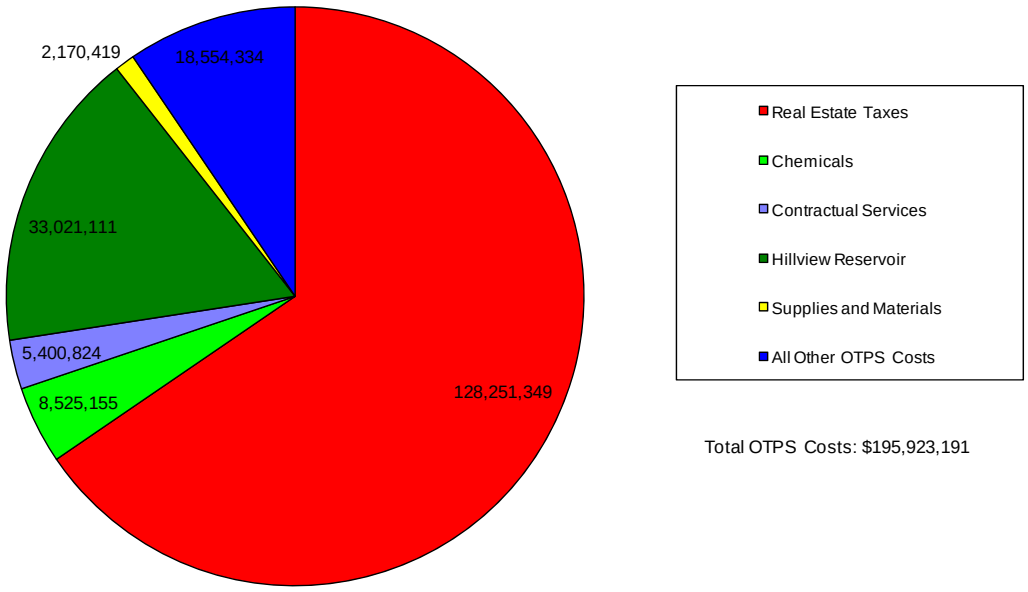
It is important to note that property taxes associated with the UV Facility in 2010 and future years are currently included in the line item for the UV Facility, not in the line item for real estate taxes. Thus, total taxes are higher than the amounts shown in the real estate tax line item in 2010 and future years. Section 4.2.1.7 provides additional information concerning the UV Facility.

Recent expenses and current and ongoing programs were considered in estimating the anticipated 2010 and 2011 OTPS expenses. The findings of the analysis are presented in the following categories:

1. Real Estate Taxes
2. Chemicals
3. Hillview Reservoir
4. Contractual Services
5. Rate Studies
6. Other OTPS Expenses
7. UV Facility

The analysis considered the historical experience in each of these categories together with current and expected future changes affecting these categories of costs so that such costs would be normalized to exclude unusual increases or decreases that may have affected recent experience. The expected 2011 components of OTPS costs are summarized in Figure 3 on the following page.

Figure 3 Projected Fiscal Year 2011 Other Than Personal Services Costs



4.2.1.1 Real Estate Taxes

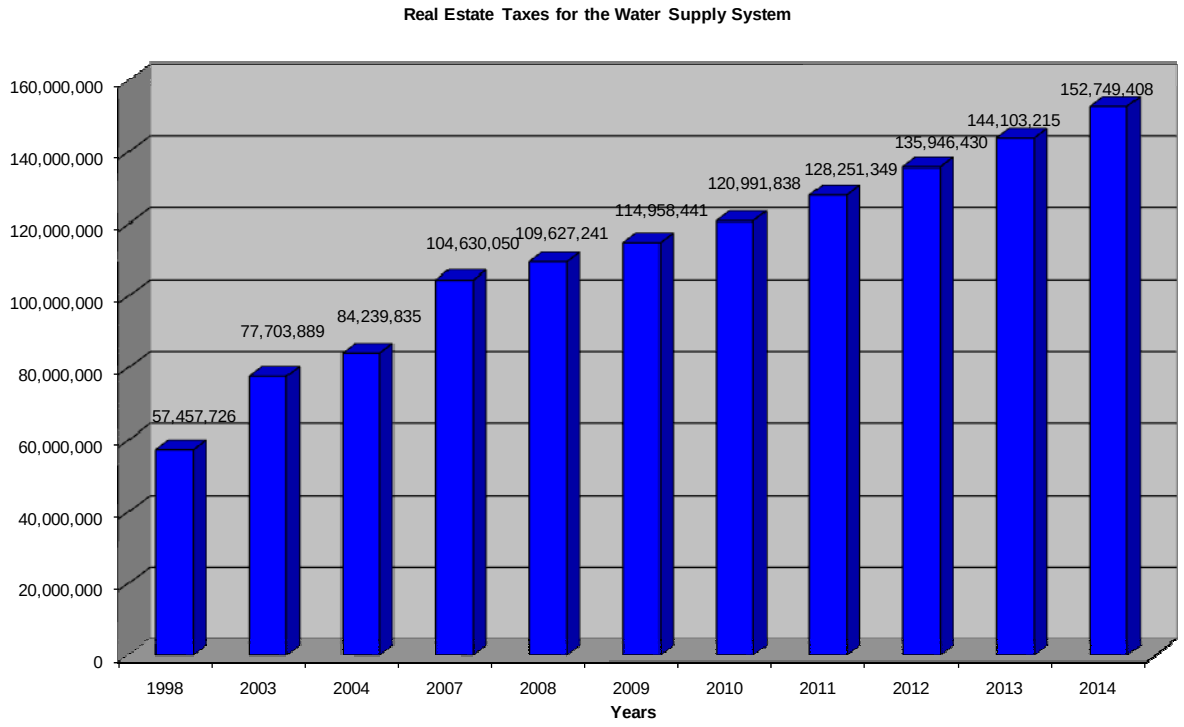
Real estate taxes have increased at the average annual rate of about 5.6% from 1992 to 2009. The rate of increase from 2004 to 2009 is higher, averaging 6.4% per year. Historical property tax payments are shown in the table below.

Fiscal Year	Property Tax Expense ($)	Annual Increase (%)
1992	45,523,172	
1993	47,168,247	3.6%
1994	49,778,593	5.5%
1995	52,415,756	5.3%
1996	53,669,656	2.4%
1997	54,995,223	2.5%
1998	57,165,589	3.9%
1999	60,277,681	5.4%
2000	63,127,985	4.7%
2001	66,579,445	5.5%
2002	70,729,378	6.2%
2003	77,703,889	9.9%
2004	84,239,835	8.4%
2005	91,223,381	8.3%
2006	101,209,162	10.9%
2007	104,630,050	3.4%
2008	109,627,241	4.8%
2009	114,958,441	4.9%

The increase in recent years reflects a combination of both increases in the local tax rates applied to water supply properties as well as taxes on newly purchased properties. Data prepared by DEP show that that the annual increases in the real estate tax rates are the primary cause of increasing property taxes.

The projected real estate taxes for 2010 and 2011 are $121.0 million and $128.2 million, respectively. Both estimates reflect an allowance for the expected increases in property tax rates as well as the taxes on newly-purchased land. A 6.0% annual rate of increase in the property taxes is assumed for 2012 through 2014. While the current rate adoption by the Board will only address 2011, projections for 2012 through 2014 are shown for illustrative purposes. The actual and estimated real estate taxes payable to upstate communities for watershed properties are summarized below.

Figure 4 Real Estate Taxes



Real Estate Taxes for the years 2009 through 2013 are projected using assumed increases in tax rates and taxes on newly-purchased properties.

4.2.1.2 Chemicals

Several chemicals are used by the City to treat the water supply, including chlorine that is used for disinfection and other purposes. This part of the Report addresses the chemicals that are used in the watershed except for the chemicals used at the Hillview Reservoir, which are presented separately. As illustrated by the following summary table, the total cost of chemicals can vary from year to year.

Fiscal Year	Chemical Costs ($)	Annual Rate of Change (%)	Chemical Costs as a % of Total OTPS
1992	2,625,000		
1993	2,351,440	-10.4%	4.1%
1994	2,766,850	17.7%	4.6%
1995	2,975,135	7.5%	4.6%
1996	3,463,427	16.4%	5.0%
1997	2,443,920	-29.4%	3.0%
1998	2,246,704	-8.1%	2.7%
1999	1,927,052	-14.2%	2.3%
2000	1,805,752	-6.3%	1.9%
2001	2,160,223	19.6%	2.1%
2002	2,087,173	-3.4%	2.0%
2003	1,716,477	-17.8%	1.5%
2004	2,047,475	19.3%	2.0%
2005	2,220,258	8.4%	1.9%
2006	3,290,291	48.2%	2.8%
2007	3,462,379	5.2%	2.5%
2008	5,344,146	54.3%	3.5%
2009	8,035,776	50.4%	4.7%

The cost of chemicals for water supply in a given year is dependent upon both the quantities of chemicals that must be used as well as the unit price per ton. Significant increases in prices for fluoride and other chemicals were experienced in FY 2008 and in FY 2009. The quantities of chemicals used and the applicable unit prices in recent years are summarized in the following tables.

Historical Chemical Use

Fiscal Year	Chlorine (Lbs)	Fluoride (Tons)
1992	3,313	2,741
1993	2,858	2,605
1994	3,192	2,696
1995	3,326	2,642
1996	4,601	2,646
1997	3,960	2,610
1998	3,245	2,516
1999	3,011	2,532
2000	2,847	2,496
2001	2,939	2,331
2002	3,325	2,178
2003	3,146	1,577
2004	3,109	1,451
2005	2,777	1,892
2006	2,854	1,731
2007	3,149	1,392
2008	3,141	1,940
2009	2,859	2,203

Historical Unit Prices

Fiscal Year	Chlorine ($)[1]/Lb	Fluoride ($)[2]/Ton
1994	176.80, 223.60	797.00
1995	248.20, 327.40	797.00
1996	248.20, 327.40	797.00
1997	278.51	506.14
1998	300.00	506.00
1999	234.00	483.00
2000	233.44	457.25
2001	317.00	457.25
2002	317.00	457.25, 493.76
2003	298.07	493.71
2004	428.07	493.71
2005	448.07	515.81
2006	695.05	796.16, 934.78
2007	686.30	934.78
2008	667.55	1673.92
2009	620.05	2934.78

[1] Chlorine prices for 1994 through 1996 reflect two different delivery zones within the water supply system. Approximately 80% to 90% of all chlorine that was used each year was within the lower priced delivery zone.
[2] Fluoride prices for 2002 and 2006 reflect two different delivery zones within the water supply system.

The assumed rate of increase in chemical costs in 2011 through 2014 is 3% per year. As noted previously, certain chemical costs have increased significantly in the northeast U.S. It is not certain at this time whether prices will stay the same, increase or decline in future periods. Chemical addition that solely benefits in-City customers is excluded from this cost of service analysis.

4.2.1.3 Operating Expenses Associated with Hillview Reservoir

The principal expenses incurred in the operation of Hillview Reservoir are associated with chemical addition and security. Caustic soda is added for water quality purposes to adjust the pH of the water entering Hillview. Orthophosphate is added for lead and copper control. In 2009, the costs for caustic soda and orthophosphate were $7.7 million and $21.9 million, respectively. These costs reflected substantial increases compared to prior years. The competitively bid unit prices for orthophosphate effective June 1st for 2007, 2008 and 2009 were: $1.73 per gallon, $13.13 per gallon and $8.29 per gallon, respectively. The expenses other than labor that are attributable to Hillview Reservoir in Tables 4A and 4B in the Appendix to this Report are exclusive of property taxes which are included in the separate property tax line item that covers all water supply properties.

Chemical costs at Hillview are assumed to decline by $10 million from 2009 to 2010 reflecting an assumption that the new unit prices for chemicals will be lower than the recent prices. Market conditions and upcoming bid prices will dictate the actual prices. All other OTPS expenses are assumed to increase at the rate of 3% per year from 2009 to 2010. OTPS expenses in 2011 through 2014 are assumed to increase at the rate of 3% per year. Future increases in expenses at Hillview could be significantly affected by fluctuations in the price of chemicals, ongoing discussions regarding the potential covering of the Reservoir and other factors.

Labor expenses include day-to-day operations, maintenance, and security. Security costs, in terms of both labor and non-labor expenses, have risen significantly in recent years as initiatives to protect the water supply system have been implemented. In 2011 through 2014, salary and wage costs at Hillview are assumed to increase at the rate of 3% annually. Pension and fringe benefit rates that are applied to salaries and wages are expected to change in each year as summarized in Section 4.2.5.

4.2.1.4 Contractual Services

The City was required by the Watershed Memorandum of Agreement to fund a number of capital projects and operating programs to support the protection of the watershed. Programs to be paid from operating funds began in 1997 and most of the operating expenses were classified under the Contractual Services line item. Beginning in 2004 the expenses related to the Watershed Memorandum of Agreement declined as the programs called for in the Agreement ended or were scaled down. The continuing level future expenses for Agreement-related programs is reflected in the contractual services line item of the projected OTPS expenses. Beginning in 2005, Contractual Services also included certain costs associated with the development and

implementation of environmental health and safety programs for the water supply system. Contractual Services expenses are assumed to increase at the rate of 3% annually.

4.2.1.5 Rate Studies

The annual costs associated with performing rate studies and related work for establishing the regulated rate for upstate customers, including, but not limited to, the distribution of documents, posting of notices and the rate hearing, are estimated at $75,000 per year.

4.2.1.6 Other OTPS Expenses

Other categories of expense are assumed to increase at the rate of 3% per year in 2010 through 2014. This rate of increase is consistent with the 3% annual increase in such costs which is assumed by the Authority and the Board in their forecasts of future expenses other than property taxes.

4.2.1.7 UV Facility

It is currently anticipated that the UV Facility will be completed by October 29, 2012 (Fiscal Year 2013). DEP will begin to pay property taxes for the UV Facility in 2010; such taxes are expected to increase each year until the Facility is complete. When fully operational, property taxes are assumed to be more than 50% of the total annual operating expenses for the UV Facility. OTPS expenses other than property taxes are expected to be incurred beginning in 2012.

4.2.2 Debt Service/Capital Improvement Financing

Capital improvements to the System are financed principally through the proceeds from the sale of bonds. A portion of the capital improvements are financed on a cash basis using funds from revenues of the System. This part of the Report describes the methodology that is used to develop the annual debt service requirements (i.e., the principal and interest payments on bonds) of the water supply system as well as the annual amounts raised in cash for use in the CIP. Table 5A in the Appendix provides a summary of the debt service/cash-financed construction/bond defeasance payments for fiscal years 2007 through 2009, as well as the projected amounts for 2010 through 2014. The debt service/cash-financed construction amounts are then reflected in Line 2 of Tables 1A and 1B which summarize the annual cost of water supply service and the regulated rate. Line 3 of Tables 1A and 1B presents the water supply portion of the amounts used (if any) to defease Authority bonds. The costs and benefits of defeasance are described herein.

4.2.2.1 Historical Investments in the Water System

Prior to the formation of the Authority, the development, expansion and upgrading of the Water System was carried out by the City with funds that were typically provided by the proceeds of General Obligation (G.O.) bonds issued by the City. The last major reservoir was completed in 1967, nearly 40 years ago. Within the last twenty years, over $2 billion in investments have been made throughout the System principally through the proceeds of bonds issued by the

Authority. The capital costs are reflected in debt service on bonds of the Authority and NYSEFC which is a component of the cost of service and regulated rate.

Investments that are either complete or in progress include improvements to: dams; reservoirs; reservoir roads and bridges; City-owned and non-City wastewater treatment plants; agricultural programs (i.e., pollution prevention for watershed protection); security; the UV Facility; and other capital needs including the Rondout-West Branch Tunnel investigations. Costs for the Croton filtration plant prior to the approval of the in-City site are included in the water supply cost of service and are allocated to all water supply customers; costs incurred following the approval of the site are not included. Land purchases, improvements to wastewater treatment plants and other capital investments and operating expenses have been instrumental in maintaining the quality and reliability of the System including the avoidance of filtration for the Catskill and Delaware Systems.

4.2.2.2 Debt Service Related to the Water System

Authority Bonds

Debt service on Authority bonds is computed based on the total net debt service payable for the Water and Wastewater System of the City in each year times the percentage attributable to the water supply portion of the capital improvements that have historically been financed with the proceeds of Authority and NYSEFC bonds. This approach provides benefits to all ratepayers resulting from the refundings of previously-issued bonds that were made to take advantage of the favorable interest rate environment in recent years. It also incorporates the impacts of the defeasance of certain future debt service obligations of the Authority.

The methodology for allocating debt service to the System begins with the calculation of the percentage of the capital investments since 1986 that are attributable to the System versus other components of the water and sewer system of the City. Since improvements have been financed with the proceeds of both Authority bonds and bonds issued by NYSEFC, Tables 5C and 5D in the Appendix were prepared to illustrate the estimated proceeds of each bond issue and the upstate portion of such proceeds for Authority and EFC bonds, respectively. Since the Water Supply System percentage share will change from year to year, a percentage is computed in each year through 2010. The computed percentage for 2011 through 2014 is preliminary and subject to change since not all proceeds of bonds issued in 2010 have been spent at the time of this report.

Table 5B illustrates the current projections of debt service on outstanding bonds and anticipated future bonds of the Authority and NYSEFC for the Projection Period. Authority debt service is shown as First Resolution and Second Resolution. The Second Resolution debt of the Authority is subordinate to the First Resolution debt of the Authority. Table 5B also presents the estimated interest on Commercial Paper shown as Interest on Short-Term Debt. The Authority initially finances capital improvements through the proceeds of short-term Commercial Paper sales and then redeems the Commercial Paper with the proceeds of long-term bonds. Interest rates on Commercial Paper and the variable rate debt of the Authority have been low in recent periods

compared to historical conditions resulting in actual interest costs that are lower than projections. There is no assurance that such market conditions will continue in future years. As a result, projections of future debt service payments assume that interest rates on Commercial Paper, variable rate debt and future fixed rate debt will be higher than current market rates.

Cash-financed construction is discussed in 4.2.2.3. Interest earnings on available funds (the Debt Service Fund, the Debt Service Reserve Fund, the Construction Fund and the Subordinate Debt Service Fund) together with Authority expenses related to debt collectively form a net offset to a portion of the debt service. Interest earnings have generally declined in recent years due to conditions in the financial markets that result in relatively low rates of interest earnings on secure investments. Authority expenses related to debt include administrative expenses charged by NYSEFC for the low-interest loan program, liquidity fees and other expenses related to variable rate debt, swap payments, arbitrage rebate payments and other expenses.

The water supply share of debt service and net offsets are computed by multiplying the System-wide totals for each category times the applicable percentage in each year to reflect, as applicable: 1) water supply capital costs funded through Authority bond proceeds as a percentage of total capital costs funded through Authority bond proceeds; 2) water supply capital costs funded through NYSEFC bond proceeds as a percentage of total capital costs funded through NYSEFC bond proceeds; and 3) water supply capital costs funded through both NYSEFC and Authority bond proceeds as a percentage of total capital costs funded through NYSEFC and Authority bond proceeds.

General Obligation (G.O.) Bonds

Table 5E in the Appendix illustrates the estimated annual principal and interest payments for 2007 through 2008 on general obligation bonds of the City that were issued from 1981 through 1985 and whose proceeds were used, in part, for upstate facilities.

The methodology for computing debt service on outstanding G.O. bonds of the City issued during the above period remains the same as used in prior reports regarding the cost of water supply service and the regulated rate. The debt service figures used in computing the cost of service were based on an analysis of each outstanding G.O. bond issue of the City. Within the total debt service for each G.O. bond issue, there are schedules of maturity sub-divided according to 'periods of probable usefulness' (PPU), which are set by local finance law. These PPU schedules allow bond proceeds to fund projects with differing terms of usefulness in a fair and equitable manner. In this way, projects with longer life spans would have debt repayment schedules over a longer time period that reflected their longer expected life, whereas proceeds used for short-term projects would be repaid in a shorter duration of time. Water supply projects followed the debt service schedule of the longest PPU contained with each series of bonds issued by the City.

To calculate the debt service for G.O. bonds, all expenditures related to facilities north of the City are identified. These expenditures are divided by the total amount of principal contained

within the long-term PPU schedule of the bond issue. The resulting ratio is multiplied by the annual debt service for that particular PPU schedule to arrive at debt service attributable to water supply facilities. The impact of the refunding of bonds on annual debt service has not been factored into the calculation of the annual debt service amounts for the City G.O. debt from 1981 to 1985. Since the remaining G.O. debt service is relatively small and refundings of G.O. bonds resulted in both a reduction in debt service and an extension of the term for repaying debt service, the estimated original amortization schedule has been maintained for purposes of calculating the water supply cost of service and regulated rate. No further payments towards G.O. debt service are assumed after 2008.

4.2.2.3 Cash-Financed Construction

Portions of the capital improvements to the Water System may be financed through available cash in lieu of the proceeds of Authority revenue bonds or NYSEFC bonds. The Authority deposited $20 million for cash-financed construction needs in 2007. No cash-financed construction deposits were made in 2008 and 2009. No cash-financed construction deposits are expected to be made in 2010. The deposits for cash-financed construction in future years are currently expected to be $80 million in 2011, $125 million in 2012, $150 million in 2013 and $175 million in 2014. Line 8 of Table 5B reflects the cash-financed capital assumptions identified above. The projected amounts for each year may increase or decrease in the future. Line 18 of Table 5B shows the upstate water supply share of such costs. The upstate share is based on the total cash-financed construction amount in each year times the Water System capital costs funded through both NYSEFC and Authority bond proceeds as a percentage of total capital costs funded through NYSEFC and Authority bond proceeds. The Board and the Authority may also decide to instead use the cash-financed allowance for the defeasance of outstanding bonds with a resulting reduction in future debt service based on the effects of the defeasance.

4.2.2.4 Cash Used for the Defeasance of Bonds

In 2003, 2004 and 2006, cash from the water and sewer system was used to pay future debt service in advance of the years in which such debt service was payable. The debt service on outstanding bonds of the Authority as illustrated in Table 5B in the Appendix is net of any prepayment amounts. Since all water supply customers share in the benefit of lower future debt service due to the defeasance, all water supply customers should share in the costs of the defeasance. No deposits from System cash were made for defeasance in 2007, 2008 or 2009 so there are no costs to be allocated to the upstate water supply system share for these years. At the time of this Report, there were no plans for the defeasance of additional debt in 2010 or during the period of 2011 through 2014. However, as noted in 4.2.2.3, the Board and Authority may decide in the future to use part or all of the planned Cash-Financed Construction amounts for the defeasance of debt.

4.2.2.5 Ongoing and Future Capital Improvements

Ongoing capital improvements in the System to be funded through the proceeds of bonds in 2010 through 2014 include: rehabilitation of the Gilboa Dam; the UV Facility; Hillview cover-related

work; purchases of land; upgrades to wastewater treatment plants in the watershed; reconstruction of other water supply infrastructure; the Dependability Program; filtration avoidance measures north of the City; and other projects and programs.

4.2.2.6 Capital Cost Summary

There will be an overall net increase in debt service/capital costs in the upcoming years to reflect the debt service for capital improvements being funded through the proceeds of Authority bonds and cash-financed construction. Table 5A summarizes the historical and expected future annual costs attributable to debt service and cash-financed construction.

4.2.3 Judgments and Claims

Judgments and claims represent the amount of judgments rendered against the System or claims paid by the City for water supply-related matters in upstate areas. Actual and projected judgments and claims are illustrated in Table 6 in the Appendix. There are years in which no judgments or claims were paid in the water supply area. Payments made in other years have ranged from $1,834 in 1999 to $536,000 in 1997. The payment amounts in 2008 and in 2009 were $3,695 and $26,925, respectively. A payment of about $5.5 million was made in 2007 to settle litigation relating to the Shandaken Tunnel. There may be additional expenses related to this matter. The cost of service analysis assumes that the fifteen year (1995 through 2009) average of $430,669 will provide an allowance for judgments and claims in future years.

4.2.4 Miscellaneous Revenue

This category includes revenues received from upstate sources that can be used to offset the total cost of supplying water to both in-City and upstate customers. As indicated in Table 7 in the Appendix, miscellaneous revenues are derived from hydropower generated at upstate dams and from miscellaneous charges for permit use and related services provided in the water supply system. In addition, miscellaneous revenues can include tax refunds when such refunds are made.

Miscellaneous revenues have been inconsistent over the years, declining in some years and increasing in others. Hydropower revenues are shown for 2004 through 2009. Hydropower revenues in future years may differ from the historical experience due to the expiration of previous contracts between DEP and hydropower system operators. The City took ownership of the Grahamsville and Neversink hydroelectric facilities in October 2006 which resulted in an overall increase in annual revenues (compared to historical experience) as well as increased costs for capital improvements and operation and maintenance expenses including property taxes. The City also receives a relatively small amount of revenues from the operator of the West Delaware hydroelectric facility. No net revenues are considered in the calculations for the Ashokan and Kensico facilities because no net revenues are actually expected to be received by the City. The estimated net revenues from hydropower facilities are presented in Table 14 of this Report. In 2010 and 2011, it is expected that such net revenues will be about $6.2 million and $6.3 million, respectively, which, together with other miscellaneous revenues, will be applied as a credit towards the cost of water supply service.

For purposes of estimating future miscellaneous revenues during the Projection Period, the fifteen-year average (1995 through 2009) of permit/services revenues has been used. DEP received tax refunds in 2009 but no refunds were received in the previous four years as illustrated in Table 7. The projections assume no refunds in future years at this time. Table 7 summarizes both the historical and projected miscellaneous revenues for the water supply system.

4.2.5 Personal Service Costs

Personal services expenses directly allocable to water supply services are shown in Tables 8 and 9 of the Appendix. These expenses represent salary, pension, and fringe benefit costs associated with all BWS field personnel working in water supply facilities located north of the City as well as support and administrative personnel. Field personnel, for purposes of this report, are defined as DEP personnel with non-supervisory or non-management titles, working directly with the water supply system. Field personnel thus do not include personnel classified as management and/or administrative support. Irrespective of the "field" or "administrative support" designation, these costs are all entirely related to water supply. The methodology for classifying personnel between field personnel and support/administrative categories of cost is consistent with the City's indirect cost plan for federal and state grant programs. Prior indirect cost plans of the City which use this methodology have been approved by the NYSDEC and the federal government. Personal Services costs in Tables 8 and 9 are categorized based on location. The categories vary somewhat from previous year reports as locations have been consolidated or eliminated from a budgetary perspective. This does not necessarily indicate a physical change in location of the associated salaries.

The source documents for the above referenced costs are DEP records which identified salary and related costs by employee name and work location. Pension and fringe benefit factors reflect city-wide percentages and were computed at 35% in 2007, 45% in 2008 and 51% of

direct salary and wages in 2009. Based on recent analyses prepared by the City, the pension and fringe benefit rate for 2010 is expected to be 49% and the rate for 2011 is assumed to decline to 30%. The assumed rate for 2012 through 2014 is 40% of direct salary and wages. Pension and fringe benefit rates (which are applied to salary and wage expenses) are expected to change as follows:

The preceding pension and fringe benefit rates are applied to all projected labor costs related to the supply of water. The projected labor costs for 2010 through 2014 incorporate the projected and assumed changes in the pension and fringe benefit rate together with a 3% per year increase in salary and wage costs.

4.3 Calculation of Allocation Percentages - Step B

The remaining elements of the cost of service, i.e., those not directly or fully allocable to facilities north of the City, must undergo one or a series of allocations before an appropriate assignment of costs can be made. Accordingly, allocation percentages are developed for the purpose of apportioning a fair share of costs incurred by one bureau, unit or location to the benefiting entity. For example, DEP incurs many costs in support of the BWS. The DEP cost burden must then be shared by the BWS through the use of an allocation percentage. The allocation factors presented in Table 10 specifically exclude employees working within the City in the wastewater system. The computation of the allocation percentages used in this report is presented in Table 10 of the Appendix.

4.4 Allocation of Department of Environmental Protection Costs - Step C

Expenses of DEP that are covered by Step C represent personnel and other expenditures of the Department that are allocable to management, administration and support services needed to operate and maintain the water supply facilities located north of the City. Again, City water distribution system costs are specifically excluded.

Table 11 in the Appendix illustrates allocated personal services costs, while Table 12 presents the allocation of a portion of DEP OTPS costs to facilities north of the City. Examples of the

Pension/Fringe Benefit Rates (as a % of Salary & Wage $)

Year	Rate
2009	51%
2010	49%
2011	30%
2012-4	40%

services provided include motor vehicles, garage facilities, data processing and personnel recruiting and management. The total costs to be allocated are multiplied by headcount allocation percentages to obtain the amount that may be attributed to water supply within the

BWS. The amounts attributable to water supply are then subject to an allocation percentage to relate the costs to facilities located north of the City.

Allocated DEP personal services costs in 2011 through 2014 reflect the same assumptions identified in 4.2.5. OTPS costs are assumed to increase at an annual rate of 3%.

4.5 Allocation of City Central Service Costs - Step D

The City incurs costs that must be distributed among all of its operating entities. Such costs include planning, budgeting, accounting, purchasing, legal services and other related activities. A cost allocation plan is developed to distribute the City-wide costs. The plan is subject to review by the federal government in connection with federal aid received by the City. After the City-wide allocation process, the DEP portion of the City's costs is divided further between non-utility and water and sewer utility components. The water and sewer utility-related costs are then distributed among the various Department water and sewer functions using head count allocation percentages. The BWS is one of the functions to which costs are allocated. This cost is then further allocated to relate to facilities located north of New York City. The allocated Central Service costs were $1,807,764 in 2009. Overall City support service costs to DEP are expected to be relatively constant in future years. Thus, such costs attributable to water supply are assumed to be $1,807,764 in 2010 and each year thereafter.

4.6 Cost of Service - Step E

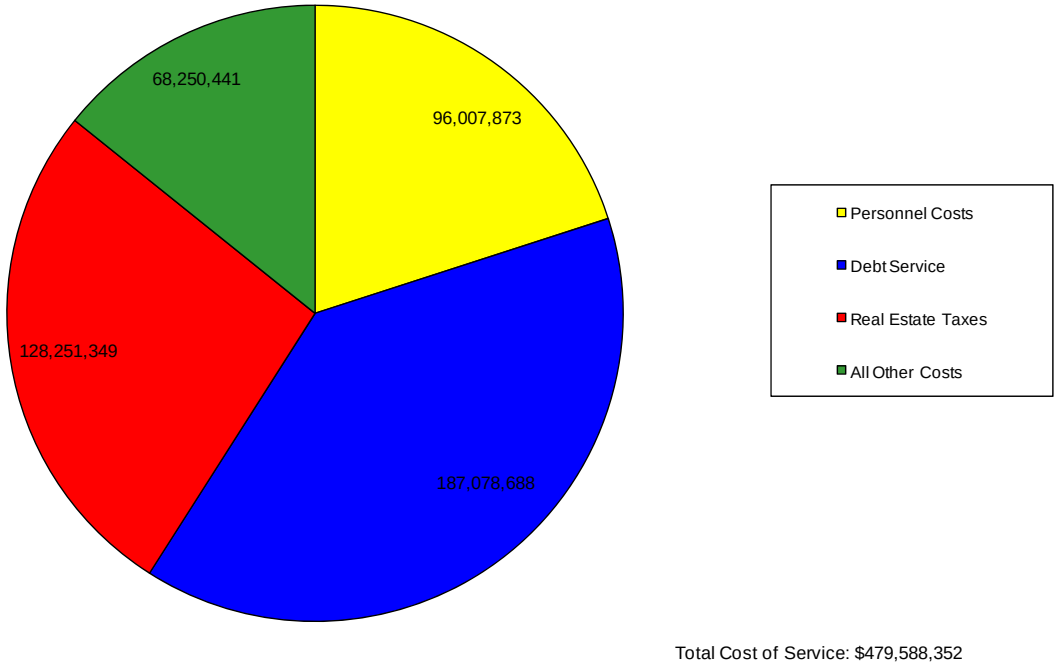
The calculations of the total cost of water supply and the cost of water supply attributable to upstate customers are presented for 2007 through 2009 in Table 1A and for 2009 through 2014 in Table 1B. Additional tables are referenced to support the various categories of costs and offsetting revenues. These additional tables provide a detailed breakdown of the components of each step of the cost of service analysis and are included in the Appendix.

The total cost of water supply as presented in Table 1B is $367,238,738 for 2010 and $472,271,930, for 2011. These amounts include the effects of the proposed reconciliation for 2008 of $42,893,777 that is credited to 2010 and the proposed reconciliation of $7,316,421 for 2009 which is credited to 2011. Of the total cost of service amount, $303,856,883 in 2010 and $383,001,880 in 2011, or about 74% and 80% (excluding the effects of the cost reconciliation), respectively, of the total in each year, is for debt service/capital costs and direct out-of-pocket expenses (other than personal services costs) associated with operating and maintaining the water supply facilities located north of the City. As illustrated in Table 4B, the largest item of expense for the supply of water is real estate taxes paid to upstate communities for watershed properties. Excluding the proposed reconciliations, upstate taxes will represent approximately 30% of all water supply costs in 2010 and 27% of such costs in 2011. Direct salary, pension costs and fringe benefits for personnel directly and indirectly related to the water supply facilities located north of the City account for about 24% of all costs excluding the proposed

reconciliation in 2010 and 18% of costs in 2011. The remaining costs include allocated management, administrative and support services.

The chart on the following page illustrates the breakdown of the total cost of service for the 2011 rate year.

Figure 5 Projected Fiscal Year 2011 Cost of Service Components



Total Cost of Service: $479,588,352

4.7 Calculation of the Regulated Rate - Step F

Table 1B presents the calculation of the projected regulated rate and upstate cost of service. The regulated rate per million gallons of water use is computed by dividing the total cost of service net of the reconciliation for 2009, shown on Line 15 of Table 1B, by total water consumption shown on Line 16.

At the direction of the Board, the calculation of the FY 2010 cost of service included a credit which reflected the difference between the cost of service actually recovered in 2008 based on the rate in effect and the quantity of water consumed and the actual 2008 cost of service based on final actual costs and actual consumption A similar credit is proposed for consideration by the Board for 2009. The calculation of the proposed 2009 credit is shown below (figures adjusted for rounding).

FY 2009 Unit Rate Billed	$	900.31
Actual Consumption		420,438
Rate X Consumption	$	378,524,626
Actual Cost of Service	$	371,208,204
Difference	$	7,316,421

As shown above, the calculated credit is $7,316,421. It is proposed that this credit be applied to the calculated cost of service for FY 2011 resulting in a lower unit rate than would otherwise be necessary if the rate were based solely on the estimated FY 2011 cost of service.

A reconciliation of the prior year projected and actual costs of service, consumption and rates is proposed with the resulting credit or additional charge for the recently completed year being applied towards the cost of service for the upcoming rate year. Given the recent variations in financing and commodities costs as well as significant changes in water consumption, this "true-up" approach is intended to ensure that both upstate and in-City customers pay their appropriate shares of the cost of water supply service. In future years, it is possible that such a true-up may show an under-recovery of prior year costs and the Consultant will propose that the shortfall in prior year cost recovery be added to the cost of service in such an upcoming year.

After taking into account the reconciliation, the resulting unit rate, shown on Line 17, is $1,149.72 per MG in 2011.

The cost of service attributable to upstate customers is calculated by multiplying the unit rate by the average annual upstate water consumption shown on Line 18 of Table 1B. The resulting upstate cost is approximately $47.6 million for fiscal year 2011. The remaining cost of water supply, approximately $424.7 million would be recoverable from in-City water customers through rates and charges.

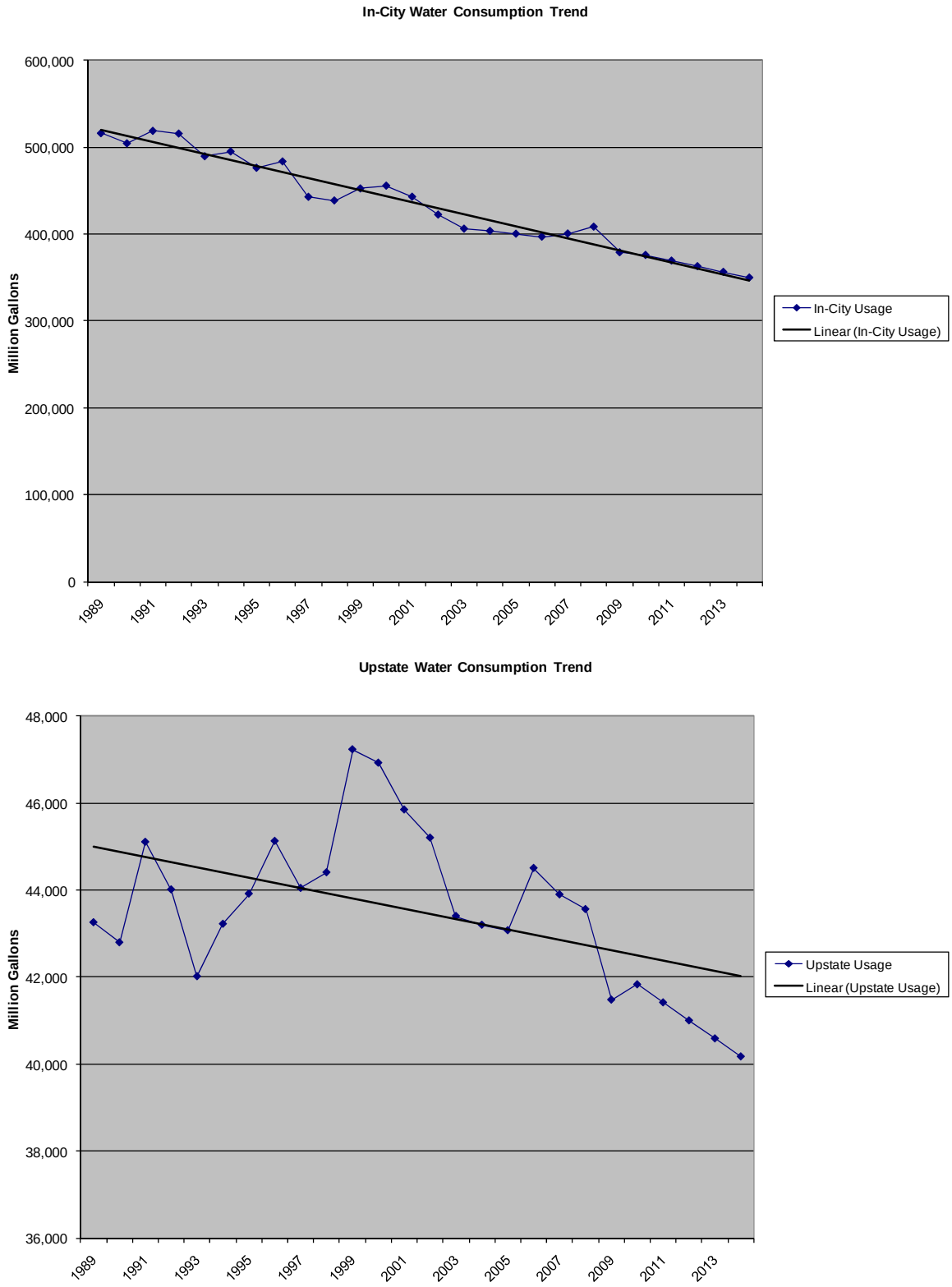
The water consumption used in calculating the regulated rate is based on a calculated decline in demand based on the results of a regression analysis. The regression analysis was requested by upstate customers in the 1990s. Water consumption data is presented in Table 13 of the Appendix. The table presents water consumption data beginning in 1985. However, given the many changes that have occurred due to metering within the City, the availability of water conserving fixtures and other factors, a 10-year regression analysis is used in estimating future water demand by both in-City and upstate customers. The results of the regression analysis show a gradually declining annual consumption by both in-City and upstate customers. The projected system-wide demand is used in developing the projected unit rate.

The results of the analyses provide an anticipated water consumption of 417,695 MG in 2010 and 410,771 MG in 2011. The upstate share of total water consumption using the regression analysis is estimated to be 41,829 MG in 2010 and 41,415 MG in 2011. On the following page, a line graph illustrates the projected consumption for both in-City and upstate customers.

Water consumption was lower than expected in 2009 and was one of the factors that had the effect of increasing the actual unit rate in 2009. The 2010 year-to-date in-City consumption through March 31, 2010 has declined about 4.2% from the usage for the same time period in 2009. The 2010 year-to-date consumption through February 28, 2010 for upstate customers has declined about 6.5% from the usage for the same time period in 2009. Thus, although the preliminary computation of the unit rate for 2010 shows a lower amount than the rate being charged, the actual rate for 2010 may increase from the preliminary computation because of the continuing reduction in water consumption.

Although the rate of decline in water use in 2010 (compared to 2009) has slowed significantly in recent months, it is likely that water consumption in 2010 and 2011 will be less than the current projection because of the 2010 year-to-date results. .

Figure 6 Comparison of Water System Consumption



4.8 Additional Issues Relating to the Cost of Service and the Regulated Rate

There are other issues relevant to the Board's deliberations on the establishment of a regulated rate for 2011. These issues are summarized herein.

4.8.1 Operating Risks

The cost of service computations are presented on the cash basis methodology as required by NYSDEC. The cost of service analysis and regulated rate as proposed for 2011 reflect no allowance for the risks being borne by the City as the owner and operator of the water system.

4.8.2 Water Conservation Initiatives

The Department has invested and continues to invest substantial amounts of money to meter all properties within the City. Through the toilet rebate program, DEP also assisted customers in the removal of old toilets and the installation of new low-flow toilets that require significantly less water. Both the meter installation and the toilet retrofit programs have produced savings in water use and will likely provide a significant long-term reduction in water use. The universal metering program brings the City into conformance with accepted industry practice. DEP continues to install new meters in previously unmetered properties and has been replacing a substantial number of meters within the City. DEP has also been installing an automated meter reading system that will provide DEP and customers with access to information on daily water use. The toilet rebate program, while not unique, went beyond standard practice.

Examples of other programs currently being used by DEP include the following:

- Sonar Leak Detection Program
- Meter Slippage Testing
- Hydrant Locking Devices
- Residential Water Survey Program
- Water Conservation Classes for Building Managers
- School Programs on Water Conservation

The Board has also provided incentives for buildings to install comprehensive water reuse systems. The cost of service and regulated rate, as presented herein, do not include the costs of the toilet rebate program, nor do they include the funds invested in metering in-City customers or the incentives to encourage reuse.

The conservation investments by the City will help to reduce the need to develop new supplies of water in the future (see the Dependability Program discussion in 1.3.3 of the report regarding alternative supplies).

4.8.3 Upstate Wastewater Treatment Plants

In addition to non-City owned plants, the City owns and operates wastewater treatment plants in the watershed and is responsible for capital improvements in those facilities. Given the absence of a mechanism to directly recover the operating and capital costs of these facilities from the users of these systems, such costs are included within the cost of water supply service and the calculation of the regulated rate.

5.0 Impacts on Customers of the Proposed Regulated Rate

5.1 Customer Impacts

The proposed regulated rate for 2011 is $1,149.72 per MG. The current estimate of the unit cost of service for 2010 is $879.20, which is lower than the rate of $922.23 per MG that was calculated approximately one year ago based on information available at that time. The current estimate of the unit cost of service for 2010 will change by the end of the fiscal year, based on actual costs incurred and actual water consumption by customers. As mentioned earlier, actual water consumption in 2010 will likely be less than the projected consumption which will have the effect of increasing the unit rate. Figure 7 following this page outlines the anticipated percentage change in the unit cost of water supply, and the portions of the change that are attributable to increases or decreases in the cost of service and water consumption. If consumption continues to decline at a faster than expected pace, the unit rate for water supply will have to increase in order to recover the estimated cost of service.

The proposed regulated rate for Fiscal Year 2011 represents an increase of $227.49 per MG from the current unit rate of $922.23, or a 24.7% increase in the current rate. The proposed increase is not unexpected given the following: the preliminary projection that was made in the report of May 2009 showed an anticipated rate increase in excess of 21% for 2011, the increase in the 2010 rate was relatively small (due to the credit applied for 2008) compared to the increase in costs in 2010, and the ongoing decline in consumption has the effect of increasing the unit rate. Additional rate increases are anticipated in future years based on the need to protect the water supply for all customers and to avoid the very costly possibility of having to filter Catskill and Delaware water. Future changes in rates are significantly dependent upon whether or not the ongoing trend in consumption continues as well as changes in debt service for capital improvements and the costs of watershed protection. The impact on a typical single family homeowner of the proposed increase in the unit rate would be modest. The increase in charges attributable to a single family residence using 100,000 gallons of water per year would be $22.75 for the entire year or about six cents per day. Typical water use for a single family household in the City has declined to about 80,000 gallons per year. The increase in charges attributable to a single family residence using 80,000 gallons of water per year in the upstate region would be $18.20 for the entire year or about five cents per day.

The potential impact of the proposed revisions to the regulated rate on the actual rate schedules for upstate customers will depend to a large extent on the upstate suppliers' cost of purchased water in relation to the total cost of service experienced by these suppliers. To illustrate the potential effects on the overall charges to customers, Table 2 presents the rate structures of several upstate communities that purchase water from the City. The annual single family residential water charge is computed for each community using the 80,000 gallon per year and the 100,000 gallon per year allowances. Table 3 illustrates the computed single family charge

and the estimated percentage increase in that charge that would occur with the proposed regulated rate for 2011.

Prior to 2008, the rates and charges of the Board that have been assessed to upstate customers for water supply service have generally been less than the actual cost to the City. Table 15 of the Appendix illustrates the charges to upstate customers versus the computed cost to the City of serving those customers.

Figure 7 Impact of Cost of Service and Consumption on Unit Rate

New York City Water Board
Cost of Supplying Water to Upstate Customers

	Projected			
	2011	***2012***	***2013***	***2014***
Percentage Change in the Unit Rate due to Increase in Cost of Service	16.9%	10.5%	8.6%	7.4%
Percentage Change in the Unit Rate due to Fluctuations in Consumption	7.7%	3.6%	1.9%	1.9%
Percentage Change in the Calculated Unit Rate for Water Supply	24.7%	14.1%	10.5%	9.4%

* Includes the effects of cost reconciliation for FY 2009.
** The percentage changes in FY 2011 reflect differences from the current rate being charged for FY 2010.

Report on the Cost of Supplying Water to Upstate Customers for the 2011 Rate Year

Appendices

Supporting Calculations for the Cost of Service and the Regulated Rate

TABLE 1A
New York City Water Board
Cost of Supplying Water to Upstate Customers
Historical Cost of Service

No.	Description		F.Y. 2007	F.Y. 2008	F.Y. 2009
	Bureau of Water Supply Direct				
	Costs for Facilities North of New York City				
1	Other Than Personal Services	- $	138,068,007	150,982,178	171,280,256
2	Debt Service / Capital Costs	- $	79,464,948	75,998,106	96,614,323
3	Cash Used for the Defeasance of Debt	- $	0	0	0
4	Judgment and Claims	- $	5,513,361	3,695	26,925
5	Less Miscellaneous Revenue	- $	(7,287,556)	(10,017,035)	(8,134,219)
	Personal Services				
6	Field Personnel	- $	65,303,055	70,628,046	76,840,122
7	Support and Administrative Personnel	- $	13,915,776	16,752,400	18,888,597
8	Total Costs Directly Related to Facilities North of NYC	- $	294,977,591	304,347,390	355,516,004
	Upstate Share of NYC DEP Costs				
9	Personal Services	- $	6,840,745	6,879,614	8,314,377
10	Other Than Personal Services	- $	4,563,977	5,333,258	5,570,059
11	Total NYC DEP Costs Allocated to Facilities North of NYC	- $	11,404,722	12,212,872	13,884,437
12	***Upstate Share of City Central Service Costs*** (1)		1,173,045	1,560,824	1,807,764
13	Total Costs Related to Facilities North of NYC	- $	307,555,358	318,121,086	371,208,204
	Cost of Service Rate				
14	System Usage	- MG	444,553	452,048	420,438
15	Unit Rate (Ln 13/Ln 14)	- $/MG	691.83	703.73	882.91
16	Upstate New York Usage	- MG	43,895	43,559	41,477
17	Total Upstate Cost (Ln 15 x Ln 16)	- $	30,368,104	30,653,783	36,620,644

Notes:
(1) Based on factors allocating a portion of central city service costs.

Table 1B Cost of Service Projections

TABLE 1B
New York City Water Board
Cost of Supplying Water to Upstate Customers
Cost of Service Projections

Line No.	Description		Actual F.Y. 2009	F.Y. 2010	Projected Years F.Y. 2011	F.Y. 2012	F.Y. 2013	F.Y. 2014
	Bureau of Water Supply Direct							
	Costs for Facilities North of New York City							
1	Other Than Personal Services	- $	171,280,256	182,805,154	195,923,191	212,685,510	237,089,502	248,834,883
2	Debt Service/Capital Costs	- $	96,614,323	121,051,728	187,078,688	207,278,397	224,139,648	251,784,585
3	Cash Used for the Defeasance of Debt	- $	0	0	0	0	0	0
4	Judgment and Claims	- $	26,925	430,669	430,669	430,669	430,669	430,669
5	Less Miscellaneous Revenue	- $	(8,134,219)	(7,444,955)	(7,569,111)	(7,695,750)	(7,824,922)	(7,956,677)
	Personal Services							
6	Field Personnel	- $	76,840,122	78,097,043	71,161,830	81,776,626	85,192,259	87,748,026
7	Support and Administrative Personnel	- $	18,888,597	19,197,569	17,252,044	19,136,498	19,710,593	20,301,910
8	Total Costs Directly Related to Facilities North of NYC	- $	355,516,004	394,137,209	464,277,312	513,611,950	558,737,749	601,143,397
	Upstate Share of NYC DEP Costs							
9	Personal Services	- $	8,314,377	8,450,381	7,594,000	8,423,498	8,676,203	8,936,489
10	Other Than Personal Services	- $	5,570,059	5,737,161	5,909,276	6,086,554	6,269,151	6,457,225
11	Total NYC DEP Costs Allocated to Facilities North of NYC	- $	13,884,437	14,187,542	13,503,276	14,510,052	14,945,354	15,393,715
12	***Upstate Share of City Central Service Costs***		1,807,764	1,807,764	1,807,764	1,807,764	1,807,764	1,807,764
13	Total Costs Related to Facilities North of NYC	- $	371,208,204	410,132,515	479,588,352	529,929,767	575,490,867	618,344,876
14	***Cost Reconciliation for Prior Years***	- $		(42,893,777)	(7,316,421)			
15	Net Total Costs Related to Facilities North of NYC	- $	371,208,204	367,238,738	472,271,930	529,929,767	575,490,867	618,344,876
	Cost of Service Rate							
16	System Usage	- MG	420,438	417,695	410,771	403,848	396,924	390,000
17	Unit Rate (Ln 15/Ln 16) *	- $/MG	882.91	879.20	1,149.72	1,312.20	1,449.88	1,585.50
18	Upstate New York Usage	- MG	41,477	41,829	41,415	41,001	40,586	40,172
19	Total Upstate Cost (Ln 17 x Ln 18)	- $	36,620,644	36,776,259	47,615,521	53,801,207	58,845,436	63,693,146

Notes:
* Current rate for FY 2010 is $922.23 per million gallons

Table 2A Current Water Rates for Upstate New York Communities

TABLE 2A
New York City Water Board
Cost of Supplying Water to Upstate Customers
Current Water Rates for Upstate New York Communities

	City of White Plains	Village of Scarsdale	New Rochelle United Water Company
Current Water Rates	$1.37/Ccf - 1st 50 Ccf $1.54/Ccf - Next 100 Ccf $1.73/Ccf - Next 200 Ccf $2.50/Ccf - Next 300 Ccf (Rates are semi-annual; additional blocks for greater consumption) Plus fixed charge of $16.61 for residential meters 1" or less, per 6 mths	$1.65/Ccf - 1st 50 Ccf (qtrly accts) or 700 Ccf (monthly accts); $5.60 for consumption greater than those amounts. Plus service charge based on meter size: $5.00/qtr for 5/8"; $7.00/qtr for 3/4"; etc.	$4.1728/Ccf - 1st 12 Ccf used per qtr $4.0098/Ccf - Next 360 Ccf $3.5078/Ccf - Over 372 Ccf Minimum based on usage of 1,200 cf/qtr for 1/2" or 5/8" meter; 1,500 cf/qtr for 3/4" meter; 2,700 cf/qtr for 1" and 1 1/4" meter, etc.
Avg. Annual Residential Use (gal.)	80,000 to 100,000	80,000 to 100,000	80,000 to 100,000
Avg. Annual Residential Use (Ccf)	106.95 to 133.69	106.95 to 133.69	106.95 to 133.69
Avg. Residential Water Bill	$181 to $222	$200 to $245	$437 to $544

	Village of Mamaroneck	Town of Harrison	City of Mount Vernon
Current Water Rates	$2.52/Ccf - 1st 66 Ccf per Qtr $2.83/Ccf - Next 150 Ccf per Qtr Plus service charge based on meter size: $14.00/qtr for 5/8"; $16.71/qtr for 3/4"; etc.	$2.29/Ccf - 1st 66 Ccf per Qtr $2.76/Ccf - Next 150 Ccf per Qtr Plus service charge based on meter size: $13.08/qtr for 5/8"; $15.57/qtr for 3/4"; etc.	$2.10/Ccf - per quarter Minimum charge based on usage of 15 Ccf/qtr at $31.50
Avg. Annual Residential Use (gal.)	80,000 to 100,000	80,000 to 100,000	80,000 to 100,000
Avg. Annual Residential Use (Ccf)	106.95 to 133.69	106.95 to 133.69	106.95 to 133.69
Avg. Residential Water Bill	$331 to $398	$302 to $363	$225 to $281

Notes:
The above rates and charges reflect the rate schedules of each community in March 2010.

Table 2B Current Water Rates for Upstate New York Communities

TABLE 2B
New York City Water Board
Cost of Supplying Water to Upstate Customers
Current Water Rates for Upstate New York Communities

	Town of Carmel	**City of Yonkers**
Current Water Rates	$60.00 per 1,000 cf (Water District #1) $9.00 per 1,000 cf (Water District #2)	$1.40 / Ccf
Avg. Annual Residential Use (gal.)	80,000 to 100,000	80,000 to 100,000
Avg. Annual Residential Use (Ccf)	106.95 to 133.69	106.95 to 133.69
Avg. Residential Water Bill	$96 - $640 to $120 - $800	$150 to $187

	City of Newburgh	**Village of Cornwall**
Current Water Rates	$3.97 per 1,000 Gal Plus service charge based on meter size: $35.73/qtr for 5/8" Minimum Charge up to 9,000 gals $55.58/qtr for 3/4" Minimum Charge up to 14,000 gals	$8.56 per 1,000 Gal
Avg. Annual Residential Use (gal.)	80,000 to 100,000	80,000 to 100,000
Avg. Annual Residential Use (Ccf)	106.95 to 133.69	106.95 to 133.69
Avg. Residential Water Bill	$318 to $397	$685 to $856

Notes:
The above rates and charges reflect the rate schedules of each community in March 2010.

Table 3 Summary of Impacts on Upstate Customers

TABLE 3
New York City Water Board
Cost of Supplying Water to Upstate Customers
Summary of Impacts on Upstate Customers

Water System Customer	Typical Single Family Charges	Increase Attributable to Proposed FY 2011 Regulated Rate	% Change to a Homeowner
City of White Plains	$181 to $222	$ 18.20 to $22.75	10.1% to 10.2%
Village of Scarsdale	$200 to $245	$ 18.20 to $22.75	9.1% to 9.3%
City of New Rochelle	$437 to $544	$ 18.20 to $22.75	4.2% to 4.2%
City of Yonkers	$150 to $187	$ 18.20 to $22.75	12.2% to 12.2%
Village of Mamaroneck	$331 to $398	$ 18.20 to $22.75	5.5% to 5.7%
Town of Harrison	$302 to $363	$ 18.20 to $22.75	6.0% to 6.3%
City of Mount Vernon	$225 to $281	$ 18.20 to $22.75	8.1% to 8.1%
Town of Carmel	$96 to $800	$ 18.20 to $22.75	19.0% to 2.3%
City of Newburgh	$318 to $397	$ 18.20 to $22.75	5.7% to 5.7%
Village of Cornwall	$685 to $856	$ 18.20 to $22.75	2.7% to 2.7%
New York City (adopted FY 2011 rate)	$315 to $394	--	--

Notes:

(1) The Typical Single Family Charge for selected communities are based on 80,000 - 100,000 gallons of annual water use and the rate schedules of each community in March 2010, except the City of New York, as noted, and the Town of Carmel where % change of 80,000 gallons/year only is shown.

Table 4A Historical Upstate Other Than Personal Services Costs

TABLE 4A
New York City Water Board
Historical Cost of Supplying Water to Upstate Customers
Upstate New York Other Than Personal Services Costs

Line No.	Description	F.Y.2007 $	F.Y.2008 $	F.Y.2009 $
	Budget			
1	Supplies and Materials - General	6,030,208	8,163,679	2,045,828
2	Automotive Supplies and Materials	32,688	27,052	23,504
3	Fuel Oil	1,962,501	2,947,849	2,207,029
4	Equipment - General	555,096	673,416	536,081
5	Telecommunications Equipment	51,087	38,886	28,654
6	Office Equipment	102,408	102,304	63,667
7	Contractual Services - General	4,645,886	4,645,361	5,090,794
8	Telephone and Other Communications	815,034	573,531	435,245
9	Office Services	473,713	517,783	439,283
10	Maintenance and Repairs - Motor Vehicles	134,640	146,174	51,743
11	Maintenance and Repairs - General	894,976	1,268,468	1,088,745
12	Rentals - Miscellaneous Equipment	2,562,172	1,571,785	1,702,223
13	Advertising	163,560	118,274	206,302
14	Security Services	663,478	174,668	59,810
15	Cleaning Services	501,890	864,280	568,646
16	Licenses (1)	0	0	0
17	Chemicals	3,462,379	5,344,146	8,035,776
18	Real Estate Taxes	104,630,050	109,627,241	114,958,441
19	NYS DEC Permits (1)	0	0	0
20	Motor Maintenance Supplies (1)	0	0	0
21	Gasoline (1)	0	0	0
22	Lab and Limnology	68,154	72,053	63,220
23	Natural Gas & Electricity	1,705,204	2,111,315	2,474,701
24	Upstate Cost of Service/Rate Studies	75,104	75,000	75,000
25	Hillview Reservoir (2)	8,537,779	11,918,913	31,125,564
26	UV Facility	0	0	0
27	Totals	138,068,007	150,982,178	171,280,256

Notes:
(1) Actual costs were not available at the publishing of this report. The City reserves the right to include such expenses at a future date.
(2) Actual costs are shown for 2007 to 2009.

Table 4B Projected Upstate Other Than Personal Services Costs

TABLE 4B
New York City Water Board
Projected Cost of Supplying Water to Upstate Customers
Upstate New York Other Than Personal Services Costs

Line No.	Description	*Actual* F.Y.2009 $	*Projected Years* F.Y.2010 $	F.Y.2011 $	F.Y.2012 $	F.Y.2013 $	F.Y.2014 $
1	Supplies and Materials - General	2,045,828	2,107,203	2,170,419	2,235,532	2,302,598	2,371,676
2	Automotive Supplies and Materials	23,504	24,210	24,936	25,684	26,455	27,248
3	Fuel Oil	2,207,029	2,273,240	2,341,437	2,411,680	2,484,031	2,558,552
4	Equipment - General	536,081	552,164	568,729	585,791	603,364	621,465
5	Telecommunications Equipment	28,654	29,513	30,399	31,310	32,250	33,217
6	Office Equipment	63,667	65,577	67,544	69,570	71,657	73,807
7	Contractual Services - General	5,090,794	5,243,518	5,400,824	5,562,848	5,729,734	5,901,626
8	Telephone and Other Communications	435,245	448,302	461,751	475,604	489,872	504,568
9	Office Services	439,283	452,462	466,036	480,017	494,417	509,250
10	Maintenance and Repairs - Motor Vehicles	51,743	53,295	54,894	56,541	58,237	59,985
11	Maintenance and Repairs - General	1,088,745	1,121,407	1,155,049	1,189,701	1,225,392	1,262,153
12	Rentals - Miscellaneous Equipment	1,702,223	1,753,290	1,805,888	1,860,065	1,915,867	1,973,343
13	Advertising	206,302	212,492	218,866	225,432	232,195	239,161
14	Security Services	59,810	61,604	63,452	65,356	67,316	69,336
15	Cleaning Services	568,646	585,705	603,277	621,375	640,016	659,217
16	Licenses (1)	0	0	0	0	0	0
17	Chemicals	8,035,776	8,276,850	8,525,155	8,780,910	9,044,337	9,315,667
18	Real Estate Taxes	114,958,441	120,991,838	128,251,349	135,946,430	144,103,215	152,749,408
19	NYS DEC Permits (1)	0	0	0	0	0	0
20	Motor Maintenance Supplies (1)	0	0	0	0	0	0
21	Gasoline (1)	0	0	0	0	0	0
22	Lab and Limnology	63,220	65,116	67,070	69,082	71,154	73,289
23	Natural Gas & Electricity	2,474,701	2,548,942	2,625,410	2,704,173	2,785,298	2,868,857
24	Upstate Cost of Service/Rate Studies	75,000	75,000	75,000	75,000	75,000	75,000
25	Hillview Reservoir	31,125,564	32,059,331	33,021,111	34,011,744	35,032,096	36,083,059
26	UV Facility	0	3,804,096	7,924,596	15,201,667	29,605,000	30,805,000
27	Totals	171,280,256	182,805,154	195,923,191	212,685,510	237,089,502	248,834,883

Notes:
(1) Actual costs were not available at the publishing of this report. The City reserves the right to include such expenses at a future date.

Table 5A Debt Service Summary

TABLE 5A
New York City Water Board
Cost of Supplying Water to Upstate Customers
Debt Service/Capital Cost Summary

Amounts Shown in Dollars ($)

Line No.	Fiscal Year	Pre-80s G.O. Debt Service	80s G.O. Debt Service	Authority Debt Service/Cash	Totals
2	2007	465,681	801,726	78,197,541	**79,464,948**
3	2008		764,469	75,233,637	**75,998,106**
4	2009			96,614,323	**96,614,323**
Projection Years:					
5	2010			121,051,728	**121,051,728**
6	2011			187,078,688	**187,078,688**
7	2012			207,278,397	**207,278,397**
8	2013			224,139,648	**224,139,648**
9	2014			251,784,585	**251,784,585**

Table 5B Debt Service/Capital Costs

Table 5B
New York City Water Board
Cost of Supplying Water to Upstate Customers
Debt Service

Line No.	Description		Actual F.Y. 2009	F.Y. 2010	F.Y. 2011	Projected F.Y. 2012	F.Y. 2013	F.Y. 2014
	System Totals - Capital-Related Costs							
1	Authority Debt Service - First Resolution	A	551,089,231	500,714,000	609,042,000	581,762,000	545,891,000	608,644,000
2	Anticipated Debt Service - First Resolution	B	-	-	11,890,000	36,136,000	51,459,000	62,826,000
3	Authority Debt Service - Second Resolution	C	25,859,614	247,588,000	350,819,000	353,242,000	385,492,000	415,857,000
4	Anticipated Debt Service - Second Resolution	D	-	-	43,372,000	138,181,000	223,048,000	293,434,000
5	Interest on Short-Term Debt	E	10,340,458	5,000,000	42,500,000	42,500,000	42,500,000	42,500,000
6	EFC Outstanding Debt Service	F	452,010,108	369,891,000	392,820,000	398,649,000	379,282,000	367,051,000
7	EFC Projected Debt Service	G	-	-	9,120,000	25,319,000	42,123,000	59,186,000
8	Cash-Financed Construction	H	-	-	80,000,000	125,000,000	150,000,000	175,000,000
	System Totals - Interest Earnings & Expenses							
9	Debt Service Fund	I	(8,555,891)	(579,000)	(731,000)	(1,494,000)	(2,112,000)	(3,311,000)
10	Debt Service Reserve Fund	J	(42,154,360)	(42,154,000)	(42,154,000)	(43,603,000)	(44,637,000)	(45,304,000)
11	Construction Fund	K	(2,616,449)	-	-	(2,500,000)	(3,750,000)	(5,000,000)
12	Subordinated Debt Service Fund	L	(4,731,198)	(5,835,000)	(6,144,000)	(6,891,000)	(2,669,000)	(4,144,000)
13	Less: Authority Debt-Related Expenses	M	22,737,000	25,300,000	43,300,000	47,630,000	52,393,000	57,632,300
	Water Supply - Capital-Related Costs							
14	Authority Debt Service - First Resolution	A x N	67,033,544	67,424,757	83,891,808	80,134,155	75,193,144	83,836,986
15	Anticipated Debt Service - First Resolution	B x N	-	-	1,637,775	4,977,513	7,088,162	8,653,897
	Authority Debt Service - Second Resolution	C x N	3,145,519	33,339,513	48,323,170	48,656,923	53,099,163	57,281,756
	Anticipated Debt Service - Second Resolution	D x N	-	-	5,974,228	19,033,587	30,723,497	40,418,737
16	Interest on Short-Term Debt	E x O	1,105,072	582,545	5,266,178	5,266,178	5,266,178	5,266,178
17	EFC Debt Service	(F + G) x P	29,673,160	23,044,356	33,290,509	35,114,969	34,902,690	35,302,898
18	Cash-Financed Construction	H x O	-	-	9,912,806	15,488,759	18,586,510	21,684,262
	Water Supply - Interest Earnings							
19	Debt Service Fund	I x N	(1,040,724)	(77,967)	(100,691)	(205,789)	(290,915)	(456,070)
20	Debt Service Reserve Fund	J x N	(5,127,584)	(5,676,341)	(5,806,455)	(6,006,046)	(6,148,474)	(6,240,349)
21	Construction Fund	K x O	(279,617)	-	-	(309,775)	(464,663)	(619,550)
22	Subordinated Debt Service Fund	L x P	(324,925)	(532,811)	(675,944)	(773,913)	(307,665)	(485,383)
23	Less: Authority Debt-Related Expenses	M x P	2,429,876	2,947,676	5,365,306	5,901,837	6,492,020	7,141,222
24	Net Water Supply Capital-Related Costs		96,614,323	121,051,728	187,078,688	207,278,397	224,139,648	251,784,585

		2009	2010	2011-2014
Upstate Authority $ as a % of Total Authority CIP $	N	12.16%	13.47%	13.77%
Upstate Total CIP $ as a % of Total CIP $	O	10.69%	11.65%	12.39%
Upstate EFC $ as a % of Total EFC CIP $	P	6.56%	6.23%	8.28%

Table 5C Authority Bond Proceeds

Table 5C
New York City Water Board
Cost of Supplying Water to Upstate Customers
Proceeds of Authority Bonds Used for Upstate Projects

Line	Bond Issue	Total Principal	Total Upstate Allocation	Upstate Principal
1	FY 1986 Series A	200,000,000	2.72%	5,442,800
2	FY 1986 Series B	200,000,000	3.74%	7,475,200
3	FY 1987 Series A	388,650,000	2.70%	10,494,327
4	FY 1987 Series B	160,278,232	6.60%	10,578,684
5	FY 1988 Series A	244,915,000	6.93%	16,974,079
6	FY 1988 Series B	240,000,155	12.47%	29,929,699
7	FY 1989 Series A	275,001,170	10.39%	28,559,147
8	FY 1989 Series B	288,057,995	8.10%	23,334,138
9	FY 1990 Series A	281,474,425	6.92%	19,490,978
10	FY 1991 Series A	285,000,004	5.78%	16,469,580
11	FY 1991 Series C	-	-	-
12	FY 1992 Series A	583,155,000	2.86%	16,678,233
13	FY 1992 Series C	200,000,000	4.45%	8,900,000
14	FY 1993 Series B&C	193,000,000	4.75%	9,167,500
15	FY 1994 Series C	200,000,000	5.77%	11,540,000
16	FY 1994 Series F&G	428,150,000	4.89%	20,936,535
17	FY 1995 Series A	216,700,000	5.92%	12,828,640
18	FY 1996 Series A	484,295,000	7.10%	34,384,945
19	FY 1996 Series B	579,670,000	4.40%	25,505,480
20	FY 1997 Series A	365,125,000	7.85%	28,662,313
21	FY 1997 Series B	700,000,000	16.94%	118,580,000
22	FY 1998 Series B	449,525,000	19.59%	88,061,948
23	FY 1999 Series A	301,470,000	11.06%	33,342,582
24	FY 1999 Series B	202,015,000	3.43%	6,929,115
25	FY 2000 Series A	275,735,000	6.80%	18,749,980
26	FY 2000 Series B&C	431,230,000	11.21%	48,345,193
27	FY 2001 Series A	328,225,000	12.72%	41,741,715
28	FY 2001 Series C	112,040,000	15.87%	17,786,151
29	FY 2002 Series A	216,305,000	21.38%	46,244,904
30	FY 2002 Series G	216,375,000	38.79%	83,937,864
	2003 Total	9,046,391,981	9.30%	841,071,728
31	FY 2003 Series A	330,040,081	20.42%	67,379,252
32	FY 2003 Series B	150,000,000	24.18%	36,272,195
33	FY 2003 Series E	314,798,571	22.66%	71,323,090
34	FY 2003 Series F	201,655,000	28.04%	56,543,643
	2004 Total	10,042,885,633	10.68%	1,072,589,909
35	FY 2004 Series A	217,000,000	1.75%	3,805,504
36	FY 2004 Series C	297,549,412	12.96%	38,561,372
	2005 Total	10,557,435,045	10.56%	1,114,956,785
37	FY 2005 Series A	150,000,000	23.22%	34,836,356
38	FY 2005 Series B	417,570,000	20.03%	83,634,213
39	FY 2005 Series D	509,553,201	13.98%	71,236,597
	2006 Total	11,634,558,246	11.21%	1,304,663,952
40	FY 2006 Series A	202,970,000	15.90%	32,275,185
41	FY 2006 Series AA	400,000,000	9.92%	39,682,422
42	FY 2006 Series B BB C	250,000,000	17.70%	44,248,847
43	FY 2006 Series D	355,519,052	7.45%	26,485,735
44	**2007 Total**	12,843,047,298	11.27%	1,447,356,141
45	FY 2007 Series AA	199,910,000	25.51%	51,006,584
46	FY 2007 Series CC	210,500,000	15.89%	33,450,077
47	FY 2007 Series A	310,475,000	13.73%	42,629,128
49	FY 2007 Series DD	395,000,000	8.43%	33,314,037
50	**2008 Total**	13,958,932,298	11.52%	1,607,755,967
51	FY 2008 Series AA	400,000,000	27.49%	109,951,398
52	FY 2008 Series BB	401,000,000	15.39%	61,708,489
53	FY 2008 Series A	446,245,000	14.91%	66,527,108
54	FY 2008 Series DD	504,905,000	12.90%	65,126,012
55	**2009 Total**	15,711,082,298	12.16%	1,911,068,973
56	FY 2009 Series BB	200,870,000	63.93%	128,419,355
57	FY 2009 Series CC	150,100,000	6.88%	10,321,706
58	FY 2009 Series A	536,030,000	21.14%	113,326,719
59	FY 2009 Series DD	325,580,000	13.04%	42,451,994
60	FY 2009 Series EE	460,000,000	33.03%	151,958,808
61	FY 2009 Series FF	270,035,000	0.44%	1,181,509
62	FY 2009 Series GG	500,000,000	17.16%	85,797,419
	2010 Total	18,153,697,298	13.47%	2,444,526,482
63	FY 2010 Series AA	504,240,000	17.34%	87,418,834
64	FY 2010 Series CC	200,000,000	15.36%	30,718,565
65	FY 2010 Series DD	400,000,000	22.50%	89,999,107
62	**2011-14 Total**	19,257,937,298	13.77%	2,652,662,988

Notes:
(A) The 1991 C Bonds were not included in the calculations used in the report. The total principal was $4,650,000.
(B) Figures for recent bond issues are preliminary; the upstate portion may change after all bond proceeds are spent.

Table 5D NYSEFC Bond Proceeds

Table 5D
New York City Water Board
Cost of Supplying Water to Upstate Customers
Proceeds of EFC Bonds Used for Upstate Projects

Line No.	Bond Issue	Total Principal	Upstate Allocation	Upstate Principal
1	FY 1995 Series 1	112,733,019	1.26%	1,420,436
2	FY 1996 Series 1	113,085,000	1.28%	1,447,488
3	FY 1996 Series 2	28,775,000	39.38%	11,331,595
4	FY 1996 Series 3	40,285,000	8.93%	3,597,451
5	FY 1998 Series 1	44,635,000	28.51%	12,725,439
6	FY 1998 Series 2	113,784,841	9.71%	11,048,508
7	FY 1998 Series 4	15,749,040	12.22%	1,924,533
8	FY 1998 Series 5	87,872,535	15.02%	13,198,455
9	FY 1999 Series 1	121,435,485	7.88%	9,569,116
10	FY 1999 Series 2	269,985,000	0.54%	1,462,597
11	FY 2000 Series 1	285,855,884	18.10%	51,746,780
12	FY 2002 Series 1	204,131,705	1.70%	3,478,818
13	FY 2002 Series 2	72,082,983	2.77%	1,999,381
14	FY 2002 Series 3	519,405,711	3.01%	15,624,990
15	FY 2002 Series 5	371,757,628	2.85%	10,609,799
16	**2003 Total**	2,401,573,831	6.30%	151,185,384
17	FY 2003 Series 1	148,040,809	1.65%	2,438,893
18	FY 2003 Series 5	295,157,120	1.70%	5,003,460
19	**2004 Total**	2,844,771,760	5.58%	158,627,737
20	FY 2004 Series 1	301,008,574	0.07%	208,972
21	FY 2004 Series 2	257,400,299	1.09%	2,806,140
22	**2005 Total**	3,403,180,633	4.75%	161,642,849
23	FY 2005 Series 1	230,408,946	4.02%	9,264,567
24	FY 2005 Series 2	390,624,553	0.61%	2,369,434
25	**2006 Total**	4,024,214,132	4.31%	173,276,850
26	FY 2006 Series 1	229,018,261	3.83%	8,773,410
27	FY 2006 Series 2,3	457,828,498	13.50%	61,821,784
28	**2007 Total**	4,711,060,891	5.18%	243,872,044
29	FY 2007 Series 1,2	518,427,784	9.58%	49,677,805
30	**2008 Total**	5,229,488,675	5.61%	293,549,849
31	FY 2008 Series 1,2	399,690,401	19.01%	75,989,525
32	**2009 Total**	5,629,179,076	6.56%	369,539,374
33	FY 2009 Series 1,2	448,435,268	2.03%	9,098,412
	2010 Total	6,077,614,344	6.23%	378,637,786
34	FY 2010 Series 2,3,4	406,684,607	38.95%	158,421,511
34	**2010-12 Total**	6,484,298,951	8.28%	537,059,297

Notes:
(A) Figures for recent bond issues are preliminary; the upstate portion may change after all bond proceeds are spent.

TABLE 5E
New York City Water Board
Cost of Supplying Water to Upstate Customers
1980's G.O. Debt Service

Line No.	Issue Date	2007 Principal	2007 Interest	2008 Principal	2008 Interest
1	10/27/1981	0	0	0	0
2	12/15/1981	0	0	0	0
3	2/18/1982	0	0	0	0
4	3/15/1982	61,334	13,340	61,334	4,447
5	9/30/1982	0	0	0	0
6	12/16/1982	131,030	21,096	133,040	7,068
7	1/21/1983	57,967	13,332	57,966	6,666
8	3/1/1983	0	38,074	0	38,074
9	6/1/1983	0	13,726	0	13,726
10	6/16/1983	34,525	5,227	35,007	1,750
11	10/27/1983	0	0	0	0
12	2/15/1984	0	74,402	0	74,402
13	5/15/1984	0	51,303	0	51,303
14	7/12/1984	79,168	11,844	80,360	3,968
15	3/15/1985	0	85,925	0	85,925
16	7/15/1985	0	109,433	0	109,433
17	Subtotals	364,024	437,702	367,707	396,762
18	Total Debt Service		801,726		764,469

Table 5F 2006 - 2008 Defeasance of Bonds

TABLE 5F
New York City Water Board
Cost of Supplying Water to Upstate Customers
Cash Used for Defeasance of Debt
All Amounts in $

	2007	2008	2009
Cash Used for the Defeasance of Bonds	0	0	0
Upstate CIP $ as a % of Total Water/Sewer CIP $	9.48%	9.91%	10.69%
Upstate Portion of Defeasance Cash	0	0	0

TABLE 6
New York City Water Board
Cost of Supplying Water to Upstate Customers
Judgments and Claims

Year	Historical Costs ($)
1995	6,879
1996	30,516
1997	536,000
1998	151,220
1999	1,834
2000	109,969
2001	75,160
2002	4,480
2003	0
2004	0
2005	0
2006	0
2007	5,513,361
2008	3,695
2009	26,925
Average (1995-2009)	430,669
Projection Years (2010-2014)	430,669

TABLE 7
New York City Water Board
Cost of Supplying Water to Upstate Customers
BWSWC Miscellaneous Revenue

Year	Hydropower	Rents (Permits)	Tax Refunds	Total
1995		825,252	0	825,252
1996		810,460	116,415	926,875
1997		949,483	332,370	1,281,853
1998		753,766	264,560	1,018,326
1999		1,208,738	354,942	1,563,680
2000		944,043	283,436	1,227,479
2001		795,290	189,518	984,808
2002		935,023	50,686	985,709
2003		723,939	0	723,939
2004	1,105,639	1,348,358	50,686	2,504,683
2005	1,396,145	1,788,012	0	3,184,157
2006	1,321,881	2,379,307	0	3,701,188
2007	4,987,041	2,300,515	0	7,287,556
2008	7,239,859	995,209	0	10,017,035
2009	6,086,074	1,800,000	248,145	8,134,219
Average		1,237,160		
Projection Years (2010-2014)				
2010	6,207,795	1,237,160	0	7,444,955
2011	6,331,951	1,237,160	0	7,569,111
2012	6,458,590	1,237,160	0	7,695,750
2013	6,587,762	1,237,160	0	7,824,922
2014	6,719,517	1,237,160	0	7,956,677

Notes:
(1) Certain historical revenues for hydropower and rents have changed from prior reports based on updated information from the City.

Table 8A Historical Upstate Direct Personal Services Costs

TABLE 8A
New York City Water Board
Historical Cost of Supplying Water to Upstate Customers
Upstate New York Direct Personal Services Costs

Line No.	Description	F.Y.2007 $	F.Y.2008 $	F.Y.2009 $
	Divisional and Sectional Offices			
1	Katonah Resource Protection	225,281	95,349	109,469
2	Carmel Section	4,049,943	4,422,952	4,851,502
3	Prattsville/Schoharie	2,421,747	2,716,891	3,266,547
4	Ashokan	7,451,039	9,497,168	6,772,104
5	Grahamsville	3,936,184	5,160,760	6,083,083
6	Port Jervis	449,821	424,312	534,591
7	E. Division Hudson River P/S	154,205	205,846	224,051
	Laboratories			
8	Kensico	1,579,971	1,860,840	2,130,799
9	Grahamsville	1,363,667	858,944	944,365
	Other Services			
10	Ashokan	2,487,916	2,486,831	0
11	Downsville	2,997,909	3,044,880	3,652,338
12	Sutton Park	7,630,354	8,043,694	9,093,957
13	Kingston	1,491,153	1,712,099	8,690,591
14	Watershed Security (1)	12,355,132	11,582,349	10,753,602
15	Watershed-East of Hudson	5,078,007	6,150,195	7,215,171
16	Upstate DWQC	204,691	155,401	0
17	Capital Construction	1,823,427	2,342,001	2,760,334
18	Water Plan and Protect	416,904	347,423	403,326
19	Mahopac	771,821	840,421	866,853
20	Hillview Reservoir	3,956,924	4,445,110	4,907,613
21	UV Facility	0	0	0
22	Direct Personnel Overtime Costs	4,456,956	4,234,579	3,579,827
23	**Total Personal Services Costs**	**65,303,055**	**70,628,046**	**76,840,122**

Notes:
(1) Hillview, Croton, Ashokan, Schoharie, Kingston, Downsville, Neversink, Beerston & other watershed locations.
(2) Personal service costs include salary and a fringe benefit rate of 51.0% in FY 2009.
(3) Hillview Reservoir costs include overtime expenses .
(4) Upward or downward changes from year to year in a particular category of costs may reflect shifts in classifications for accounting purposes as opposed to changes in personal functions or responsibilities.

Table 8B Projected Upstate Direct Personal Services Costs

TABLE 8B
New York City Water Board
Cost of Supplying Water to Upstate Customers
Upstate New York Direct Personal Services Costs

Line No.	Description	*Actual* F.Y.2009 $	F.Y.2010 $	F.Y.2011 $	*Projected Years* F.Y.2012 $	F.Y.2013 $	F.Y.2014 $
	Divisional and Sectional Offices						
1	Katonah Resource Protection	109,469	111,260	99,984	110,906	114,233	117,660
2	Carmel Section	4,851,502	4,930,861	4,431,156	4,915,175	5,062,630	5,214,509
3	Prattsville/Schoharie	3,266,547	3,319,980	2,983,525	3,309,418	3,408,701	3,510,962
4	Ashokan	6,772,104	6,882,879	6,185,353	6,860,983	7,066,813	7,278,817
5	Grahamsville	6,083,083	6,182,588	5,556,030	6,162,920	6,347,807	6,538,241
6	Port Jervis	534,591	543,336	488,273	541,608	557,856	574,591
7	E. Division Hudson River P/S	224,051	227,716	204,638	226,991	233,801	240,815
	Laboratories						
8	Kensico	2,130,799	2,165,654	1,946,181	2,158,764	2,223,527	2,290,233
9	Grahamsville	944,365	959,812	862,543	956,759	985,462	1,015,025
	Other Services						
10	Ashokan	0	0	0	0	0	0
11	Downsville	3,652,338	3,712,082	3,335,891	3,700,273	3,811,281	3,925,619
12	Sutton Park	9,093,957	9,242,712	8,306,035	9,213,309	9,489,709	9,774,400
13	Kingston	8,690,591	8,832,748	7,937,617	8,804,650	9,068,789	9,340,853
14	Watershed Security (1)	10,753,602	10,929,505	9,821,884	10,894,736	11,221,578	11,558,226
15	Watershed-East of Hudson	7,215,171	7,333,194	6,590,031	7,309,866	7,529,162	7,755,036
16	Upstate DWQC	0	0	0	0	0	0
17	Capital Construction	2,760,334	2,805,487	2,521,172	2,796,562	2,880,459	2,966,873
18	Water Plan and Protect	403,326	409,923	368,380	408,619	420,877	433,504
19	Mahopac	866,853	881,033	791,747	878,230	904,577	931,714
20	Hillview Reservoir	4,907,613	4,987,890	4,482,406	4,972,022	5,121,183	5,274,818
21	UV Facility	0	0	979,319	3,928,026	5,008,200	5,158,446
22	Direct Personnel Overtime Costs	3,579,827	3,638,384	3,269,662	3,626,810	3,735,614	3,847,683
23	**Total Personal Services Costs**	**76,840,122**	**78,097,043**	**71,161,830**	**81,776,626**	**85,192,259**	**87,748,026**

Notes:
(1) Hillview, Croton, Ashokan, Schoharie, Kingston, Downsville, Neversink, Beerston & other watershed police locations.
(2) Personal service costs include salary and a fringe rate of 49% for FY 2010, 30% in FY 2011 and 40% in FY 2012-4.
(3) It is assumed that personal services costs will increase 3.0% per annum in FY 2011 - 2014.
(4) Upward or downward changes from year to year in a particular category of costs may reflect shifts in classifications for accounting purposes as opposed to changes in personal functions or responsibilities.

Table 9A Historical Upstate Indirect Personal Services Costs

TABLE 9A
New York City Water Board
Historical Cost of Supplying Water to Upstate Customers
Upstate New York Indirect Personal Services Costs

Line No.	Description	F.Y.2007 $	F.Y.2008 $	F.Y.2009 $
	Divisional and Sectional Offices			
1	Katonah Resource Protection	106,140	271,852	478,656
2	Carmel Section	272,664	485,479	339,064
3	Prattsville/Schoharie	0	0	0
4	Ashokan	2,670,918	3,145,601	407,214
5	Grahamsville	799,115	1,127,224	1,191,138
	Laboratories			
6	Kensico	268,340	357,663	514,579
7	Grahamsville	167,331	257,126	277,014
8	Giardia	349,232	0	0
	Other Services			
9	Ashokan	106,661	124,620	0
10	Downsville	146,854	116,509	129,291
11	Sutton Park	4,115,104	5,066,844	5,663,802
12	Kingston Office	1,229,981	2,073,143	5,599,005
13	Watershed Security (1)	1,706,948	1,803,001	1,910,026
14	Mobile Task Force	0	0	314,121
15	East of Hudson Fleet	496,634	424,843	447,635
16	Shokan Fleet Admin.	464,023	503,992	541,774
17	Downsville Fleet Admin.	87,383	93,856	97,739
18	Grahmsville Fleet Admin.	174,766	187,711	195,479
19	Watershed-East of Hudson	335,907	433,563	516,956
20	Capital Construction	0	0	0
21	Env. Planning & Assess Float	126,554	0	0
22	Indirect Personnel Overtime Costs	291,222	279,374	265,104
23	**Total Personal Services Costs**	**13,915,776**	**16,752,400**	**18,888,597**

Notes:

(1) Hillview, Croton, Ashokan, Schoharie, Kingston, Downsville, Neversink, Beerston & other watershed locations.

(2) Personal service costs include salary and a fringe benefit rate of 51.0% in FY 2009.

(3) Upward or downward changes from year to year in a particular category of costs may reflect shifts in classifications for accounting purposes as opposed to changes in personal functions or responsibilities.

Table 9B Projected Upstate Indirect Personal Services Costs

TABLE 9B
New York City Water Board
Cost of Supplying Water to Upstate Customers
Upstate New York Indirect Personal Services Costs

Line No.	Description	*Actual* F.Y.2009 $	F.Y.2010 $	F.Y.2011 $	*Projected Years* F.Y.2012 $	F.Y.2013 $	F.Y.2014 $
	Divisional and Sectional Offices						
1	Katonah Resource Protection	478,656	486,486	437,184	484,938	499,487	514,471
2	Carmel Section	339,064	344,611	309,687	343,514	353,820	364,434
3	Prattsville/Schoharie	0	0	0	0	0	0
4	Ashokan	407,214	413,875	371,932	412,558	424,935	437,683
5	Grahamsville	1,191,138	1,210,622	1,087,935	1,206,771	1,242,974	1,280,263
	Laboratories						
6	Kensico	514,579	522,997	469,995	521,333	536,973	553,082
7	Grahamsville	277,014	281,545	253,013	280,650	289,069	297,741
8	Giardia	0	0	0	0	0	0
	Other Services						
9	Ashokan	0	0	0	0	0	0
10	Downsville	129,291	131,406	118,089	130,988	134,917	138,965
11	Sutton Park	5,663,802	5,756,448	5,173,076	5,738,135	5,910,280	6,087,588
12	Kingston Office	5,599,005	5,690,591	5,113,893	5,672,488	5,842,663	6,017,942
13	Watershed Security (1)	1,910,026	1,941,270	1,744,537	1,935,094	1,993,147	2,052,941
14	Mobile Task Force	314,121	319,259	286,905	318,243	327,791	337,624
15	East of Hudson Fleet	447,635	454,957	408,851	453,510	467,115	481,129
16	Ashokan Fleet Admin.	541,774	550,637	494,834	548,885	565,351	582,312
17	Downsville Fleet Admin.	97,739	99,338	89,271	99,022	101,993	105,052
18	Grahmsville Fleet Admin.	195,479	198,676	178,542	198,044	203,985	210,105
19	Watershed-East of Hudson	516,956	525,412	472,166	523,741	539,453	555,637
20	Capital Construction	0	0	0	0	0	0
21	Env. Planning & Assess Float	0	0	0	0	0	0
22	Indirect Personnel Overtime Costs	265,104	269,440	242,135	268,583	276,641	284,940
23	**Total Personal Services Costs**	**18,888,597**	**19,197,569**	**17,252,044**	**19,136,498**	**19,710,593**	**20,301,910**

Notes:
(1) Personal service costs include salary and a fringe rate of 49% for FY 2010, 30% in FY 2011 and 40% in FY 2012-4.
(2) It is assumed that personal services costs will increase 3.0% per annum in FY 2011 - 2014.
(3) Upward or downward changes from year to year in a particular category of costs may reflect shifts in classifications for accounting purposes as opposed to changes in personal functions or responsibilities.

Table 10 Development of Allocation Factors

TABLE 10
New York City Water Board
Cost of Supplying Water to Upstate Customers
Development of Allocation Factors

Line No.	Description	2007		2008		2009		Projection Years
1	Total Salaries - Employees North of NYC	68,317,722		76,574,547		86,976,176		
2		---------- =	48.34%	---------- =	49.75%	---------- =	49.72%	49.72%
3	Total Salaries - All Water Supply Employees	141,332,147		153,906,802		174,918,510		
4	Head Count - Water Supply Employees	1,779		1,765		1,792		
5		---------- =	30.44%	---------- =	29.88%	---------- =	30.93%	30.93%
6	Head Count - NYC DEP Employees	5,844		5,907		5,794		
7	Number of Vehicles - Water Supply	821		772		781		
8		---------- =	37.92%	---------- =	36.02%	---------- =	37.97%	37.97%
9	Number of Vehicles - NYC DEP	2,165		2,143		2,058		

Table 11A Historical Allocation of DEP Personal Services Costs

TABLE 11A
New York City Water Board
Cost of Supplying Water to Upstate Customers
Historical Allocation of DEP Personal Services
Costs to Facilities North of NYC

Line No.	Description	F.Y.2007 $	F.Y.2008 $	F.Y.2009 $
1	Executive	7,889,756	9,044,130	9,570,413
2	General Counsel	2,472,548	2,418,636	2,755,505
3	Public Affairs	1,501,413	2,049,527	2,379,392
4	Env. Health & Safety	2,478,709	2,671,531	3,460,630
5	Environ. Planning	3,043,183	4,011,386	5,604,903
6	Budget Office	2,682,906	3,169,794	3,617,535
7	Facilities Mgt & Constr	4,665,073	4,822,144	6,495,786
8	Human Res & Labor Rel	11,330,271	12,732,366	14,252,387
9	Chief Contract Office	4,966,542	3,143,316	5,685,078
10	Environ. Coordination	1,058,030	1,268,882	0
11	Addt'l Exec & Support	4,400,040	944,705	242,059
12	Total DEP Executive and Support Personal Services Costs	46,488,471	46,276,417	54,063,688
13	Allocation to Water Supply	30.44%	29.88%	30.93%
14	Personal Services Costs Related to Water Supply	14,151,778	13,827,303	16,721,113
15	Allocation to Facilities North of NYC	48.34%	49.75%	49.72%
16	**Personal Services Costs Related to Facilities North of NYC**	**6,840,745**	**6,879,614**	**8,314,377**

Notes:
(1) Personal service costs include salary and a fringe benefit rate of 51.0% in FY 2009.

Table 11B Projected Allocation of DEP Personal Services Costs

TABLE 11B
New York City Water Board
Cost of Supplying Water to Upstate Customers
Projected Allocation of DEP Personal Services
Costs to Facilities North of NYC

Line No.	Description	*Actual* F.Y.2009 $	F.Y.2010 $	*Projected Years* F.Y.2011 $	F.Y.2012 $	F.Y.2013 $	F.Y.2014 $
1	Executive	9,570,413	9,726,962	8,741,210	9,696,019	9,986,899	10,286,506
2	General Counsel	2,755,505	2,800,579	2,516,762	2,791,670	2,875,420	2,961,682
3	Public Affairs	2,379,392	2,418,313	2,173,235	2,410,620	2,482,938	2,557,426
4	Env. Health & Safety	3,460,630	3,517,238	3,160,793	3,506,049	3,611,230	3,719,567
5	Environ. Planning	5,604,903	5,696,586	5,119,281	5,678,464	5,848,818	6,024,282
6	Budget Office	3,617,535	3,676,709	3,304,103	3,665,013	3,774,963	3,888,212
7	Facilities Mgt & Constr	6,495,786	6,602,042	5,932,976	6,581,039	6,778,470	6,981,824
8	Human Res & Labor Rel	14,252,387	14,485,522	13,017,526	14,439,441	14,872,624	15,318,803
9	Chief Contract Office	5,685,078	5,778,072	5,192,509	5,759,691	5,932,482	6,110,456
10	Environ. Coordination	0	0	0	0	0	0
11	Addt'l Exec & Support	242,059	246,019	221,086	245,236	252,593	260,171
12	Total DEP Personal Services Costs	54,063,688	54,948,041	49,379,481	54,773,240	56,416,437	58,108,930
13	Allocation to Water Supply	29.88%	30.93%	30.93%	30.93%	30.93%	30.93%
14	Personal Services Costs Related to Water Supply	16,154,124	16,994,631	15,272,356	16,940,567	17,448,784	17,972,248
15	Allocation to Facilities North of NYC	49.75%	49.72%	49.72%	49.72%	49.72%	49.72%
16	**Personal Services Costs - Facilities North of NYC**	**8,037,297**	**8,450,381**	**7,594,000**	**8,423,498**	**8,676,203**	**8,936,489**

Notes:
(1) Personal service costs include salary and a fringe rate of 49% for FY 2010, 30% in FY 2011 and 40% in FY 2012-4.
(2) It is assumed that personal services costs will increase 3.0% per annum in FY 2011 - 2014.
(3) Upward or downward changes from year to year in a particular category of costs may reflect shifts in classifications for accounting purposes as opposed to changes in personal functions or responsibilities.

Table 12A Historical Allocation of DEP Other Than Personal Services Costs

TABLE 12A
New York City Water Board
Historical Cost of Supplying Water to Upstate Customers
Allocation of DEP Other Than Personal Services

Line No.	Description	F.Y. 2007 $	F.Y. 2008 $	F.Y. 2009 $
1	Accounting	123,003	106,591	111,711
2	Executive and Support	57,683	37,660	39,441
3	Fleet Administration	5,244,457	6,313,067	4,685,760
4	Public Affairs	472,937	1,157,179	417,327
5	Facilities Management and Construction	1,583,682	1,072,530	1,119,587
6	Management and Budget	2,677,650	3,308,213	6,763,722
7	Management Information Systems	2,024,237	5,077,917	3,671,431
8	Chief Engineer	61,439	62,413	68,601
9	Legal	133,993	82,932	99,869
10	Environmental Assessment	592,305	275,308	155,061
11	Telephone	3,456,205	3,639,384	3,232,268
12	Lefrak Administration Rents	4,750,587	4,188,629	4,276,646
13	Facility Management Rents	460,863	468,992	469,681
14	Management and Budget Environmental Health/Safety	216,009	808,689	1,144,326
15	Total OTPS to be Allocated	21,855,050	26,599,504	26,255,430
16	Allocation	30.44%	29.88%	30.93%
17	OTPS Allocation (line 15 X line 16)	6,653,000	7,947,880	8,120,423
18	Rents Other Than Lefrak	1,421,021	1,341,940	1,548,183
19	Lefrak Water Supply Rents	779,690	857,581	887,561
20	Total Rents (line 18 + line 19)	2,200,711	2,199,521	2,435,744
21	Motor Vehicle Operating Rents	1,255,519	1,337,650	1,410,137
22	Allocation	37.92%	36.02%	37.97%
23	Total Motor Vehicle Operating Rents (line 21 X line 22)	476,112	481,879	535,360
24	Motor Vehicle Parking	300,000	300,000	345,000
25	Allocation	19.22%	16.82%	18.38%
26	Total Motor Vehicle Parking (line 24 X line 25)	57,649	50,462	63,423
27	Cafeteria	366,228	316,234	323,905
28	Allocation	14.81%	12.51%	14.52%
29	Total Cafeteria (line 27 X line 28)	54,245	39,547	47,041
30	Total OTPS Costs Allocated to Water Supply at DEP (1)	9,441,718	10,719,288	11,201,992
31	Allocation to Facilities North of NYC	48.34%	49.75%	49.72%
32	OTPS Costs Related to Facilities North of NYC	5,071,099	5,333,258	5,570,059

Notes:
(1) Total OTPS costs allocated to DEP is equal to the sum of lines 17, 20, 23, 26, and 29.

Table 12B Projected Allocation of DEP Other Than Personal Services Costs

TABLE 12B
New York City Water Board
Cost of Supplying Water to Upstate Customers
Allocation of DEP Other Than Personal Services
Costs to Facilities North of NYC

Line No.	Description	*Actual* F.Y. 2009 $	F.Y. 2010 $	*Projected Years* F.Y. 2011 $	F.Y. 2012 $	F.Y. 2013 $	F.Y. 2014 $
1	Accounting	111,711	115,062	118,514	122,069	125,732	129,504
2	Executive and Support	39,441	40,624	41,843	43,098	44,391	45,723
3	Fleet Administration	4,685,760	4,826,333	4,971,123	5,120,256	5,273,864	5,432,080
4	Public Affairs	417,327	429,847	442,742	456,025	469,705	483,796
5	Facilities Management and Construction	1,119,587	1,153,174	1,187,769	1,223,402	1,260,104	1,297,908
6	Management and Budget	6,763,722	6,966,633	7,175,632	7,390,901	7,612,628	7,841,007
7	Management Information Systems	3,671,431	3,781,574	3,895,021	4,011,871	4,132,228	4,256,194
8	Chief Engineer	68,601	70,659	72,779	74,962	77,211	79,527
9	Legal	99,869	102,865	105,951	109,129	112,403	115,775
10	Environmental Assessment	155,061	159,713	164,504	169,439	174,523	179,758
11	Telephone	3,232,268	3,329,236	3,429,113	3,531,987	3,637,946	3,747,085
12	Lefrak Administration Rents	4,276,646	4,404,946	4,537,094	4,673,207	4,813,403	4,957,805
13	Facility Management Rents	469,681	483,771	498,284	513,233	528,630	544,489
14	Management and Budget Environmental Health/Safety	1,144,326	1,178,656	1,214,016	1,250,436	1,287,949	1,326,588
15	Transportation Enhancement	0	0	0	0	0	0
16	Total OTPS to be Allocated	26,255,430	27,043,093	27,854,386	28,690,017	29,550,718	30,437,239
17	Allocation	30.93%	30.93%	30.93%	30.93%	30.93%	30.93%
18	OTPS Allocation (line 16 X line 17)	8,120,423	8,364,036	8,614,957	8,873,405	9,139,608	9,413,796
19	Rents Other Than Lefrak	1,548,183	1,594,629	1,642,468	1,691,742	1,742,494	1,794,769
20	Lefrak Water Supply Rents	887,561	914,188	941,613	969,862	998,958	1,028,926
21	Total Rents (line 19 + line 20)	2,435,744	2,508,817	2,584,081	2,661,604	2,741,452	2,823,695
22	Motor Vehicle Operating Rents	1,410,137	1,452,441	1,496,014	1,540,895	1,587,122	1,634,735
23	Allocation	37.97%	37.97%	37.97%	37.97%	37.97%	37.97%
24	Total Motor Vehicle Operating Rents (line 22 X line 23)	535,360	551,421	567,964	585,003	602,553	620,629
25	Motor Vehicle Parking	345,000	355,350	366,011	376,991	388,301	399,950
26	Allocation	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%
27	Total Motor Vehicle Parking (line 25 X line 26)	63,423	65,326	67,286	69,304	71,384	73,525
28	Cafeteria	323,905	333,622	343,631	353,939	364,558	375,494
29	Allocation	14.52%	14.52%	14.52%	14.52%	14.52%	14.52%
30	Total Cafeteria (line 26 X line 27)	47,041	48,453	49,906	51,403	52,946	54,534
31	Total OTPS Costs Allocated to Water Supply at DEP (1)	11,201,992	11,538,052	11,884,194	12,240,720	12,607,941	12,986,179
32	Allocation to Facilities North of NYC	49.72%	49.72%	49.72%	49.72%	49.72%	49.72%
33	**OTPS Costs Related to Facilities North of NYC**	**5,570,059**	**5,737,161**	**5,909,276**	**6,086,554**	**6,269,151**	**6,457,225**

Notes:
(1) Total OTPS costs allocated to DEP is equal to the sum of lines 18, 21, 24, 27, and 30.
(2) It is assumed that OTPS costs will increase 3% per annum.

Table 13 Annual Water Consumption

TABLE 13
New York City Water Board
Cost of Supplying Water to Upstate Customers
Annual Water Consumption

Line No.	Fiscal Year	(A) System-Wide Consumption mg	(B) Upstate Consumption mg	Upstate as a % of Total [B]/[A]
1	1985	544,025	41,661	7.66%
2	1986	501,019	39,397	7.86%
3	1987	542,870	42,853	7.89%
4	1988	573,679	44,956	7.84%
5	1989	559,669	43,255	7.73%
6	1990	547,522	42,795	7.82%
7	1991	564,234	45,103	7.99%
8	1992	560,014	44,010	7.86%
9	1993	531,796	42,015	7.90%
10	1994	538,558	43,221	8.03%
11	1995	520,410	43,915	8.44%
12	1996	528,938	45,125	8.53%
13	1997	487,012	44,044	9.04%
14	1998	483,182	44,404	9.19%
15	1999	499,849	47,230	9.45%
16	2000	502,758	46,922	9.33%
17	2001	488,909	45,845	9.38%
18	2002	467,705	45,200	9.66%
19	2003	449,606	43,400	9.65%
20	2004	446,822	43,198	9.67%
21	2005	443,445	43,072	9.71%
22	2006	441,477	44,504	10.08%
23	2007	444,553	43,895	9.87%
24	2008	452,048	43,559	9.64%
25	2009	420,438	41,477	9.87%
Projections:				
25	2010	417,695	41,829	10.01%
26	2011	410,771	41,415	10.08%
27	2012	403,848	41,001	10.15%
28	2013	396,924	40,586	10.23%
29	2014	390,000	40,172	10.30%

Notes:

(1) Consumption projections are based on a regression analysis beginning in 2000.

(2) Equation used to calculate System-wide Consumption:
y=m(t)+b. Where (t) is a given year.
m= -6923.81543
b= 14334564

(3) Equation used to calculate Upstate Consumption:
y=m(t)+b. Where (t) is a given year.
m= -414.21
b= 874,382.88

Table 14 Projected Net Revenues From Hydroelectric Facilities

TABLE 14
NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION
NET REVENUE ESTIMATES FOR UPSTATE HYDRO-ELECTRIC FACILITIES (3)

	YEAR				
	2010	**2011**	**2012**	**2013**	**2014**
ASHOKAN & KENSICO					
NET REVENUE	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
NEVERSINK (1)					
REVENUES	**$ 2,758,989**	**$ 2,814,168**	**$ 2,870,452**	**$ 2,927,861**	**$ 2,986,418**
NYPA EXPENSES (2)	**$ 1,685,968**	**$ 1,719,687**	**$ 1,754,081**	**$ 1,789,162**	**$ 1,824,946**
NET REVENUE	**$ 1,073,021**	**$ 1,094,481**	**$ 1,116,371**	**$ 1,138,698**	**$ 1,161,472**
WEST DELAWARE,					
NET REVENUE (3)	**$ 75,908**	**$ 77,427**	**$ 78,975**	**$ 80,555**	**$ 82,166**
EAST DELAWARE (1)					
REVENUES	**$ 6,218,129**	**$ 6,342,491**	**$ 6,469,341**	**$ 6,598,728**	**$ 6,730,702**
NYPA EXPENSES (2)	**$ 1,159,263**	**$ 1,182,448**	**$ 1,206,097**	**$ 1,230,219**	**$ 1,254,823**
NET REVENUE	**$ 5,058,866**	**$ 5,160,043**	**$ 5,263,244**	**$ 5,368,509**	**$ 5,475,879**
SUMMARY					
TOTAL REVENUES	$ 9,053,025	$ 9,234,086	$ 9,418,768	$ 9,607,143	$ 9,799,286
TOTAL EXPENSES W/O TAXES	$ 2,845,230	$ 2,902,135	$ 2,960,178	$ 3,019,381	$ 3,079,769
NET REVENUE	**$ 6,207,795**	**$ 6,331,951**	**$ 6,458,590**	**$ 6,587,762**	**$ 6,719,517**

NOTES:

(1) All figures for Neversink and East Delaware except property taxes were prepared by the New York City Office of the Comptroller.

(2) Expenses include Direct Charges and Overhead for Neversink and East Delaware.

(3) Estimated annual increase in revenues is 2% per year, consistent with the assumptions used by the Office of the Comptroller.

Note: Reflects fiscal year revenue if available at the time of the Report.

Table 15 Comparison of Upstate Customer Billings vs. Cost of Service

TABLE 15
New York City Water Board
Cost of Supplying Water to Upstate Customers
Cost-of-Service Reconciliation

	Rate per Million Gallons (MG) (a)					
Fiscal Year	**Billed to Upstate Customers**	**Computed Cost to the Board**	**Upstate Consumption**	**Total Billed**	**Actual Cost**	**Underpayment**
1994 (b)	165.23	211.6	43,221	7,141,373	9,145,521	2,004,148
1995 (b)	174.18	229.87	43,915	7,649,115	10,094,741	2,445,626
1996 (b)	174.18	247.28	45,125	7,859,907	11,158,559	3,298,652
1997	227.95	309.55	44,044	10,039,830	13,633,820	3,593,990
1998	274.93	338.79	44,404	12,208,047	15,043,699	2,835,652
1999	342.97	348.31	47,230	16,198,439	16,450,646	252,208
2000	383.78	385.25	46,922	18,007,764	18,076,739	68,975
2001	414.37	414.88	45,845	18,996,834	19,020,215	23,381
2002	448.83	462.24	45,200	20,287,116	20,893,248	606,132
2003	485.71	522.99 (c)	43,400	21,079,814	22,697,766	1,617,952
2004	542.36	529.85 (c)	43,198	23,428,650	22,888,248	-540,402
2005	591.21	591.91 (d)	43,072	25,464,774	25,494,925	30,151
2006	617.79	623.47	44,504	27,494,064	27,746,847	252,782
2007	691.91	691.83	43,895	30,371,597	30,368,104	-3,493
2008	798.62	703.73	43,559	34,786,978	30,653,783	-4,133,195
2009	900.31	882.91	41,477	37,342,428	36,620,644	-721,784
				Total Underpayment 1994-2009		11,630,776
				Total Underpayment 2001-2009		-2,868,476

(a) From 1973 to 1992, customers using Croton water were charged $76.87 per million gallons and customers using Catskill/Delaware water were charged $103.72 per million gallons. Prior to the 1993 rate increase, communities using water from the Croton System were billed at a different regulated rate than communities using water from the Catskill/Delaware System. Since 1993, a uniform rate has been used for all upstate customers.

(b) The rates approved by NYSDEC were: $137.73 per million gallons for 1993, $158.31 for 1994 and $175.69 for both 1995 and 1996.

(c) The computed cost to the Board as shown above for 2003 and 2004 does not take into consideration the upstate share of the costs of defeasance of certain Authority bonds. Including the effects of the cost of defeasance, the rate per million gallons is $549.32 in 2003 and $560.58 in 2004. The City reserves the right to include such costs in the cost of service and the regulated rate. The basis for these costs is explained in Section 4 of the Report.

(d) The rate shown above for 2005 & 2006 includes the costs of defeasance in those years.