

NEW JERSEY WATER SUPPLY AUTHORITY

BASIS AND BACKGROUND STATEMENT

**PROPOSED AMENDMENTS TO N.J.A.C. 7:11-4.1, et seq. IN THE SCHEDULE OF
RATES, CHARGES AND DEBT SERVICE ASSESSMENTS
FOR THE SALE OF WATER FROM THE
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM**

**ADJUSTMENT OF OPERATIONS AND MAINTENANCE EXPENSE COMPONENT
TO REFLECT CHANGE IN SALES BASE AND OPERATING EXPENSE
FOR FISCAL YEAR 2017**

**ADJUSTMENT OF SOURCE WATER PROTECTION FUND COMPONENT TO
REFLECT NO CHANGE IN COMPONENT RATE
FOR FISCAL YEAR 2017**

**ADJUSTMENT OF DEBT SERVICE COST COMPONENTS TO
REFLECT BOND YEAR PAYMENTS DUE AND REQUIRED
FOR FISCAL YEAR 2017 AND CHANGE IN SALES BASE**

**ADJUSTMENT OF NJEIFP DEBT COMPONENT TO
REFLECT BOND YEAR PAYMENTS DUE AND REQUIRED
FOR FISCAL YEAR 2017 AND CHANGE IN SALES BASE**

Proposed Effective Date: July 1, 2016

Approved by the Board: 12/7/2015

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PART I – EXPLANATION OF PROPOSED REVISED RATE STRUCTURE

Overview of Rate Proposal for Fiscal Year 2017

(July 1, 2016 - June 30, 2017)

The New Jersey Water Supply Authority (Authority) is proposing to adjust its Schedule of Rates, Charges and Debt Service Assessments for the sale of water from the Manasquan Reservoir Water Supply System (System), to cover expenses for the Fiscal Year (FY) starting on July 1, 2016.

The Authority operates and maintains the System including the Intake Facilities located in Wall Township adjacent to Hospital Road, the Manasquan Reservoir located in Howell Township and 5 1/4 miles of 66-inch diameter pipeline which connects the Intake Facilities to the Reservoir. The Authority also operates and maintains a water treatment plant located on the same site as the Reservoir Intake Facilities and approximately 39,000 feet of transmission piping. This treatment plant/transmission system was constructed and is being operated by the Authority for the Southeast Monmouth Municipal Utilities Authority (SMMUA) on behalf of the Boroughs of Brielle, Spring Lake, Spring Lake Heights, Sea Girt and Wall Township, which have entered into agreements with SMMUA for the treatment/transmission of their portion of the supply from the System.

Summary of Proposed Adjustments

Initial Water Purchase Contracts of 15.008mgd (15.695mgd at July 1, 1990 and 14.980mgd at July 1, 2015) and Shorelands (.028mgd) delayed water contract effective July 1, 2006:

Component	Current (FY2016) Rates Per MG 7/1/2015 – 6/30/2016	Proposed (FY2017) Rates Per MG 7/1/2016 – 6/30/2017
Operations & Maintenance Component	\$386.00	\$432.87
Source Water Protection Fund Component	10.00	10.00
Debt Service Cost Component	636.61	669.79
NJEIFP Debt Component	24.79	25.10
TOTAL RATE	\$1,057.40/mg	\$1,137.76/mg

New Jersey American Water Delayed Water Purchase Contracts Effective July 1, 2001, October 1, 2002 and January 1, 2005 (4.435mgd):

Component	Current (FY2016) Rates Per MG 7/1/2015 – 6/30/2016	Proposed (FY2017) Rates Per MG 7/1/2016 – 6/30/2017
Operations & Maintenance Component	\$386.00	\$432.87
Source Water Protection Fund Component	10.00	10.00
Debt Service Cost Component	770.07	772.99
NJEIFP Debt Component	24.79	25.10
TOTAL RATE	\$1,190.86/mg	\$1,240.96/mg

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The General Rate Schedule for Operations and Maintenance (O&M) was last adjusted effective July 1, 2015 to cover the operating expenses of the System for FY2016. The FY2015 sales base was 20.158 million gallons per day (mgd). The Authority anticipates that the applicable raw water O&M sales base for FY2017 will decrease to approximately 19.443 mgd, a reduction of 715,000 gallons per day. The Authority estimates the initial sales base will decrease from 15.723 mgd to 15.008mgd. The delayed sales base will remain at 4.435mgd.

After the allocation of appropriate Headquarters General and Administrative costs to the System, the Authority anticipates \$2,986,938 in O&M component revenue required during FY2017 with an O&M rate component of \$432.87 per million gallons, an increase of \$46.87 per million gallons from FY2016, starting on July 1, 2016 (Schedule 20, page 41). The proposed operating expense budget for FY2017 is \$110,100 more than FY2016 and the proposed Capital Equipment Budget, net of depreciation reserve, is \$24,500 less than FY2016. In FY2017 there will be a \$10,000 contribution to the Sediment Reserve Fund, a \$120,000 contribution to the Renewal and Replacement Fund, a \$5,000 contribution to the Formal Dam Inspection Reserve, and a \$15,000 contribution to the High Voltage Testing Reserve Fund, the same as in FY2016. Now in FY2017 there will be a \$35,000 contribution to the Other Post Employment Benefits Reserve and a \$350,000 contribution to the Supplemental Renewal and Replacement Fund. See Budget Summary on page 19.

A credit of \$69,577.72 is owed from the Manasquan Reservoir System to the SMMUA Water Treatment Plant and Transmission System for actual FY2015 salaries and fringe expenses and will be applied to the CY2016 SMMUA budget (Schedule 15, pages 34-36).

Miscellaneous revenue and interest income in FY2017 is projected to increase by \$407,600

relative to FY2016 reflecting stable interest earnings (Schedule 16, page 37) and an increase in the use of year end surplus available from FY2015 (Schedule 17, page 38). Additionally, overdraft revenue of \$27,609 is available from the summer of 2015.

The System was financed with loans from the State of New Jersey and a Debt Service Assessment for contracts, effective as of July 1, 1990, was established to cover debt service payments on the initial loan of \$63,600,000 at a set interest rate of 7.15 percent and payment of the interim completion loan of \$7,416,000 at an interest rate of 7.16 percent. During FY1992 the State of New Jersey reduced the interest rate on the completion loan to 6.24 percent. During FY1997, the Authority negotiated an agreement with the State of New Jersey, which reduced the interest rate on the \$63,600,000 original State Loan Notes from 7.15 percent to 5.93 percent effective for the payments due on or after August 1998. The Debt Service component of the rate has been adjusted in the past to reflect the revised debt service schedules.

In August of 2005, the Authority refunded the current portion of the State Loan Notes and the Completion Notes at an average coupon of 4.83 percent and net present value savings of \$6.187 million. The terms of the bonds are 15 and 25 years respectively. The bond proceeds also fully funded the Debt Service Reserve Account and debt service coverage must remain at 120 percent through the life of the bonds.

The Debt Service component of the rate for the Initial Water Purchase Contracts will be \$669.79 (an increase of \$33.18) and \$772.99 (an increase of \$2.92) for the Delayed Water Purchase (DWP) Contracts in FY2017. These changes reflect 120 percent real debt service coverage.

The Authority established a Source Water Protection Fund Component in FY2004 dedicating \$15.00 per million gallons to protect the quality and quantity of water in the Manasquan Water Supply System. The Authority decreased the rate component by \$5.00 per million gallons from \$15.00 to \$10.00 for this fund in FY2016 and recommends no change in FY2017.

The Authority closed on a loan to the New Jersey Environmental Infrastructure Financing Program (NJEIFP) on May 3, 2012 to finance the construction of a building structure over the Intake Pump Station and traveling water screens to protect the infrastructure from degradation by the elements. The final interest on the loan is based on 75 percent at zero interest and 25 percent market rate with coupons up to 5 percent for an effective interest rate of .8 percent over the twenty year life of the loans. The rate component of \$25.10 per million gallons in FY2017) is required to cover debt service payments in accordance with the schedule and is an increase of \$.31 over the FY2016 rate of \$24.79 per million gallons.

The base contract O&M Rate (\$432.87), Source Water Protection Program Rate (\$10.00), Debt Service Rate (\$669.79) and NJEIFP Debt Rate (\$25.10) comprise the total base contract rate for raw water of \$1,137.76 per million gallons, and represent an increase of \$80.36 per million gallons relative to FY2016. This base contract rate is charged to all uninterruptible service contracts executed prior to July 1, 1990 (and renewed at July 1, 2015), the commencement date of Manasquan Reservoir System operations, and one Delayed Water Purchase contract with Shorelands Water Company executed on July 1, 2006. In order for its customers to be assessed the base contract rate

on the .028mgd delayed contract, Shorelands Water Company prepaid the net present value of the difference between the initial water purchase contracts debt service schedule and the delayed water purchase contracts debt service schedule.

The total rate for delayed water purchase contracts in FY2017 is \$1,240.96 per million gallons representing an increase of \$50.10 per million gallons relative to the FY2016 delayed water purchase rate. The O&M Component (\$432.87), the Source Water Protection Fund Component (\$10.00), the Debt Service Rate Component (\$772.99) and NJEIFP Debt Rate (\$25.10) comprise the total rate.

Table 1 (page 15) contains a summary of the proposed base contract rate and delayed water purchase contract rate components. The proposed rates shown in Table 1 are effective July 1, 2016 through June 30, 2017. These rates are based upon the projected operating costs and reflect an estimated contracted sales base of 19.443mgd.

Table 2 (page 16) is a twenty-year history of the total initial water purchase contract annual water rate.

Table 3 (page 17) is a fifteen-year history of the combined delayed water purchase contract annual water rates.

Water use payments are to be made quarterly with due dates of October 10, 2015, January 10, 2016, April 10, 2016 and July 10, 2016.

The balance of this document contains a further discussion of the individual rate components, a Schedule of Events and detailed supporting information for the proposed rate adjustment.

Schedule of Events

A pre-public hearing on the proposed rate adjustment is scheduled at 11:00 a.m. on Thursday, January 7, 2016, at the Authority's Manasquan Administration Building, Hospital Road, Wall, New Jersey.

A public hearing on the proposed rate adjustment is scheduled at 11:00 a.m. on Thursday, **February 4, 2016, also at the Authority's Manasquan Administration Building in Wall, New Jersey.** The public hearing record is scheduled to close on March 14, 2016.

The Authority will take final action on the proposed rate adjustment at its June 6, 2016 meeting at the Authority's Administration Building in Clinton, New Jersey.

Distribution of Headquarters General and Administrative Costs and Insurance Costs to all Operating Systems

On July 1, 1990 the Authority placed the Manasquan Reservoir Water Supply System in operation to provide an untreated water supply for use throughout Monmouth County. In addition to this major System, the Authority also began operation of the Water Treatment Plant and Transmission System for the Monmouth County Improvement Authority (MCIA) on July 1, 1990. The Boroughs of Brielle, Spring Lake, Spring Lake Heights, Sea Girt and Wall Township entered into agreements with the MCIA for this treatment/transmission system, which treats and conveys their portion of the supply from the Manasquan Reservoir Water Supply System. In December 2008, the five member communities created the Southeast Monmouth Municipal Utilities Authority and in September 2009 purchased the Water Treatment Plant from the MCIA and the Authority continues to operate the Water Treatment Plant. The Authority also operates the Spruce Run/Round Valley Reservoirs Complex and the Delaware and Raritan Canal Water Supply Transmission Complex comprising the Raritan Basin System, headquartered in Clinton, New Jersey. As a result, the Authority is operating, maintaining and managing three distinct Systems each with its own budget, cost accountability and revenue stream.

The Authority's headquarters staff located in Clinton provides general and administrative support services for all three Systems. These services include, but are not limited to, Financial Management, Payroll, Human Resources, Purchasing, Contract Administration, Risk Management, and overall management.

In order to equitably assess the customers of each of the three Systems, the Authority previously retained the services of an auditing firm to develop a methodology for the allocation of the Headquarters General and Administrative costs to all three operating Systems. After the close of each fiscal year, the Authority's current Auditors provide the Authority with their findings as to the adjustment, if any, of the allocation factors and the actual audited expenditures for the fiscal year.

The audit report for the immediately preceding fiscal year ending June 30 is available during November. Each September the Authority formulates the proposed budgets for the upcoming fiscal year starting on the following July 1. The adjusted allocation factors, if any and the audited expenditures for the previous fiscal year are used to establish a debit or credit for each of the three operating Systems. This debit or credit is applied to the budgets being prepared each September for the upcoming fiscal year starting on July 1.

An independent auditor performed the Authority's fiscal year 2015 audit. The audit included a review of the allocation factors, as well as the actual audited expenditures. The appropriate adjustments have been made to the FY2017 budget based on the FY2015 audit. A copy of the Auditor's report on the allocation of the Headquarters General and Administrative costs is included in the Appendices to the rate proposal package for each System.

Insurance costs are also allocated to each System based upon the recommendations of the Authority's Risk Management Consultant. See the rate proposal package for additional information.

Distribution of Costs Between the Manasquan Reservoir System and the Treatment Plant/Transmission System

A common staff operates the System and the Treatment Plant/Transmission System. Salaries are allocated between the two Systems based upon time records that were kept during the fiscal year ending on June 30, 2015. The percentages used to provide the basis for the salary allocation for FY2017, were established from the time records from FY2012 through FY2015. A listing of all positions and the percentage of each position's time assigned to each of the two Systems appear on Schedule 2 (page 21).

Detailed budgets have been prepared for the Manasquan Reservoir System and the Treatment Plant/Transmission System. Each System's budget has three main categories of annual operational expenses in addition to the allocation of headquarters overhead. The three categories include (a) salaries and fringes (b) direct operation and maintenance expenses and (c) general and administrative expenses. Part 2 of this document provides more information on both Systems including detailed summaries of the projected line item budget figures for General and Administrative expenses and Operations and Maintenance expenses for FY2017.

Analysis of Significant Changes in Operations and Maintenance Expenses and Sales Base - Manasquan Reservoir System

Overview of Sales Base

On July 1, 1990 the Authority placed the Manasquan Reservoir Water Supply System in operation to provide an untreated water supply for use throughout Monmouth County. Twelve of the 13 original water purchase contracts expired after a 25-year term, on June 30, 2015 and were renewed effective July 1, 2015. Five are two-party contracts with the New Jersey Water Supply Authority. These are the five treated water customers (Wall Township and the Boroughs of Brielle, Sea Girt, Spring Lake and Spring Lake Heights) of the Southeast Monmouth Municipal Utilities Authority's water treatment plant operated by the New Jersey Water Supply Authority. One is a three party contract (Keyport Borough) among the Authority, the customer and Shorelands Water Company for the delivery of water through Shorelands' distribution system. Six contracts (the Boroughs of Avon, Belmar, Matawan, Red Bank and Lake Como, and Shorelands Water Company) are three party contracts among the Authority, the customers and New Jersey American for the provision of treated water from New Jersey American. The final customer contract, New Jersey American, consolidated the initial water purchase and delayed water purchases for a total of 12.5mgd and has an expiration date of June 30, 2031. The total sales base through FY2015 was 20.560mgd, was expected to drop to 20.158mgd as reflected in the FY2016 Basis and Background Document and is actually 19.443mgd at renewal effective July 1, 2015.

Overview of Projected Operational Expenses

The Authority's proposed FY2017 Manasquan Reservoir Operating Expense budget is \$110,100 more than the current FY2016 budget. The allocation of Authority Headquarters General and Administrative Expenses in FY2017 remains the same as in FY2016 and the Capital Equipment budget for FY2017 is \$24,500 less than FY2016. There will be no FY2017 contribution to the Depreciation Reserve account, Insurance Reserve, or Pumping Reserve. There will be a \$10,000 contribution to the Sediment Reserve, a \$5,000 contribution to the Formal Dam Inspection Reserve, and a \$15,000 contribution to the Reserve for High Voltage Testing. Formal Dam Inspections and High Voltage Testing are performed every three years and rather than raising the entire amount every third year, budget stability is created by raising one third of the cost every year. There will be a normal contribution to the Renewal and Replacement Fund of \$120,000 and an extra contribution to the Renewal and Replacement Fund of \$350,000 funded by a one-time infusion of operating surplus. There will be a contribution of \$35,000 to a newly created reserve for other post-employment benefits (accrued sick leave payments for retirees). Miscellaneous revenue and interest income increases by \$413,300. These factors contribute to a \$183,870 increase in the total FY2017 O&M Component requirement relative to FY2016 (\$2,803,068 vs. \$2,986,938). (Budget Summary on page 19)

Total O&M Direct Expenses are decreasing by \$1,732 from FY2016. The largest contributor is a decrease in electricity offsetting minor increases in other expense categories. The Authority is again funding a water quality gaging station upstream at Squankum which will be operated by the USGS and will be useful to the Authority in attempting to determine the root cause of changes to water quality and color in the Manasquan River Basin over the past several years. The Authority will transfer \$40,000 per year from the Source Water Protection Fund to cover the cost of this gaging station. General and Administrative Expenses allocated to the Reservoir System are decreasing by \$13,070 from FY2016.

Salaries, Overtime and Benefits

Authority employees are operating currently without a contract. The previous contract expired June 30, 2015. The FY2017 budget assumes a 1.75% cost of living adjustment payable July 1, 2016. The International Federation of Professional and Technical Engineers (IFPTE), AFL-CIO, represents the Authority's Maintenance, Craft and Security Units and the Communications Workers of America (CWA) represents the Authority's Administrative and Clerical, Primary Level and Higher Level Supervisors Units.

Due to a law change requiring certain managers to be unionized, two managers from the Raritan system and one from the Manasquan system joined the International Brotherhood of Electrical Workers (IBEW) as of March 21, 2015.

The initial estimate from the State of New Jersey for pension expense payable on April 1, 2016 is not yet available. The Authority has built in 20 percent per year growth in that expense item over actual FY2015. Although increases have stabilized in the last three years, there is still a level of uncertainty in this expense item because the pension system remains significantly underfunded.

Salary and fringe is increasing by a total of \$122,561 for FY2017, however the portion allocated to the Reservoir System is increasing by \$124,900 reflecting that the four-year averaging of allocation between the Reservoir System and the Treatment Plant projects the movement of more salary dollars to the Reservoir System from the Treatment Plant. The number of budgeted positions in FY2017 is 27, which is the same as FY2016. (Schedule 2, page 21) The Authority is budgeting 69 percent of the salary budget for fringe benefits in FY2017 which is inclusive of retiree medical.

In FY2017, 49 percent of total salary and fringe is allocated to the Reservoir System which is a slight increase from FY2016 (47 percent). This gradual shift in salary time (manager, facilities mechanics, and equipment operators) allocable from the Reservoir System to the Treatment Plant is due to the completion of construction of major water treatment plant upgrades including the ground level finished water storage, the caustic system and the lagoons during 2014 and 2015.

Retiree Health Benefits

Employees who retired with a minimum of 25 years of service prior to July 1, 1997 are entitled to paid health benefits. For those who retire after July 1, 1997, a co-payment is required. The Authority retiree health benefits expense item is decreasing in FY2017 from \$201,500 to \$194,800. The original retirement estimates for FY2016 were not realized and unless there are an unusually high number of retirements in FY2017, the line item should be adequate. Because there are only four retirees at present in the Manasquan System, each additional retiree will drive a large increase on a percentage basis. The FY2017 budget plans for three additional retirees, the same number that was budgeted for FY2016 but not realized.

Insurance Program

The Authority is recommending a \$5,482 decrease in insurance expenses for FY2017 reflecting general market conditions based on the advice of the Authority's insurance broker and consultant. As always, the Authority will review the rate projection for FY2017 in February 2016 to determine if adjustments are necessary.

Allocation of the Primary, Umbrella and Public Officials Liability insurance costs between the three Systems is based upon proportionate water sales. The Automobile Liability cost is allocated based upon the assignment of vehicular equipment to each System. The cost of the Business Property coverage is allocated on the basis of insured values for each System and the Workers Compensation premiums are allocated on the basis of salaries for each System.

Fees and Permits

Staff proposes a FY2017 budgetary line item of \$33,900 for fees and permits reflecting only a slight increase over FY2016.

Headquarters General and Administrative Expenses

Budgeted Headquarters General and Administrative Expenses in FY2017 total \$823,329 of which, \$709,165 is charged to the Manasquan Reservoir System and \$114,164 is charged to the Manasquan Water Treatment Plant (Schedule 13, page 32). Because actual audited Headquarters Expenses were lower than the budget for FY2015 by \$79,269 that difference must be credited in FY2017 resulting in an adjusted charge to the Reservoir System of \$640,000. Headquarters charges are driven primarily by salary and fringe.

Interest Income and Miscellaneous Revenue

The projected interest earnings on reserve funds for FY2017 are \$11,200. This reflects no change relative to FY2016 and is based upon an interest rate of .25 percent for short-term investments and a rate of 1.30 percent on long-term investments (See Schedule 16, page 37).

Reserve Contributions

Consistent with FY2016, there will be no FY2017 contribution to the Depreciation Reserve account, the Insurance Reserve or the Pumping Reserve. There will be a \$10,000 contribution to the Sediment Reserve. There will be a regular \$120,000 contribution to the Renewal and Replacement Fund, a \$5,000 contribution to the Reserve for Formal Dam Inspections and a \$15,000 contribution to the Reserve for High Voltage Testing. Formal Dam Inspections and High Voltage Testing are performed every three years and rather than raising the entire amount every third year, budget stability is created by raising one third of the cost every year. There are two new reserve fund contributions in FY2017. There will be a supplemental contribution of \$350,000 to the Renewal and Replacement Fund. The Authority requires a minimum balance of \$2 million in the fund to cover dam emergencies, and pipeline and pump emergent repairs. Because the system is aging, there are normal maintenance expenditures included in the five year plan that will draw the fund down below the \$2 million requirement. Finally, the Authority will fund a reserve for other post-employment benefits (accrued sick leave) in order to assure that sufficient funds are available to pay out sick benefits as this number is not regularly budgeted in salary and fringe.

Review of Reserve Accounts

Depreciation Reserve Account

This reserve is intended to provide for the replacement of Authority machinery and equipment with a value of \$1,000 or more and a useful life in a range from three to ten years and to cushion the impact of replacement equipment purchases in order to provide more stable rates. Depreciation Reserve should equal accumulated depreciation for this class of assets. At June 30, 2015, the balance in Depreciation Reserve of \$448,000 is equal to accumulated depreciation. Therefore, no contribution is required in FY2017.

Self Insurance Reserve

The Self Insurance Fund (\$275,118 balance at August 31, 2015) was established for the System to allow the Authority to make choices between underwritten risk and self-insurance risk in the face of increased prices in the insurance market. No contribution is being made to the fund in FY2017.

Reserve for Operations and Maintenance

A working cash reserve must be maintained at a level, which reflects the amount of the regular annual operating costs plus an allowance for possible extraordinary requirements. The level of this reserve must equal 25 percent of the Annual O&M Budget. An initial contribution of \$125,000 was budgeted in FY1991. A contribution of \$125,000 was budgeted in FY1992. The contribution for FY1993 was \$50,000 because of the availability of additional revenue from FY1991.

An additional \$100,000 was added during FY1993 from the receipt of delinquent revenue and resulted in full funding of this reserve. The Reserve for Operations and Maintenance Fund is fully funded as of June 30, 2015 and as a result, no contribution will be needed in FY2017.

Renewal & Replacement Reserve

The Renewal & Replacement Reserve is to be used for costs of capital improvements including repairs to facilities not covered by insurance and payment of extraordinary O&M costs. As per the terms of the project financing, this Reserve is to be funded by the excess debt service coverage revenue after the Debt Service Reserve requirement has been accumulated. An initial deposit of \$24,287 had been made into this account from overdue revenue received during FY1993. Excess annual debt service coverage amounts were later transferred into this fund. The balance in the Fund as of August 31, 2015 is \$2,217,362. Excess interest earnings on the Debt Service Reserve and Debt Service Funds and excess debt service coverage revenue as well as a direct deposit of \$120,000 provide the source of funds for this reserve account. A supplemental deposit of \$350,000 will fund the capital plan for the Manasquan System through FY17 and allow \$2 million to remain in the account to assure funds are available for the dam, pipeline, and pumps in the event that emergent repairs are needed.

Source Water Protection Fund Rate Component

The Authority established its Watershed Protection Unit in 1999 to implement a watershed management program for the Raritan River Basin pursuant to a Memorandum of Agreement with the New Jersey Department of Environmental Protection. Primary functions of the Unit are planning for watershed protection, development and implementation of projects that improve protection of water supply.

As an extension of that program during the period of FY2004, the Authority began the Manasquan Watershed Protection Initiative, and established the Source Water Protection Fund for

the purpose of protecting the quality and quantity of water in the Manasquan Reservoir Water Supply System. The fund is used for three purposes in cooperation with State, local and nonprofit partners: (1) administrative assistance in the preservation of those properties in the Manasquan River Basin that are critical to the long-term protection of water quality and quantity in the Manasquan Reservoir Water Supply System as they may affect Authority customers; (2) improved management of land development by municipal, county, and State government to protect both water quality and flow to and within Authority facilities; and (3) remedial projects to improve water quality from existing conditions.

Whenever possible, the Authority will seek to obtain funding from other sources to augment or match its expenditures from the Source Water Protection Fund. The balance in the Source Water Protection Fund at August 31, 2015 is \$1,499,928. Because of this level of funding the Authority is reducing the Source Water Protection Fund Component from \$15.00 per million gallons to \$10.00 per million gallons in FY2016 and proposes a rate of \$10.00 per million gallons again in FY2017.

Optional Water Use Schedule

The Authority continues allowing the use of an Optional Water Use Schedule when the total of all uninterruptible supply contract diversions is equal to or less than 25mgd, the Purchaser may operate pursuant to an optional water use schedule wherein the Purchaser may divert up to 20 percent in excess of the total contracted amount for any given month.

Overdraft Service

The Authority continues to charge an Overdraft Service Rate by recognizing that daily overdraft service rates apply to all uninterruptible service contract customers, and by recognizing that the daily overdraft service rate is a multiple of the initial water purchase rate.

Other Rule Amendments

There are no other rule amendments for FY2017.

PART II – DETAILED SUPPORTING INFORMATION

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Table 1 - Summary Of Proposed Fiscal Year 2017 Adjustments

BASED ON PRESENT USAGE

The rates, charges and debt service assessments listed below shall be paid for raw water allocated by contract from the Manasquan Reservoir System for the **base contracts effective as of July 1, 2015 (14.980mgd), and Shorelands (.028mgd) delayed water contract effective July 1, 2006:**

I. July 1, 2016 to June 30, 2017

Rate Component	Current	Original Proposal 12/07/15	Difference	Percentage Increase (Decrease)
Operations & Maintenance Expense Component	\$386.00	\$432.87	↑ \$46.87	12.14%
Source Water Protection Fund Component	\$10.00	\$10.00	→ \$0.00	0.00%
Debt Service Cost Component	\$636.61	\$669.79	↑ \$33.18	5.21%
NJEIFP Debt Component	\$24.79	\$25.10	↑ \$0.31	1.24%
Total Rate	\$1,057.40/mg	\$1,137.76/mg	↑ \$80.36	7.60%

The rates, charges and debt service assessments listed below shall be paid for raw water allocated by contract from the Manasquan Reservoir System for all **New Jersey American Water delayed water purchase contracts effective: July 1, 2001 (1mgd), October 1, 2002 (1.935mgd), January 1, 2005 (1.500mgd):**

II. July 1, 2016 to June 30, 2017

Rate Component	Current	Original Proposal 12/07/15	Difference	Percentage Increase (Decrease)
Operations & Maintenance Expense Component	\$386.00	\$432.87	↑ \$46.87	12.14%
Source Water Protection Fund Component	\$10.00	\$10.00	→ \$0.00	0.00%
Debt Service Cost Component	\$770.07	\$772.99	↑ \$2.92	0.38%
NJEIFP Debt Component	\$24.79	\$25.10	↑ \$0.31	1.24%
Total Rate	\$1,190.86/mg	\$1,240.96/mg	↑ \$50.10	4.21%

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Table 2 - Rate History of Water Charges per Million Gallons of Raw Water - Initial
FY1997-FY2017

Initial Water Purchaser 14.980 mgd July 1, 2015
Shorelands .028 mgd July 1, 2006

<u>Effective Date</u>	<u>O&M Charge</u>	<u>Source Water Protection</u>	<u>Debt Repayment 2/1/91-8/01/20</u>	<u>NJEIFP Debt Component</u>	<u>Total Charge per MG</u>	<u>Percent Increase (Decrease)</u>
July 1, 1996	316.58		748.57		\$1,065.15	-3.65%
July 1, 1997	284.09		654.83		\$938.92	-11.85%
July 1, 1998	263.56		569.36		\$832.92	-11.29%
July 1, 1999	114.13		581.18		\$695.31	-16.52%
July 1, 2000	145.81		583		\$728.81	4.82%
July 1, 2001	212.29		585.63		\$797.92	9.48%
July 1, 2002	212.35		582.62		\$794.97	-0.37%
July 1, 2003	201.14	15	578.83		\$794.97	0.00%
July 1, 2004	321.69	15	584.95		\$921.64	15.93%
July 1, 2005	295.41	15	584.6		\$895.01	-2.89%
July 1, 2006	295.41	15	522.86		\$833.27	-6.90%
July 1, 2007	302.52	15	528.54		\$846.06	1.53%
July 1, 2008	302.52	15	566.59		\$884.11	4.50%
July 1, 2009	396.79	15	568.26		\$980.05	10.85%
July 1, 2010	396.79	15	568.69		\$980.48	0.04%
July 1, 2011	347.39	15	618.09	35.42	\$1,015.90	3.61%
July 1, 2012	345.95	15	619.53	35.42	\$1,015.90	0.00%
July 1, 2013	356.61	15	619.87	24.42	\$1,015.90	0.00%
July 1, 2014	356.61	15	619.87	24.42	\$1,015.90	0.00%
July 1, 2015	386.00	10.00	636.61	24.79	\$1,057.40	4.09%
July 1, 2016	432.87	10.00	669.79	25.10	\$1,137.76	7.60%

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Table 3 - Rate History of Water Charges per Million Gallons of Raw Water - Delayed
FY2002-FY2017

Delayed Water Purchaser NJ-American 1 mgd July 1, 2001
1.935 mgd October 1, 2002
1.500 mgd January 1, 2005

Effective Date	O&M Charge	Source Water Protection	Debt Repayment <u>2/1/02-8/01/31</u>	NJEIFP Debt Component	Total Charge per MG	Percent Increase (Decrease)
July 1, 2001	199.88		835.62		\$1,035.50	
July 1, 2002	212.35		835.61		\$1,047.96	1.20%
July 1, 2003	201.14	15.00	849.31		\$1,065.45	1.67%
July 1, 2004	321.69	15.00	849.31		\$1,186.00	11.31%
July 1, 2005	295.41	15.00	853.85		\$1,164.26	-1.83%
July 1, 2006	295.41	15.00	763.61		\$1,074.02	-7.75%
July 1, 2007	302.52	15.00	764.44		\$1,081.96	0.74%
July 1, 2008	302.52	15.00	762.28		\$1,079.80	-0.20%
July 1, 2009	396.79	15.00	763.24		\$1,175.03	8.82%
July 1, 2010	396.79	15.00	756.19		\$1,167.98	-0.60%
July 1, 2011	347.39	15.00	770.90	35.42	\$1,168.71	0.06%
July 1, 2012	345.95	15.00	772.12	35.42	\$1,168.49	-0.02%
July 1, 2013	356.61	15.00	772.46	24.42	\$1,168.49	0.00%
July 1, 2014	356.61	15.00	772.46	24.42	\$1,168.49	0.00%
July 1, 2015	386.00	10.00	770.07	24.79	\$1,190.86	1.91%
July 1, 2016	432.87	10.00	772.99	25.10	\$1,240.96	4.21%

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule of Events

(N.J.A.C. 7:11-4.1 et.seq.)
To become effective July 1, 2016

2015

- SEPTEMBER 18 Advise Water Users of informal meeting.
- NOVEMBER 5 Informal meeting with Water Users – 11:00 AM.
- DECEMBER 7 Board reviews and approves proposed Rates.
- 17 Mail Official Notice to water customers, Rate Payer Advocate, interested parties and advertise in newspapers.

2016

- JANUARY 4 Publication in the New Jersey Register.
- 7 Pre-Public Hearing – 11:00 AM (within 45 days of Official Notice).
Deadline for responses to inquires received prior to pre-public hearing.
- 25 Deadline for receipt of comments to be addressed at Public Hearing
(15 days after pre-public hearing).
- FEBRUARY 4 Public Hearing Meeting. (SR Administration Building) – 11:00 AM
Deadline for responses to inquires received between
pre-public and public hearing.
- 22 Written responses to questions raised at Hearing (within 10
business days of the public hearing).
- MARCH 4 NJ Register Comment Period Ends.
- 14 Public Hearing record closes (25 business days after
Public Hearing).
- JUNE 6 Board approval of FY 2017 Rates and Budgets.
- JULY 1 Effective date.

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Proposed Fiscal Year 2017 Budget Summary

(07/01/16-06/30/17)

	ADOPTED F/Y2016 <u>Reservoir Budget</u>	PROPOSED F/Y2017 <u>Reservoir Budget</u>
Proposed Operating Expense Budget (Schedule 1)	\$ 2,619,460	\$ 2,729,560
Allocation of Headquarters General & Administrative Expenses to the Manasquan Reservoir System (Schedule 13)	<u>\$ 640,000</u>	<u>\$ 640,000</u>
Proposed Total Expense Budget	\$ 3,259,460	\$ 3,369,560
Proposed Capital Equipment Budget (Schedule 14)	\$ 96,100	\$ 71,600
Contribution to Reserve Funds		
- Sediment Reserve	\$ 10,000	\$ 10,000
- Formal Dam Inspection Reserve	\$ 5,000	\$ 5,000
- Renewal & Replacement Fund	\$ 120,000	\$ 120,000
- High Voltage Testing Reserve	\$ 15,000	\$ 15,000
- Other Post Employment Benefits Reserve	\$ -	\$ 35,000
- Supplemental Renewal & Replacement	\$ -	\$ 350,000
Adjustment for F/Y15 Salary and Fringe Expenses to be paid (from)/to WTP/TS Account (Schedule 15)	\$ -	\$ 69,578
Adjustment for F/Y14 Salary and Fringe Expenses to be paid (from)/to WTP/TS Account	<u>\$ (51,292)</u>	
Total Budget Requirements	<u>\$ 3,454,268</u>	<u>\$ 4,045,738</u>
Interest Earnings on Funds (Except Renewal and Replacement and Depreciation Reserve Fund) (Schedule 16)	\$ (11,200)	\$ (11,200)
Unanticipated Revenue (Schedule 17)	<u>\$ (640,000)</u>	<u>\$ (1,047,600)</u>
Total Miscellaneous Revenue & Interest Income	<u>\$ (651,200)</u>	<u>\$ (1,058,800)</u>
Net Amount to be paid for O & M Component	<u>\$ 2,803,068</u>	<u>\$ 2,986,938</u>

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 1 - Total Operations & Maintenance Budget

Fiscal Year 2017

	F/Y2015 Reservoir Actual	F/Y2016 Reservoir Adopted	F/Y2017 Reservoir Proposed
Salaries & Fringe Benefits (Schedule 2)	\$1,317,662	\$1,432,000	\$1,556,900
O & M Direct Expense (Schedule 3)	902,749	1,072,500	1,070,768
G&A Expenses (Schedule 5)	109,267	114,960	101,890
Total Operations & Maintenance Budget	\$2,329,678	\$2,619,460	\$2,729,558
Estimate		\$2,619,460	\$2,729,560

Summary of O & M Expenses for Reservoir and Treatment Plant/Transmission System

	F/Y2015 Actual		F/Y2016 Adopted		F/Y2017 Proposed	
	Reservoir	WTP/TS	Reservoir	WTP/TS	Reservoir	WTP/TS
Salaries/Fringe	\$1,317,662	\$1,363,539	\$1,432,000	\$1,604,350	\$1,556,900	\$1,602,011
O & M Direct Expense	902,749	878,791	1,072,500	1,094,200	1,070,768	1,059,546
G & A Expense	109,267	80,008	114,960	85,540	101,890	87,360
Total	\$2,329,678	\$2,322,338	\$2,619,460	\$2,784,090	\$2,729,558	\$2,748,917

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 2 - Labor Projection
Fiscal Year 2017 (7/01/16-6/30/17)

TITLES	RANGE	SALARY	FRINGE BENEFITS	OVERTIME	CLOTHING ALLOWANCE	SHIFT DIFFERENTIAL	TOTAL	ALLOCATION RESERVOIR %	AMOUNT RESERVOIR	ALLOCATION WTP/TS %	AMOUNT WTP/TS
Manager	34	117,000.00	75,281.00	0.00	0.00	0.00	192,281.00	60%	115,400.00	40%	76,881.00
Project Engineer II	26	92,500.00	59,517.00	0.00	0.00	0.00	152,017.00	50%	76,100.00	50%	75,917.00
Water Supply Tech.	14	51,800.00	33,986.00	470.00	550.00	0.00	86,806.00	58%	50,400.00	42%	36,406.00
Administrative Assistant	18	65,300.00	42,016.00	0.00	0.00	0.00	107,316.00	54%	58,000.00	46%	49,316.00
Supervisor Technical Facilities Maint	23	82,200.00	63,614.00	16,117.00	550.00	0.00	162,481.00	42%	68,300.00	58%	94,181.00
Sr. Water Supply Tech.	20	71,600.00	47,613.00	1,849.00	550.00	0.00	121,612.00	48%	58,400.00	52%	63,212.00
Maintenance Worker I	10	45,000.00	29,308.00	0.00	550.00	0.00	74,858.00	94%	70,300.00	6%	4,558.00
Supervisor Operations	28	94,000.00	60,482.00	0.00	0.00	0.00	154,482.00	25%	38,600.00	75%	115,882.00
Equipment Operator	12	49,200.00	32,010.00	0.00	550.00	0.00	81,760.00	90%	73,600.00	10%	8,160.00
Foreman Bldg & Grounds Maint	19	68,400.00	45,408.00	1,622.00	550.00	0.00	115,980.00	89%	103,200.00	11%	12,780.00
Foreman Facilities Maintenance	20	68,100.00	44,497.00	507.00	550.00	0.00	113,654.00	47%	53,400.00	53%	60,254.00
Facilities Mechanic (3 Positions)	18	193,500.00	126,414.00	1,321.00	1,650.00	0.00	322,885.00	47%	151,700.00	53%	171,185.00
Supervisor Plant Operator	22	78,500.00	53,903.00	4,655.00	550.00	70.00	137,678.00	36%	49,600.00	64%	88,078.00
Maintenance Worker I Operations	10		29,640.00	516.00	550.00	0.00	75,706.00	92%	69,700.00	8%	6,006.00
Reservoir System Operator (5 Positions)	15	267,500.00	194,614.00	30,385.00	2,750.00	1,830.00	497,079.00	97%	482,200.00	3%	14,879.00
Plant Operator (2 Positions)	20	141,600.00	102,419.00	16,477.00	1,100.00	0.00	261,596.00	5%	13,000.00	95%	248,596.00
Plant Operator (4 Positions)	19	<u>270,400.00</u>	<u>196,039.00</u>	<u>32,081.00</u>	<u>2,200.00</u>	0.00	500,720.00	5%	<u>25,000.00</u>	95%	<u>475,720.00</u>
TOTAL:		<u>1,801,600.00</u>	<u>1,236,760.00</u>	<u>106,000.00</u>	<u>12,650.00</u>	<u>1,900.00</u>	<u>3,158,911.00</u>		<u>1,556,900.00</u>		<u>1,602,011.00</u>
TOTAL = 27 Positions		1,803,500.00	1,249,410.00	0.6928							

NOTE: A. PERCENTAGES ARE FROM THE AVERAGE OF FISCAL YEARS 2012 THROUGH 2015 BASED ON ACTUAL TIME RECORDS.
B. PLANT OPERATOR TIME STUDY PERCENTAGES WERE ADJUSTED TO ACCOUNT FOR THE VALUE OF THE SHIFT DIFFERENTIAL PROVIDED TO THE RESERVOIR

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 3 - Reservoir System Operations and Maintenance Direct Expense Budget

Proposed F/Y 2017, Adopted F/Y 2016, and Actual F/Y 2013-2015

Cost Center: Reservoir Direct
(40)

MANASQUAN WATER SUPPLY SYSTEM
RESERVOIR SYSTEM
O & M DIRECT EXPENSE BUDGET

CODE	ACCOUNT	FY '13 ACTUAL	FY '14 ACTUAL	FY '15 ACTUAL	FY '16 ADOPTED	FY '17 PROPOSED
5110	Regular Salaries & Wages					
5120	Overtime-Salaries & Wages					
5130	New positions-Salaries & Wages					
5140	Seasonal Help-Salaries & Wages					
5150	Fringe Benefits					
5160	Retiree Health Benefits					
	Total Salary, Wages & Fringe					
5200	Residences					
5211	Heating Fuel					
5220	Utilities -Electrical Service	65,558	94,189	113,344	80,500	90,500
5230	-Gas Service	5,032	5,586	6,629	8,000	8,000
5240	-Propane					
5250	Electricity for Pumping Station	267,525	260,176	258,651	346,900	336,300
5260	Fuel - Vehicular					
5270	Oil & Grease					
5280	Tires					
5290	Maintenance Supplies	105	114	1,750	2,000	2,000
5300	Maint. Supplies - Vehicular					
5310	Major Vehicle Service & Repair					
5320	Agricultural Supplies					
5330	Maintenance Equipment	67,724	17,426	43,693	45,500	51,500
5340	Serv. & Maintenance Contracts	6,001	32,021	49,225	33,000	39,750
5350	Equipment Rental	664	1,789	5,700	6,500	6,500
5360	Household - Safety Supplies	460		692	500	500
5370	Uniforms					
5380	Special & Professional Services	67,009	56,293	84,861	124,900	112,700
5390	Protective Services	228,063	249,353	257,277	285,300	279,818
5400	Telephone	5,689	6,020	6,571	5,000	5,000
5410	Postage & Freight Out					
5420	Data Processing					
5430	Printing & Office Supplies	710	882	1,662	1,500	1,500
5440	Scientific & Photographic	5,060	2,171	1,615	5,000	5,000
5450	Dues & Subscriptions					
5460	Advertising & Promotional	506	321	1,330	1,500	2,000
5470	Travel & Subsistence					
5480	Staff Training & Tuition Aid					
5490	Fees & Permits	31,696	31,255	32,618	33,600	33,900
5500	In - Lieu Taxes	36,756	36,755	36,756	36,800	36,800
5510	Sediment Removal	23,947	36,102	375	56,000	59,000
5520	Chemicals					
5525	Carbon Filter Replacement					
	Total Other Expenses	\$812,505	\$830,453	\$902,749	\$1,072,500	\$1,070,768
	Total Operating Expenses	\$812,505	\$830,453	\$902,749	\$1,072,500	\$1,070,768
	ANNUAL BUDGET	\$946,400	\$934,700	\$963,900	\$1,072,500	\$1,070,768

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 4 - Treatment Plant/Transmission System Operations and Maintenance Direct

Expense Budget

Proposed F/Y 2017, Adopted F/Y 2016, and Actual F/Y 2013-2015

Cost Center: Treat/Trans Direct
(50)

MANASQUAN WATER SUPPLY SYSTEM
WATER TREATMENT PLANT/TRANSMISSION SYSTEM
O & M DIRECT EXPENSE BUDGET

CODE	ACCOUNT	FY '13 ACTUAL	FY '14 ACTUAL	FY '15 ACTUAL	FY '16 ADOPTED	FY '17 PROPOSED
5110	Regular Salaries & Wages					
5120	Overtime-Salaries & Wages					
5130	New positions-Salaries & Wages					
5140	Seasonal Help-Salaries & Wages					
5150	Fringe Benefits					
5160	Retiree Health Benefits					
	Total Salary, Wages & Fringe					
5200	Residences					
5211	Heating Fuel	26,041	1,298	3,971	11,500	9,540
5220	Utilities -Electrical Service	403,869	383,124	369,880	520,500	476,500
5230	-Gas Service	34,998	42,188	31,655	40,000	40,000
5240	-Propane					
5250	Electricity for Pumping Station					
5260	Fuel - Vehicular					
5270	Oil & Grease		204			
5280	Tires					
5290	Maintenance Supplies	0	819	4,696	5,000	6,000
5300	Maint. Supplies - Vehicular					
5310	Major Vehicle Service & Repair		57			
5320	Agricultural Supplies					
5330	Maintenance Equipment	96,290	56,385	80,783	90,500	90,500
5340	Serv. & Maintenance Contracts	20,028	12,941	34,602	28,800	31,300
5350	Equipment Rental	9,250	4,203	1,389	4,800	4,800
5360	Household - Safety Supplies	585	209	794	1,000	1,000
5370	Uniforms					
5380	Special & Professional Services	27,942	44,950	28,409	34,100	45,600
5390	Protective Services	74,207	79,708	84,013	77,300	91,406
5400	Telephone	358	403	405	1,000	1,000
5410	Postage & Freight Out					
5420	Data Processing					
5430	Printing & Office Supplies	4,235	1,729	2,654	6,800	6,800
5440	Scientific & Photographic	11,087	10,120	13,930	14,500	14,500
5450	Dues & Subscriptions					
5460	Advertising & Promotional	750	1,531	1,675	1,000	1,000
5470	Travel & Subsistence					
5480	Staff Training & Tuition Aid			0	4,000	5,200
5490	Fees & Permits	6,533	5,726	11,220	8,000	8,000
5500	In - Lieu Taxes	140	140	140	400	400
5510	Residual Removal	23,884	23,226	19,205	41,000	41,000
5520	Water Treatment Chemicals	126,551	120,475	112,523	145,000	126,000
5525	GAC Replacement	49,700	461	50,621	59,000	59,000
5528	Reimb of O&M Capital Expenditures	10,025	31,004	26,226		
	Total Other Expenses	\$926,473	\$820,901	\$878,791	\$1,094,200	\$1,059,546
	Total Operating Expenses	\$926,473	\$820,901	\$878,791	\$1,094,200	\$1,059,546
	ANNUAL BUDGET	\$1,103,300	\$1,070,800	\$1,086,600	\$1,094,200	\$1,059,546

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 5 - Reservoir System General and Administrative Operations and Maintenance

Direct Expense Budget

Proposed F/Y 2017, Adopted F/Y 2016, and Actual F/Y 2013-2015

Cost Center: G & A
(60)

MANASQUAN WATER SUPPLY SYSTEM
GENERAL & ADMINISTRATIVE
EXPENSE BUDGET

CODE	ACCOUNT	FY '13 ACTUAL	FY '14 ACTUAL	FY '15 ACTUAL	FY '16 ADOPTED	FY '17 PROPOSED
5110	Regular Salaries & Wages	\$1,516,318	\$1,580,123	\$1,611,361	\$1,720,850	\$1,816,150
5120	Overtime-Salaries & Wages	104,865	88,137	78,338	106,000	106,000
5130	New positions-Salaries & Wages					
5140	Seasonal Help-Salaries & Wages					
5150	Fringe Benefits	790,546	813,180	798,599	1,003,000	1,036,961
5160	Retiree Health Benefits	95,307	100,479	105,824	201,500	194,800
5168	Workers Comp. (Self-Insured)	1,544	730	1,015	5,000	5,000
	Total Salary, Wages & Fringe	\$2,508,580	\$2,582,649	\$2,595,137	\$3,036,350	\$3,158,911
	Budget - salary and fringe					
5200	Residences					
5211	Heating Fuel					
5220	Utilities -Electrical Service					
5230	-Gas Service					
5240	-Propane					
5250	Electricity for Pumping Station					
5260	Fuel - Vehicular	35,036	32,447	23,159	35,000	22,450
5270	Oil & Grease	3,971	484	6,965	5,900	6,900
5280	Tires	7,442	2,500	4,490	6,000	6,000
5290	Maintenance Supplies	12,783	14,597	34,978	27,300	27,300
5300	Maint. Supplies - Vehicular	5,045	3,505	6,598	7,100	8,800
5310	Major Vehicle Service & Repair	26,761	28,487	45,077	29,000	29,000
5320	Agricultural Supplies	2,244	4,889	5,002	5,200	6,200
5330	Maintenance Equipment	5,641	2,566	5,441	10,000	7,500
5340	Serv. & Maintenance Contracts	11,871	9,308	8,787	12,500	13,100
5350	Equipment Rental	1,726	2,122	2,087	3,400	3,000
5360	Household - Safety Supplies	9,110	4,423	7,592	8,500	7,500
5370	Uniforms					
5380	Special & Professional Services	1,668	2,035	1,928	3,600	3,600
5390	Protective Services					
5400	Telephone	5,302	5,613	5,775	6,500	7,000
5410	Postage & Freight Out	708	311	449	1,000	500
5420	Data Processing	8,793	8,639	8,363	9,000	8,500
5430	Printing & Office Supplies	5,681	3,182	12,382	7,300	7,300
5440	Scientific & Photographic	1,080		0	300	300
5450	Dues & Subscriptions		229	83	2,500	3,000
5460	Advertising & Promotional	163	108	3,091	1,500	1,500
5470	Travel & Subsistence	345	648	240	500	700
5480	Staff Training & Tuition Aid	5,479	3,989	3,435	11,400	11,400
5490	Fees & Permits	2,566	8,041	3,354	7,000	7,700
5500	In - Lieu Taxes					
5510	Residual Removal					
5520	Water Treatment Chemicals					
5525	GAC Replacement					
	Total Other Expenses	\$153,415	\$138,123	\$189,275	\$200,500	\$189,250
	Total Operating Expenses	\$2,661,995	\$2,720,772	\$2,784,412	\$3,236,850	\$3,348,161
	Budget- other expenses	\$182,500				
	TOTAL ANNUAL BUDGET	\$2,761,900				
	Reservoir System	\$89,732	\$79,995	\$109,267	\$114,960	\$101,890
	Treatment/Transmission System	\$63,683	\$58,128	\$80,008	\$85,540	\$87,360

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 6 - List Of Category 5340 Items Recommended Service & Maintenance Contracts

For Reservoir (40)

Fiscal Year 2017

	Adopted F/Y16	Proposed F/Y17
1 HVAC/Dehumidifier Service	\$ 500.00	\$ 500
2 Instrumentation & Control System Service/Upgrade	2,000	3,000
3 Electrical Upgrade & Repair	12,000	14,000
4 overhead Crane Service & Inspection	2,000	2,000
5 Fire & Intrusion Alarm Service	1,500	1,500
6 Potable Well/Septic Service	1,500	1,500
7 Fertilization-Dam Dike	3,000	3,750
8 Roadway Crack Sealing	1,500	1,500
9 Wood Debris Removal	2,500	2,500
10 Access Roadway Repairs	2,500	2,500
11 Roofing System Maintenance & Repair	4,000	4,000
12 Reservoir Transmission Line Clearing	-	3,000
	<u> </u>	<u> </u>
Total Service & Maintenance Contracts	<u>\$ 33,000</u>	<u>\$ 39,750</u>

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 7 - List Of Category 5340 Items Recommended Service & Maintenance Contracts

For WTP/TS (50)

Fiscal Year 2017

		<u>Adopted F/Y16</u>	<u>Proposed F/Y17</u>
1	HVAC Service	\$1,000.00	\$ 1,000
2	Electrical Service Contract	1,000	1,000
3	Instrumentation & Control System Service & Upgrade	1,000	8,000
4	Electrical Upgrade & Repair	2,000	4,000
5	Overhead Crane Service	1,000	1,000
6	UST Monitors Service and Upgrade	1,000	1,000
7	Fire & Intrusion Alarm Service	1,200	1,200
8	Air Compressor Service	1,200	1,200
9	Boiler Service	1,500	1,500
10	Auxiliary Generator Service	2,500	3,000
11	Lab Equipment Service	2,000	2,000
12	Backflow Preventor Service	500	500
13	Gas-Fired Hot Water Heater Service	500	500
14	Instrumentation & Control System Service & Upgrade (Transmission System)	5,000	-
15	Electrical Upgrade & Repair (Transmission System)	2,000	-
16	Meter Vault Internet Service (Transmission System)	5,400	5,400
Total Service & Maintenance Contracts		<u>\$ 28,800</u>	<u>\$ 31,300</u>

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 8 - List Of Category 5340 Items Recommended Service & Maintenance Contracts

For G & A (60)
Fiscal Year 2017

		<u>Adopted</u> F/Y16	<u>Proposed</u> F/Y17
1	Refuse & Waste Disposal	\$ 1,700.00	\$ 2,000
2	Office Equipment/Computers	1,600	1,800
3	Waste Oil Disposal	1,100	200
4	Fire Extinguisher Service	1,100	1,100
5	UST Monitor Service	750	750
6	Building Maintenance	750	750
7	Internet Service	2,000	2,000
8	Janitorial Service	2,100	2,100
9	Vehicle Lift Inspection	400	400
10	Generator Service & Maintenance	<u>1,000</u>	<u>2,000</u>
	Total Service & Maintenance Contracts	<u>\$ 12,500</u>	<u>\$ 13,100</u>

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 9 - List Of Category 5380 Items Recommended Special & Professional Service

For Reservoir (40)

Fiscal Year 2017

		Adopted F/Y15	Proposed F/Y16
		<u> </u>	<u> </u>
1	Laboratory Services - Water Quality Sampling	\$ 2,000.00	\$ 2,000
2	Consultant Services	15,000	15,000
3	Services-USGS Cooperative Agreement	31,700	31,700
4	Annual Trustee Fund	9,500	9,500
5	Dam Management-Surveying	2,500	2,500
6	Wetland Monitoring Management	1,200	4,000
7	Lake Management Consultants	19,500	19,500
8	Engineering Services	2,500	2,500
9	Financial Advisory Services	1,000	1,000
11	USGS Gaging Station Squankum	40,000	25,000
		<u> </u>	<u> </u>
Total Special & Professional Services		<u>\$ 124,900</u>	<u>\$ 112,700</u>

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 10 - List Of Category 5380 Items Recommended Special & Professional Services
For WTP/TS (50)
Fiscal Year 2017

		Adopted F/Y16	Proposed F/Y17
1	Water Quality Sampling	\$ 17,200.00	\$ 17,200
2	Residual Quality Analysis	800	800
3	Consultant Services	4,000	4,000
4	USGA Allenwood Gage-Parameters	10,500	11,000
5	Underground Markout Service (Transmission System)	1,600	1,600
6	Water Quality Sampling and Analysis for LT2	-	11,000
	Total Special & Professional Services	\$ 34,100	\$ 45,600

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 11 - List Of Category 5380 Items Recommended Special & Professional Services

For G & A (60)

Fiscal Year 2017

	<u>Adopted</u> <u>F/Y16</u>	<u>Proposed</u> <u>F/Y17</u>
1 Pulmonary Testing	\$ 1,500.00	\$ 1,500
2 CDL Medical Testing	500	500
3 EAS Service	1,200	1,200
4 Pre-Employment Physicals	<u>400</u>	<u>400</u>
Total Special & Professional Services	<u>\$ 3,600</u>	<u>\$ 3,600</u>

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 12 - Projected FY 2017 New Jersey Water Supply Authority Insurance Program

<u>Policy</u>	<u>Raritan Basin System</u>	<u>Manasquan Reservoir System</u>	<u>Manasquan Water Treatment Plant and Transmission System</u>	<u>Total Premium</u>
Property Limit \$150 million, Limit \$25m BI Deduct: \$100k all perils \$250k Deduct dams, dikes / \$1m Deduct Canal flood	\$618,526	\$207,930	\$50,886	\$877,342
General/Products Liability Limit \$1 million Deduct: \$150k	\$108,676	\$10,161	\$2,110	\$120,947
Environmental Impairment Liability Limit \$10 million Deduct: \$100k	\$21,457	\$2,006	\$417	\$23,880
Workers' Compensation Limit \$1 million	\$205,001	\$26,354	\$27,613	\$258,968
Employer Liability Limit \$1 million	Included in Workers' Comp	Included in Workers' Comp	Included in Workers' Comp	Included in Workers' Comp
Umbrella Liability Limit \$20 million	\$283,672	\$26,521	\$5,507	\$315,700
Business Automobile Limit: \$1 million G/L, \$0 pd Deduct: \$50k, G/L	\$11,739	\$2,084	\$477	\$14,300
Public Officials Liability Limit \$5 million/\$1million crime Deduct: \$100k/\$50k c. crime	\$50,053	\$4,680	\$972	\$55,705
	\$50,053	\$4,680	\$3,408 \$4,380	\$3,408 \$59,113
Travel Accident Limit \$2 million	\$876	\$82	\$17	\$975
TOTAL:	\$1,300,000	\$279,818	\$91,407	\$1,671,225

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

**Schedule 13 - Recap Of Allocation Of Headquarters General And Administrative Expenses
Charged To The Manasquan Reservoir Water Supply System**

Fiscal Year 2017 (7/1/16-6/30/17)

	<u>Total Headquarters Charge</u>	<u>Manasquan Reservoir System</u>	<u>Manasquan WTP/TS</u>
Budgeted-Appendix I, amount to be charged to Manasquan System for F/Y17 (7/1/16-6/30/17)	\$823,329	\$709,165	\$114,164
F/Y15 Adjustment as per audited expenditures:			
Budgeted as per rate schedule for F/Y15 (7/1/14-6/30/15). Amounts paid during F/Y15 to Raritan Basin System.	\$781,349	\$678,114	\$103,235
Actual allocation based upon audited expenditures F/Y15 (7/1/14-6/30/15) - Appendix II	<u>\$702,080</u>	<u>\$609,319</u>	<u>\$92,761</u>
Adjustments F/Y15	<u>(\$79,269)</u>	<u>(\$68,795)</u>	<u>(\$10,474)</u>
Net Allocation for F/Y2017 Budget	<u><u>\$744,060</u></u>	<u><u>\$640,370</u></u>	<u><u>\$103,690</u></u>
Estimate	<u>\$744,000</u>	<u>\$640,000</u>	<u>\$104,000</u>

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 14 - Proposed Capital Equipment Budget

Fiscal Year 2017

Description	(A)Addition (R)Replacement	Year of Purchase Vehicle/Equipment	Dollar Value	%	Manasquan Reservoir	Manasquan WTP/TS	Reservoir Depreciation Reserve	WTP/TS Depreciation Reserve
(I) REPLACE ELECTRIC GATE OPERATOR ADMIN BLDG	(R)	Original	4,000	100/0	4,000	0		
(I) REPLACE HEAT PUMP WITH AC UNIT FRONT AREA OF ADM	(R)	Original	20,000	100/0	20,000	0		
(I) REPLACE HEAT PUMP WITH AC UNIT SHOP AREA OF ADMIN	(R)	Original	15,000	100/0	15,000	0		
(I) REPLACE MOHAWK VEHICLE LIFT W/8 TON UNIT	(R) PE287	1994	18,000	100/0	18,000	0	7,889	
(I) NJWA29 - RSO VEHICLE	(R) TR516	2013	35,000	95/5	33,250	1,750	5,869	309
(I) 4-INCH TRASH PUMP - (#454)	(R) EQ454	2007	4,000	44/56	1,760	2,240	1,705	1,705
(I) POWERTRAC SLOPE TRACTOR - (#332)	(R) PE332	1997	46,000	100/0	46,000	0	35,429	
TOTAL			142,000		138,010	3,990		
*Per Resolution #861, dated 7/12/93 Asset Definition minimum is \$1,000.						0		
Less Amount charged to Reservoir Depreciation Reserve						50,892		
Less Amount charged to WTP/TS Depreciation Reserve							2,014	
Total						87,118	1,976	
Additional Depreciation Reserve						(15,551)	0	
Estimate						\$71,600	\$1,976	

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 15 - July, 2014 – June, 2015 Fiscal Year 2015 G&A Expenses Split

EMPLOYEE NUMBER	TOTAL	BUDGETED %		ACTUAL % (Timesheets)		VARIANCE UNDER (OVER)		
		(40)	(50)	(40)	(50)	(40)	(50)	
		RESERVOIR	WTP/TS	RESERVOIR	WTP/TS	RESERVOIR	WTP/TS	
4 6738 PLANT OPERATOR	TIME SPLIT		5%	95%	5%	95%		
	REGULAR	65,982.24	3,299.12	62,683.12	3,299.11	62,683.13	0.01	(0.01)
	CLOTH.	550.00	27.50	522.50	27.50	522.50	0.00	0.00
	O.T.	4,659.53	232.99	4,426.54	232.98	4,426.55	0.01	(0.01)
	FRINGE	37,918.42	1,895.92	36,022.50	1,895.92	36,022.50	0.00	0.00
21 7335 RESERVOIR SYSTEM OPERATOR	TIME SPLIT		96%	4%	100%	0%		
	REGULAR	52,678.80	50,571.66	2,107.14	52,678.80	0.00	(2,107.14)	2,107.14
	CLOTH.	550.00	528.00	22.00	550.00	0.00	(22.00)	22.00
	O.T.	5,594.82	5,371.01	223.81	5,594.82	0.00	(223.81)	223.81
	FRINGE	31,844.80	30,571.00	1,273.80	31,844.80	0.00	(1,273.80)	1,273.80
20 7933 PLANT OPERATOR	TIME SPLIT		5%	95%	6%	94%		
	REGULAR	67,185.44	3,359.28	63,826.16	4,031.13	63,154.31	(671.85)	671.85
	CLOTH.	550.00	27.50	522.50	33.00	517.00	(5.50)	5.50
	O.T.	4,649.57	232.49	4,417.08	278.97	4,370.60	(46.48)	46.48
	FRINGE	38,953.59	1,947.69	37,005.90	2,337.22	36,616.37	(389.53)	389.53
7 8172 RESERVOIR SYSTEM OPERATOR	TIME SPLIT		96%	4%	96%	4%		
	REGULAR	54,952.00	52,753.92	2,198.08	52,753.92	2,198.08	0.00	0.00
	CLOTH.	550.00	528.00	22.00	528.00	22.00	0.00	0.00
	O.T.	2,807.83	2,695.52	112.31	2,695.52	112.31	0.00	0.00
	FRINGE	30,997.38	29,757.49	1,239.89	29,757.48	1,239.90	0.01	(0.01)
9 12976 FAC MECHANIC II	TIME SPLIT		47%	53%	47%	53%		
	REGULAR	60,764.80	28,559.45	32,205.35	28,559.46	32,205.34	(0.01)	0.01
	CLOTH.	550.00	258.50	291.50	258.50	291.50	0.00	0.00
	O.T.	748.55	351.83	396.72	351.82	396.73	0.01	(0.01)
	FRINGE	33,296.64	15,649.42	17,647.22	15,649.42	17,647.22	0.00	0.00
16 16220 FOREMAN BLDG. & GROUNDS MAINT.	TIME SPLIT		77%	23%	95%	5%		
	REGULAR	65,160.56	50,173.64	14,986.92	61,902.53	3,258.03	(11,728.89)	11,728.89
	CLOTH.	550.00	423.50	126.50	522.50	27.50	(99.00)	99.00
	O.T.	1,198.76	923.04	275.72	1,138.82	59.94	(215.78)	215.78
	FRINGE	35,934.24	27,669.35	8,264.89	34,137.53	1,796.71	(6,468.18)	6,468.18
12 23959 FAC. MECHANIC II	TIME SPLIT		47%	53%	47%	53%		
	REGULAR	60,764.80	28,559.45	32,205.35	28,559.46	32,205.34	(0.01)	0.01
	CLOTH.	550.00	258.50	291.50	258.50	291.50	0.00	0.00
	O.T.	374.51	176.03	198.48	176.02	198.49	0.01	(0.01)
	FRINGE	33,083.49	15,549.24	17,534.25	15,549.24	17,534.25	0.00	0.00
8 23970 RESERVOIR SYS OPERATOR	TIME SPLIT		96%	4%	94%	6%		
	REGULAR	51,120.60	49,075.77	2,044.83	48,053.36	3,067.24	1,022.41	(1,022.41)
	CLOTH.	550.00	528.00	22.00	517.00	33.00	11.00	(11.00)
	O.T.	6,314.94	6,062.36	252.58	5,936.04	378.90	126.32	(126.32)
	FRINGE	30,995.08	29,755.27	1,239.81	29,135.38	1,859.70	619.89	(619.89)
14 26529 FOREMAN FACILITIES MAINT.	TIME SPLIT		46%	54%	48%	52%		
	REGULAR	67,358.24	30,984.81	36,373.43	32,331.96	35,026.28	(1,347.15)	1,347.15
	CLOTH.	550.00	253.00	297.00	264.00	286.00	(11.00)	11.00
	O.T.	1,366.49	628.59	737.90	655.92	710.57	(27.33)	27.33
	FRINGE	37,107.18	17,069.31	20,037.87	17,811.45	19,295.73	(742.14)	742.14

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 15 (Continued) July, 2014 – June, 2015 Fiscal Year 2015 G&A Expenses Split

EMPLOYEE NUMBER	TOTAL	BUDGETED %		ACTUAL % (Timesheets)		VARIANCE UNDER (OVER)		
		(40)	(50)	(40)	(50)	(40)	(50)	
		RESERVOIR	WTP/TS	RESERVOIR	WTP/TS	RESERVOIR	WTP/TS	
5 36810 MAINT. WORKER I	TIME SPLIT		89%	11%	94%	6%		
	REGULAR	38,695.04	34,438.59	4,256.45	36,373.34	2,321.70	(1,934.75)	1,934.75
	CLOTH.	550.00	489.50	60.50	517.00	33.00	(27.50)	27.50
	O.T.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	FRINGE	21,782.26	19,386.20	2,396.06	20,475.32	1,306.94	(1,089.12)	1,089.12
17 41950 PLANT OPERATOR	TIME SPLIT		5%	95%	5%	95%		
	REGULAR	65,235.84	3,261.79	61,974.05	3,261.79	61,974.05	0.00	0.00
	CLOTH.	550.00	27.50	522.50	27.50	522.50	0.00	0.00
	O.T.	5,186.87	259.35	4,927.52	259.34	4,927.53	0.01	(0.01)
	FRINGE	37,645.33	1,882.28	35,763.05	1,882.27	35,763.06	0.01	(0.01)
18 47397 SUPERVISOR TECHINICAL ASST. FACILITIES MAINT.	TIME SPLIT		39%	61%	44%	56%		
	REGULAR	80,005.90	31,202.32	48,803.58	35,202.60	44,803.30	(4,000.28)	4,000.28
	CLOTH.	550.00	214.50	335.50	242.00	308.00	(27.50)	27.50
	O.T.	11,910.82	4,645.23	7,265.59	5,240.76	6,670.06	(595.53)	595.53
	FRINGE	50,328.89	19,628.27	30,700.62	22,144.71	28,184.18	(2,516.44)	2,516.44
11 50121 SUPERVISING PLANT OPERATOR	TIME SPLIT		35%	65%	25%	75%		
	REGULAR	93,605.79	32,762.03	60,843.76	23,401.45	70,204.34	9,360.58	(9,360.58)
	CLOTH.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	O.T.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	FRINGE	49,981.86	17,493.65	32,488.21	12,495.47	37,486.39	4,998.18	(4,998.18)
1 50461 MANAGER, MWSS	TIME SPLIT		55%	45%	69%	31%		
	REGULAR	111,067.00	61,086.85	49,980.15	76,636.23	34,430.77	(15,549.38)	15,549.38
	CLOTH.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	O.T.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	FRINGE	60,155.19	33,085.35	27,069.84	41,507.08	18,648.11	(8,421.73)	8,421.73
2 50802 ADMIN. ASSISTANT	TIME SPLIT		55%	45%	69%	31%		
	REGULAR	59,882.73	32,935.50	26,947.23	41,319.08	18,563.65	(8,383.58)	8,383.58
	CLOTH.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	O.T.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	FRINGE	32,286.62	17,757.64	14,528.98	22,277.77	10,008.85	(4,520.13)	4,520.13
10 51483 EQUIP OPERATOR	TIME SPLIT		80%	20%	93%	7%		
	REGULAR	47,085.28	37,668.22	9,417.06	43,789.31	3,295.97	(6,121.09)	6,121.09
	CLOTH.	550.00	440.00	110.00	511.50	38.50	(71.50)	71.50
	O.T.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	FRINGE	25,570.45	20,456.37	5,114.08	23,780.52	1,789.93	(3,324.15)	3,324.15
19 63738 PLANT OPERATOR	TIME SPLIT		5%	95%	5%	95%		
	REGULAR	64,988.16	3,249.40	61,738.76	3,249.41	61,738.75	(0.01)	0.01
	CLOTH.	550.00	27.50	522.50	27.50	522.50	0.00	0.00
	O.T.	5,598.32	279.92	5,318.40	279.92	5,318.40	0.00	0.00
	FRINGE	37,625.33	1,881.26	35,744.07	1,881.27	35,744.06	(0.01)	0.01
6 69555 MAINT WORKER I - OPERATIONS	TIME SPLIT		89%	11%	90%	10%		
	REGULAR	43,779.04	38,963.35	4,815.69	39,401.14	4,377.90	(437.79)	437.79
	CLOTH.	550.00	489.50	60.50	495.00	55.00	(5.50)	5.50
	O.T.	381.16	339.23	41.93	343.04	38.12	(3.81)	3.81
	FRINGE	23,892.32	21,264.17	2,628.15	21,503.09	2,389.23	(238.92)	238.92

**NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM**

Schedule 15 (Continued) July, 2014 – June, 2015 Fiscal Year 2015 G&A Expenses Split

EMPLOYEE NUMBER	TOTAL	BUDGETED %		ACTUAL % (Timesheets)		VARIANCE UNDER (OVER)		
		(40)	(50)	(40)	(50)	(40)	(50)	
		RESERVOIR	WIP/TS	RESERVOIR	WIP/TS	RESERVOIR	WIP/TS	
22 75370 FAC MECHANIC -WSA	TIME SPLIT		47%	53%	48%	52%		
	REGULAR	62,789.44	29,511.05	33,278.39	30,138.93	32,650.51	(627.88)	627.88
	CLOTH.	550.00	258.50	291.50	264.00	286.00	(5.50)	5.50
	O.T.	227.68	107.00	120.68	109.29	118.39	(2.29)	2.29
	FRINGE	34,152.89	16,051.86	18,101.03	16,393.39	17,759.50	(341.53)	341.53
28 81185 RESERVOIR SYSTEM OPERATIONS	TIME SPLIT		96%	4%	97%	3%		
	REGULAR	39,571.62	37,988.78	1,582.84	38,384.47	1,187.15	(395.69)	395.69
	CLOTH.	550.00	528.00	22.00	533.50	16.50	(5.50)	5.50
	O.T.	2,829.11	2,715.95	113.16	2,744.24	84.87	(28.29)	28.29
	FRINGE	22,923.76	22,006.82	916.94	22,236.05	687.71	(229.23)	229.23
23 87000 PLANT OPERATOR	TIME SPLIT		5%	95%	5%	95%		
	REGULAR	66,233.28	3,311.67	62,921.61	3,311.66	62,921.62	0.01	(0.01)
	CLOTH.	550.00	27.50	522.50	27.50	522.50	0.00	0.00
	O.T.	7,527.98	376.40	7,151.58	376.40	7,151.58	0.00	0.00
	FRINGE	39,354.09	1,967.71	37,386.38	1,967.70	37,386.39	0.01	(0.01)
24 87750 RESERVOIR SYSTEM OPERATOR	TIME SPLIT		96%	4%	100%	0%		
	REGULAR	55,588.40	53,364.87	2,223.53	55,588.40	0.00	(2,223.53)	2,223.53
	CLOTH.	550.00	528.00	22.00	550.00	0.00	(22.00)	22.00
	O.T.	4,909.06	4,712.70	196.36	4,909.06	0.00	(196.36)	196.36
	FRINGE	32,612.92	31,308.40	1,304.52	32,612.92	0.00	(1,304.52)	1,304.52
27 72463 PROJECT ENGINEER II	TIME SPLIT		50%	50%	39%	61%		
	REGULAR	40,811.44	20,405.72	20,405.72	15,916.46	24,894.98	4,489.26	(4,489.26)
	CLOTH.	550.00	275.00	275.00	214.50	335.50	60.50	(60.50)
	O.T.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	FRINGE	21,236.26	10,618.15	10,618.11	8,282.14	12,954.12	2,336.01	(2,336.01)
15 88875 WATER SUPPLY TECH OPERATOR	TIME SPLIT		58%	42%	61%	39%		
	REGULAR	47,617.36	27,618.06	19,999.30	29,046.59	18,570.77	(1,428.53)	1,428.53
	CLOTH.	550.00	319.00	231.00	335.50	214.50	(16.50)	16.50
	O.T.	347.70	201.66	146.04	212.10	135.60	(10.44)	10.44
	FRINGE	26,004.43	15,082.58	10,921.85	15,862.70	10,141.73	(780.12)	780.12
25 90000 SUPERVISING PLANT OPERATOR	TIME SPLIT		35%	65%	37%	63%		
	REGULAR	71,950.24	25,182.58	46,767.66	26,621.59	45,328.65	(1,439.01)	1,439.01
	CLOTH.	550.00	192.50	357.50	203.50	346.50	(11.00)	11.00
	O.T.	3,440.33	1,204.10	2,236.23	1,272.92	2,167.41	(68.82)	68.82
	FRINGE	40,845.83	14,296.04	26,549.79	15,112.96	25,732.87	(816.92)	816.92
26 93000 PLANT OPERATOR	TIME SPLIT		5%	95%	5%	95%		
	REGULAR	63,837.00	3,191.85	60,645.15	3,191.85	60,645.15	0.00	0.00
	CLOTH.	550.00	27.50	522.50	27.50	522.50	0.00	0.00
	O.T.	8,264.45	413.24	7,851.21	413.22	7,851.23	0.02	(0.02)
	FRINGE	39,341.14	1,967.06	37,374.08	1,967.06	37,374.08	0.00	0.00
VACANT WATER SUPPLY TECH	TIME SPLIT		58%	42%	58%	42%		
	REGULAR	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	CLOTH.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	O.T.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	FRINGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		(60)	(40)	(50)	(40)	(50)	(40)	(50)
	REGULAR	1,598,711.04	773,479.73	825,231.31	817,004.03	781,707.01	(43,524.30)	43,524.30
	CLOTH.	12,650.00	6,677.00	5,973.00	6,935.50	5,714.50	(258.50)	258.50
	O.T.	78,338.48	31,928.64	46,409.84	33,221.20	45,117.28	(1,292.56)	1,292.56
	FRINGE	905,870.39	435,998.50	469,871.89	460,500.86	445,369.53	(24,502.36)	24,502.36
	GRAND TOTAL	<u>2,595,569.91</u>	<u>1,248,083.87</u>	<u>1,347,486.04</u>	<u>1,317,661.59</u>	<u>1,277,908.32</u>	<u>(69,577.72)</u>	<u>69,577.72</u>

*PLANT OPERATORS ADJUSTED TO ACTUAL %'S OF 5%/95%
ORIGINAL %'S AS FOLLOWS:
C. BENNETT 2%/98%
R. KARECKY 1%/99%
J. TESTA 2%/98%
C. ZIEGLER 3%/97%

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 16 - Estimate Of Interest Income

Fiscal Year 2017 Budget

Fund/Reserve	TD Bank Funds	Long-Term Investments
Operating	\$300,000	\$0
Reserve for O & M	\$400,000	\$400,000
General Reserve (Rate Stabilization Fund)	\$250,000	\$0
Pumping Reserve	\$125,000	\$35,000
Self-Insurance Reserve	\$50,000	\$200,000
Sediment Reserve	\$60,000	\$0
Estimated Total	\$1,185,000	\$635,000
	\$1,185,000 x .25% =	\$2,963
	\$635,000 x 1.30% =	\$8,255
	Total	\$11,218
	Estimate	\$11,200

Short-Investments

TD Bank
Managed Rate of .25%
95% of the 30 Day Libor After the
Compensating Balance Has Been Satisfied

Long-Term Investments

J.P. Morgan Securities
New Jersey State G/O Bonds
Due 07/15/2016 Yield to Maturity 1.30%
Expect Similar Returns After Maturity

NEW JERSEY WATER SUPPLY AUTHORITY
 MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 17 - Unanticipated Revenue

Funds to be Appropriated into Rate Stabilization fund for Fiscal Year 2017

	<u>Amount</u>								
F/Y2015 Net Year-End Balance	\$380,000.00								
Excess D/S Coverage FY2016	\$600,000.00								
<table style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th style="width: 30%; border-bottom: 1px solid black;"><u>Overdraft</u></th> <th style="width: 20%; border-bottom: 1px solid black;"><u>Invoice No.</u></th> <th style="width: 30%; border-bottom: 1px solid black;"><u>Received</u></th> <th style="width: 20%; border-bottom: 1px solid black;"><u>Amount</u></th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	<u>Overdraft</u>	<u>Invoice No.</u>	<u>Received</u>	<u>Amount</u>					
<u>Overdraft</u>	<u>Invoice No.</u>	<u>Received</u>	<u>Amount</u>						

Additional Sources

Source Water Protection Fund	\$40,000.00
New Jersey American Overdrafts April-August 2015	\$27,609.00
Total Available	<u>\$1,047,609.00</u>
Estimate for FY/17	<u><u>\$1,047,600.00</u></u>

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 18 - Fund Balances as of 6/30/15

Final

	REVENUE FUND	OPERATING ACCOUNT	OPERATING FUND	O & M RESERVE	INVESTMENTS O & M RESERVE	TOTAL
BALANCE 6/30/15 (Does not include Debt Service payment)	\$171,096	\$312,836	\$3,610,830	\$1,244,939	\$469,908	\$5,809,609
Add: Adjustment for uncollected water revenues at 6/30/15			0			0
Add: NJ-American, JCP&L expenses for June 2015			33400			33,400
Deduct: Accrued expenses to be paid as of 6/30/15			-168271			(168,271)
Deduct: June 10th billing, received			-252331.78			(252,332)
Adjusted Balances 6/30/15	\$171,096	\$312,836	\$3,223,627	\$1,244,939	\$469,908	\$5,422,406
INCOME						
Operating Transfer	-100000		100,000			0
Receipt of WTP/TS G&A expenses for the month of June 2015, 7/31/15 billing			163335.8			163,336
						0
						0
						0
EXPENSES						
O & M Expenses - (A/P-6/30/15) includes accrued payroll and pension thru 6/30/15			-295458			(295,458)
Capital items to be purchased by 6/30/15			-11377			(11,377)
Payment of Headquarters overhead expenses - to be paid 7/01			(169,000)			(169,000)
Contributions to Various Reserves- 7/15			(37,000)			(37,000)
ADJUSTED BALANCE AT 6/30/15	\$171,096	\$312,836	\$2,974,128	\$1,244,939	\$469,908	\$5,072,907

Less: O & M Reserve Balance (Goal is 3 months O & M Expenses as dictated by Bond Resolution) -838890

Balance of projected funds available \$4,234,017

Use of Available Funds

Unanticipated revenues (overdrafts in FY15 to be available to the General Fund for FY17)
NJ American Water -3840

Appropriate FY16 net fund balance into the General Fund (Rate Stabilization) to be used for rate stabilization -640000

Balance of fund to be used for future years \$3,590,177

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 19 - Operations & Maintenance Expense Component and Debt Service Cost
Component Sales Base
Projected Fiscal Year 2017

USER	ALLOCATION (mgd)
Avon, Borough of	0.126
Belmar, Borough of	0.288
Brielle, Borough of	0.450
Keyport, Borough of	0.356
Matawan, Borough of	0.332
New Jersey American Water	12.500
Red Bank, Borough of	0.548
Sea Girt, Borough of	0.040
Shorelands Water Company	2.007
Lake Como, Borough of	0.100
Spring Lake, Borough of	0.310
Spring Lake Heights, Borough of	0.386
Wall Township	2.000
OPERATIONS & MAINTENANCE/DEBT SERVICE SALES BASE	19.443 mgd

NEW JERSEY WATER SUPPLY AUTHORITY
 MANASQUAN RESERVOIR WATER SUPPLY AUTHORITY

Schedule 20 - Operations And Maintenance Rate Component (19.443mgd)

Fiscal Year 2017

Funds Required for F/Y2017 Budget

Total Budget Requirements		\$4,045,738
Miscellaneous Revenues		<u>(\$1,058,800)</u>
Net Budget Requirement		\$2,986,938
Less - Quarterly O&M payment on July 10, 2016 (cash received in July for water used in April, May and June of 2016 based on \$386.00/mg)		(\$682,955)
Additional Revenue required from last three (3) Quarterly payments in F/Y2017 to cover Operations & Maintenance expenses through 6/30/17		<u>\$2,303,983</u>

Computation of Operations & Maintenance Rate for Fiscal Year 2017

Required Operations & Maintenance Rate F/Y2017	<u>\$2,303,983</u>	=	\$432.87/mg
	5,322.52*		

* Four (4) Quarters Sales =

	19.443 mgd x 365	=	7,096.70mg/yr
--	------------------	---	---------------

Rate Calculation for Required revenues due for payment on
10/10/16, 1/10/17 and 4/10/17:

Sales Base =

	7,096.70 x 3/4	=	5,322.52/mg
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The same rate will apply to the payment due 7/10/17 and this
payment will be reflected in the calculation of the F/Y2018 rate.

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 21 - Computation Of Base Debt Service Rates

Initial Water Purchasers (14.980MGD) – 7/01/15
Shorelands Delayed Purchase Contract (.028MGD) – 7/01/06

Debt Service for Fiscal Year 2017	\$3,207,552	
Debt Service Fund Interest Income and Other Available Resources	<u>(\$150,000)</u>	
Net Debt Service Obligation	\$3,057,552	
Coverage Requirement = Net Debt Service Obligation x 20%	<u>\$611,510</u>	
Total to be Recovered by Rates	\$3,669,062	
Debt Service Rate Effective 7/01/16 365 x 15.008/mgd = 5,477.92mg	<u>\$3,669,062</u> 5,477.92mg	= \$669.79mg

NEW JERSEY WATER SUPPLY AUTHORITY
 MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 22 - Computation Of Delayed Water Purchase Debt Service Rates

NJAW – 1.000MGD CONTRACT - 07/01/01
 1.935MGD CONTRACT – 10/01/02
 1.500MGD CONTRACT – 01/01/05

Debt Service for Fiscal Year 2017	\$1,046,652	
Debt Service Fund Interest Income and Other Available Resources	<u>(\$3,910)</u>	
Net Debt Service Obligation	\$1,042,742	
Coverage Requirement = Net Debt Service Obligation x 20%	<u>\$208,548</u>	
Total to be Recovered by Rates	\$1,251,290	
Debt Service Rate Effective 7/01/16 365 x 4.435/mgd =1,618.78mg	<u>\$1,251,290</u> 1,618.78mg	= \$772.99mg

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR SYSTEM

Schedule 24 - 2005 Bond Debt Service Coverage

Fiscal Year 2017
(7/1/16-6/30/17)

	<u>Budgeted F/Y2017</u>
<u>Revenues</u>	
Uninterruptible Water Sales	\$8,241,414
Interest Income	<u>\$11,200</u>
Total Revenues	<u><u>\$8,252,614</u></u>
Prior Years Surplus/Other	<u>\$1,047,600</u>
<u>Expenses</u>	
O&M Costs	\$2,729,560
Overhead Allocation	<u>\$640,000</u>
Total O&M	<u><u>\$3,369,560</u></u>
Cash Available for Debt Service - A	\$5,930,654
Net Debt Service Expense	\$4,100,294
Debt Service Coverage Calculation - A/B	1.45
Cash After Debt Service A-B	\$1,830,360

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR SYSTEM

Schedule 25 - Rehabilitation Reserve and Capital Improvement Program

Manasquan Reservoir Project Description	Renewal & Repl. Reserve	FY2016	FY2017	FY2018	FY2019	FY2020+
Dam Emergency Contingency	\$400,000					
Pipeline Replacement Under I-195	\$950,000					
Pumping Equipment Replacement	\$650,000					
Portable Generator, Hookup and Transfer Switch for Reservoir I/O Tower		\$140,000				
Resize Intake - Motor/Pump/VFD			\$50,000		\$250,000	
Fueling System Upgrade		\$60,000				
Rehabilitation Pump and Motors at Reservoir & Intake Pumping Stations			\$60,000		\$60,000	\$50,000
Security System Upgrades		\$50,000		\$100,000		\$50,000
Replacement Capacitors				\$20,000	\$20,000	
Replace Rubber Seats on 36" Ball Valve that Controls Water Flow from Reservoir to Manasquan		\$65,000				
Replace Rubber Seats on 36" Guardian Valve that Controls Water Flow from Reservoir to Manasquan		\$10,000				
Install a 36" Vport Style Control Valve at FMVC		\$60,000				
Replace Control Panel at Reservoir IO building				\$80,000		
Resurface Floor in Hall and Bathrooms RPS Building			\$40,000			
Replace Incoming Electrical Power Breakers and Replace One Cable Set		\$115,000				
Renovation of Traveling Water Screens				\$50,000	\$50,000	
Variable Frequency Drive Control Conversion Reservoir Pumps			\$120,000			
Sealcoat Driveway and Parking Areas			\$25,000			
Replace Valve Operator on 36" Intake Pool Return from Oil to Electric Operated		\$20,000				
Evaluation of Condition of Reservoir PCCP pipeline						\$250,000
Total	2,000,000.00*	\$520,000	\$295,000	\$250,000	\$380,000	\$350,000
Renewal and Replacement Balance June 30, 2015	\$2,300,477					
Projected Balance End of Fiscal Year with annual regular deposit		\$1,900,477	\$1,725,477	\$1,595,477	\$1,335,477	\$1,105,477
*Minimum Balance Requirement		\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Revised Balance		-\$99,523	-\$274,523	-\$404,523	-\$664,523	-\$894,523
Additional Deposit Requirements			\$374,046	\$404,523	\$664,523	\$894,523

**New Jersey Water Supply Authority
Manasquan Water Supply System**

Update of the Renewal and Replacement Reserve and Capital Improvement Program

Prepared by

Paul McKeon, P.E., Manasquan System Manager

**MANASQUAN WATER SUPPLY SYSTEM
RENEWAL/REPLACEMENT RESERVE & CAPITAL IMPROVEMENT PROGRAM
Fiscal Years 2016-2020
Updated July 2015**

Introduction

The New Jersey Water Supply Authority (Authority) operates and maintains the Manasquan Water Supply System including the Intake Facilities located in Wall Township, the Manasquan Reservoir located in Howell Township and 5-1/4 miles of 66-inch diameter pipeline which connects the Intake Facilities to the Reservoir. The Manasquan Water Supply System was constructed between 1987 and 1990 and commenced operation on July 1, 1990.

Construction of this system was financed by the issuance of Bonds under the authorization of Authority Bond Resolution No. 295 dated April 16, 1987. The Bond Resolution provides for rates for water use to include an excess payment of 20% (effective February 1, 1994) of the annual debt service, identified as 120% debt service coverage. During the initial years, this excess payment flowed into the debt service reserve account until an amount equal to 50% of the annual debt service had been accumulated. Thereafter, the 20% excess debt service is to be used to establish a Renewal & Replacement Reserve and to fund a Capital Improvement Program (CIP) for the facilities.

A Capital Improvement Program funded by the Renewal and Replacement Reserve was first recommended in September 1996. This is an update of the CIP.

The Renewal and Replacement Reserve for Extraordinary Operations and Maintenance Costs is fully funded as recommended.

Renewal and Replacement Reserve for Extraordinary Operations and Maintenance Costs

Problems with the Earthen Dam Embankments

The Manasquan Reservoir dam and dikes are inspected by the Authority's operations and engineering staff to provide early detection of situations which, if uncorrected, could lead to serious problems. There are no indications of problems with any of the embankments at the present time. It is unlikely that a major catastrophic dam failure will occur as a result of the weather. A more common occurrence would be surface erosion especially in areas where good turf is not established. The periodic inspection of the embankments shows good establishment of turf. On-site maintenance staff has implemented various measures to improve the grass cover on the dams. Continued long-term success of these measures is dependent on continued maintenance and weather.

The Reserve includes funds that can be used to repair any surface erosion that cannot be repaired by Authority maintenance forces.

Replacement of Pipe under Interstate Route 195

The Manasquan Reservoir pipeline is a 5-1/4 mile long, 66-inch diameter prestressed concrete cylinder pipeline (PCCP) constructed in the 1980s. A 380-foot long section of 72-inch diameter PCCP was installed beneath Interstate Route 195 during its construction for use in connection with the pipeline between the reservoir pumping station and the reservoir. This section of pipe was manufactured by Interpace in the late 1970's. This vintage PCCP is suspect because of the type of prestressing wire used in its manufacture and the “inadequate” quality control used in the application of the mortar coating.

A rupture of this section of pipe could be catastrophic and result in major disruptions to Route 195. Repair costs could easily amount to several million dollars. Therefore, the section of pipe under Route 195 is dewatered and inspected bi-annually to monitor its condition.

The entire length of the pipeline was inspected in December 2009. The interior concrete lining was sounded with a 57-inch piece of black iron pipe with caps welded to the ends. The lining was continuously sounded for hollow regions that may be indicative of a loss of prestress and therefore exterior pipe distress. Sounding was carried out on both sides of the pipe approximately in the 2-4 o'clock range and the 8-10 o'clock range at approximately 6 to 12-inch intervals. Other features such as spalled concrete linings were noted throughout the inspection. The Manasquan Reservoir 66-inch pipeline is in good condition. The items noted during the internal inspection were minor in nature and are not indicative of pipeline distress.

The pipes under Route 195 were inspected in 2011 and October 2014 and found to be sound. The pipe under Route 195 will be inspected in the fall of 2017. The entire pipeline will be inspected in March of 2016.

A sum of \$950,000 is included in the Renewal and Replacement Reserve to insert a 66-inch diameter steel pipe into the PCCP under Route 195 or to replace other sections of pipe as needed

Replacement of Pumps or Equipment

Five (5) 600-horsepower pumps are used at the Intake Pumping Station to pump water from the Manasquan River to the presedimentation pond at the Reservoir Pumping Station. Five (5) 900-horsepower pumps are used at the Reservoir Pumping Station to pump water from the presedimentation pond to the Reservoir. The estimated replacement cost for each unit, including a variable frequency drive, is \$650,000. Replacement costs for the units would be dependent on the problem but would be limited to the cost of replacement.

All pumps and motors have been physically inspected, vibration tested, and pump efficiency tested in 2013. All are within acceptable performance tolerances. Although testing and inspection has determined that no units are needing replacement at this time, it is appropriate to include funds in a Renewal & Replacement Reserve to rehabilitate or replace a single unit in case of an unforeseen failure or damage from lightning.

Furthermore, these funds could be used to rehabilitate or replace other major equipment such as a large 500kva electrical transformer or cables as well. The combined construction cost for the Intake Pumping Station and the Reservoir Pumping Station was approximately \$30,000,000 (1990 dollars). The recommended reserve of \$650,000 represents 2% of the total construction cost.

Planned Capital Improvements - Fiscal Years 2016 – 2020

Portable generator, hookup and transfer switch for I/O tower

A standby power generator is needed at the Reservoir Inlet and Outlet tower to enable staff to operate the reservoir emergency dump valve in case of a dam emergency at the time of a power outage. Also other inlet and outlet valves will remain operable under all conditions and the dam instrumentation will be able to send readings on the condition of the drainage system and piezometers during times of prolonged power outages as was experienced after super storm Sandy. This project will go out to bid in the fall of 2015.

Resize Intake - Motor/Pump/VFD

A recent safe yield review has determined that replacing one of the 600-hp motors and pump at the intake with a 300-hp motor and pump that can deliver up to 15 MGD and a new variable frequency drive will improve the reliable safe yield of the system. This project will likely be designed in calendar year 2017 and constructed in 2019. This will allow a closer match between the anticipated average customer sales from the intake pool and the intake pump capacities. The motor and variable frequency drive will be 480V as opposed to the existing 2400V system. Although this will require the addition of a transformer, it will also allow for powering the pump from a portable generator. This will allow for some use of the intake during an extended power outage. This will also result in the rehabilitation of one of the pumps and motors.

Fueling System Upgrade

Current regulations regarding underground storage tanks require leak monitoring in the tank and piping and recording of the data on a prescribed basis. We have leak monitoring but recording inventory is presently manual so an electronic system for recording daily inventory in the tanks is needed. A determination was made that the 1000-gallon underground storage tanks have 5 or more years of useful life so they will not be replaced under this project.

The original fuel dispensing pumps need to be replaced with modern units that electronically track usage. We plan to replace the dispensing units and usage system with identical equipment utilized at other Authority locations.

Rehabilitation of Pumps and Motors at the Intake Pumping Station and Reservoir Pumping Station

There are five main vertical turbine pumps with 600-horsepower motors at the Intake Pumping Station (IPS). There are five main vertical turbine pumps with 900-horsepower motors at the Reservoir Pumping Station (RPS).

The Authority has undertaken a multi-faceted, multi-year program to service all ten pumps and motors. The first phase, began in 2003, includes the servicing of a pump at the RPS and a motor at the IPS each year. All pumps and motors were physically inspected, vibration tested, and pump efficiency tested in 2013 and 2014. All are within acceptable performance tolerances. Motor rehabilitation on one unit was completed in FY13 and one motor for FY14. It is anticipated that no pump rehabilitation will be needed until FY2017 when pump 1 at the intake will be rehabilitated, including a new bowl assembly.

Security System Upgrade

In response to the Public Health Security and Bioterrorism Response Act of 2002 and an Executive Order issued on July 18, 2002 by the State of New Jersey identifying critical facilities that require vulnerability assessments, the Authority contracted with a consultant to develop a comprehensive security vulnerability assessment (VA) and implement recommendations of the VA. Recommendations were provided for changes in security policies and procedures, minimum and additional upgrades to the physical protection systems (PPS) and processes. Estimates of probable capital costs were developed for the minimum and additional PPS for system facilities.

Improvements recommended in the schematic design report for implementing the security measures and improvements are being phased in. A camera system and DVR has been designed for the reservoir IO tower area and is tentatively scheduled to be installed in early 2016.

Replacement of Capacitors

Electrical capacitors are component parts in the variable speed electrical drive units at both the Intake Pumping Station and the Reservoir Pumping Station. During a prior visit by the field service technician from ASI Robicon Corporation, several capacitors were identified as failed parts. All fifty-three existing capacitors are reaching the end of their useful life and are recommended for replacement. Seven of the fifty-three were replaced prior to 2011 and the remaining 46 will be replaced during upcoming years. The cost to replace the remaining capacitors is approximately \$40,000. No failures were experienced in 2013 and 2014 and a number of capacitors are on hand so the replacement has been moved back several years.

Equipment Storage Building

There was a need to provide secure under cover storage for equipment at the facility. A 120' by 50' structure, providing 6000 square feet of added storage was determined to be needed. A contract in the amount of \$375,750 was awarded to 3R Painting & Contracting in October 2013. All work is now complete.

Replace rubber seats on 36-inch ball valve that controls water flow from Reservoir to Manasquan

The valve is 25 years old and the seats are worn from controlling flow. Therefore, the valve passes excessive flow even in the closed position. With the pipeline dewatered, the seats are replaceable in the field with some large piping dismantled to obtain access to the seats inside the valve. The main shaft bearing on the valve will also be replaced. This work is planned for March of 2016.

Replace rubber seats on 36-inch guardian valve that controls water flow from Reservoir to Manasquan

This valve is also 25 years old and it will be out of service during the period when the 36-inch ball valve seats are being replaced. It is recommended to replace the seats in this valve given the opportunity that will exist with the piping disconnected and the seat accessible.

Install a 36-inch V-port Style Control Valve Upstream of the 36-inch ball valve that controls flow from the reservoir to Manasquan.

As stated above, the 36-inch reservoir return control valve passed water through the seats far sooner than was expected based on years of service. The manufacturer has stated that this premature degradation resulted from the utilization of the valve being that the valve is typically utilized in the nearly closed position at all times. Installing this adjustable v-port valve will allow the reservoir return valve to operate in its design range and extend the life of the valve seats.

Replace Control Panel at Reservoir I/O Building

The control panel at the reservoir I/O tower is 25 years old and only the reservoir dam indicators report automatically. The system should be upgraded to maintain reliability.

Resurface floor in hall and bathrooms in the RPS Building

The existing epoxy/sand finish on the concrete floor is discolored and not uniform. The surface is breaking free from the concrete in some areas and cannot be repaired. Replacement is desired to improve the appearance of the facility.

Replacing the incoming electrical power breakers and one set of cables from one breaker to Transformer T2

Electrical surges and cable failures in 2012 and 2013, as a result of several storms, brought to light the need to investigate replacing the 24 year old breakers in the incoming power substation. Staff investigation determined that the breakers could be refurbished to like new condition at half the cost of purchasing new breakers. This was undertaken in calendar year 2015. In addition, one set of cables that the breakers protect will be replaced in the fall of 2015 as they are past their expected life expectancy in regards to insulation integrity.

Renovation of Traveling Water Screens

The eight traveling water screens at the Intake Pumping Station are in need of service over time. A 2013 inspection found all units to be in good condition. Funding is included to install new reducers, drive sprockets, screen sections, chain guard assemblies and adapter bases on all eight units. Another inspection is planned for the fall of 2015.

Variable Frequency Drive Control Conversion

Staff has been working with ASI Robicon Corporation to develop a conversion package for the operation of the variable frequency drives (VFD's). The conversion package would consist of revising the sequencer operation of both the Intake and Reservoir Pumping Stations from the current card rack computerized system to a programmable logic controller. With the current logic system, the Authority has been experiencing logic card failures with expensive computer board repairs or parts that are no longer available. This is the main purpose of changing the control logic operation. It would also include replacing one of the 4 VFD's at the Reservoir pump station with a new VFD. The project is under development at this time.

Valve Operator Replacement on 36-inch Intake Pool Return Line

The existing system to operate the valve is 25 years old and relies on an oil reserve tank and compressors to drive a piston to operate the valve. Replacement of the operator with an electrically driven operator is preferred in keeping with similar valve operators at the reservoir system.

Evaluation of Condition of Reservoir PCCP pipeline

In light of difficulties with pre-stressed concrete cylinder pipe and the fact that this 5-mile pipeline will have 30 years of use in year 2020, it is advisable at this time to have the interior and wrapped wire condition evaluated. Authority staff has performed in-house inspections of the pipeline in 2003 and again in 2009. The staff inspection sounds the pipe interior using capped black iron rods for hollow areas which may be indicative of external distress. It is recommended that the pipeline be evaluated by an outside engineering firm using more modern technology that is now available. The price in the table for this work is based on an estimate given in year 2015 by a New Jersey firm that evaluates this size pipe using

electromagnetic technology. Their budget number of \$225,000 was marked up for future years.

Driveway Sealcoating

The driveways and parking areas at the Manasquan Reservoir System Administration Building were repaired a few years ago by trenching out and resurfacing the large cracks and holes and filling in the cracks with hot tar. Those repairs have reached the end of their useful life. It is recommended that these areas be addressed by cleaning and sealcoating the roads and all blacktop areas around the buildings, intake pool and parking areas, using coal tar sealer with additive and black beauty sand additive. This endeavor is exclusive of the intake road. The cost estimate is \$25,000 and this work is expected to be performed in FY2017.

PART III – PROPOSED RULE AMENDMENTS

NEW JERSEY WATER SUPPLY AUTHORITY

AMENDMENTS TO THE SCHEDULE OF RATES, CHARGES AND
DEBT SERVICE ASSESSMENTS FOR THE SALE OF WATER FROM THE
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

To Become Effective July 1, 2016

The following rules and regulations can be found in the New Jersey Administrative Code under N.J.A.C. 7:11-4.1, et seq. Full text of the proposal follows (additions indicated in boldface **thus**; deletions indicated in brackets [thus]):

7:11-4.3 Operations and Maintenance Expense Component

(a) – (b) (No change.)

(c) Operations and Maintenance Expense Component:

<u>Effective Date</u>	<u>Rate/Million Gallons</u> (based upon a [20.158] 19.443 per day sales base)
July 1, [2015] 2016	[\$386.00] \$432.87

7:11-4.4 Debt Service Cost Component

(a) (No change.)

(b) The following Debt Service rates based on a sales base of [15.723]**15.008** million gallons per day, apply to all initial water purchase contract customers, and all delayed water purchase contract customers, who fully satisfied their contractual delayed water purchase surcharge obligations at the commencement of their contract terms:

<u>Period</u>	<u>Rate/Million Gallons</u>
7/1/[2015] 2016 to 6/30/[2016] 2017	(Coverage 120%) [\$636.61] \$669.79

(c) Delayed Water Purchase Surcharge will be assessed to all water purchasers who entered into a Water Purchase Contract for an uninterruptible service commencing subsequent to the System Operation Date (Delayed Water Purchase Contract). This includes a purchaser under an Initial Water Purchase Contract, which provides for an increase in the amount of uninterruptible service effective subsequent to the System Operation Date.

1. The following Debt Service rate based on a sales base of 4.435 million gallons per day, applies to the Delayed Water Purchase Contracts commencing July 1, 2001, October 1, 2002, and January 1, 2005 in lieu of the Debt Service rate set forth in (b)above.

<u>Period</u>	<u>Rate/Million Gallons</u>
7/1/[2015] 2016 to 6/30/[2016] 2017	(Coverage 120%) [\$770.07] \$772.99

(d) (No change.)

7:11-4.5 Source water protection fund component

(a) (No change.)

(b) The source water protection fund component is as follows:

<u>Period</u>	<u>Rate/Million Gallons</u>
7/1/[2015] 2016 to 6/30/[2016] 2017	\$10.00

7:11-4.6 NJEIFP debt component

(a) (No change.)

(b) The NJEIFP debt component is as follows:

<u>Period</u>	<u>Rate/Million Gallons</u>
7/1/[2015] 2016 to 6/30/[2016] 2017	[\$24.79] \$25.10

Appendix I. Report of CLA PC – Allocation of Headquarters General and Administrative Expenses – FY 2017

Appendix II. Report of CLA PC – Allocation of Headquarters General and Administrative Expenses – Audited FY 2015 Expenditures