

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 NO CHANGE IN OPERATING EXPENSE FOR FISCAL YEAR 2020

ADJUSTMENT OF SOURCE WATER PROTECTION FUND COMPONENT TO REFLECT NO CHANGE IN COMPONENT RATE FOR FISCAL YEAR 2020

ADJUSTMENT OF DEBT SERVICE COST COMPONENTS TO REFLECT BOND YEAR PAYMENTS DUE AND REQUIRED FOR FISCAL YEAR 2020

ADJUSTMENT OF NEW JERSEY ENVIRONMENTAL INFRASTRUCTURE FINANCING PROGRAM DEBT COMPONENT TO REFLECT BOND YEAR PAYMENTS DUE AND REQUIRED FOR FISCAL YEAR 2020

Proposed Effective Date: July 1, 2019

Proposed to the Board: 11/5/2018

Contents

PART I – EXPLANATION OF PROPOSED REVISED RATE STRUCTURE.....	4
Overview of Rate Proposal for Fiscal Year 2020	4
Summary of Proposed Adjustments.....	4
Initial Water Purchase Contracts	4
New Jersey American Water Delayed Water Purchase Contracts.....	5
Schedule of Events.....	7
Distribution of Headquarters General and Administrative Costs and Insurance Costs to all Operating Systems	8
Distribution of Costs Between the Manasquan Reservoir System and the Treatment Plant/Transmission System.....	9
Analysis of Significant Changes in Operations and Maintenance Expenses and Sales Base - Manasquan Reservoir System.....	9
Insurance Program	11
Fees and Permits	11
Headquarters General and Administrative Expenses.....	11
Interest Income and Miscellaneous Revenue.....	11
Reserve Contributions.....	12
Review of Reserve Accounts	12
Source Water Protection Fund Rate Component	13
Optional Water Use Schedule.....	14
Overdraft Service	14
Other Rule Amendments.....	14
PART II – DETAILED SUPPORTING INFORMATION	15
Table 1 - Summary Of Proposed Fiscal Year 2020 Adjustments.....	15
Table 2 - Rate History of Water Charges per Million Gallons of Raw Water - Initial.....	16
Table 3 - Rate History of Water Charges per Million Gallons of Raw Water - Delayed.....	17
Schedule of Events.....	18
Proposed Fiscal Year 2020 Budget Summary	19
Schedule 1 - Total Operations & Maintenance Budget	20
Schedule 2 - Labor Projection	21
Schedule 3 - Reservoir System Operations and Maintenance Direct Expense Budget.....	22
Schedule 4 - Treatment Plant/Transmission System Operations and Maintenance Direct Expense Budget	23
Schedule 5 - Reservoir System General and Administrative Operations and Maintenance Direct Expense Budget	24
Schedule 6 - List Of Category 5340 Items Recommended Service & Maintenance Contracts For Reservoir (40).....	25
Schedule 7 - List Of Category 5340 Items Recommended Service & Maintenance Contracts For WTP/TS (50)	26
Schedule 8 - List Of Category 5340 Items Recommended Service & Maintenance Contracts For G & A (60)	27
Schedule 9 - List Of Category 5380 Items Recommended Special & Professional Service For	

Reservoir (40)	28
Schedule 10 - List Of Category 5380 Items Recommended Special & Professional Services For WTP/TS (50)	29
Schedule 11 - List Of Category 5380 Items Recommended Special & Professional Services For G & A (60)	30
Schedule 12 - Projected FY 2020 New Jersey Water Supply Authority Insurance Program...	31
Schedule 13 - Recap Of Allocation Of Headquarters General And Administrative Expenses Charged To The Manasquan Reservoir Water Supply System	32
Schedule 14 - Proposed Capital Equipment Budget	33
Schedule 15 - July, 2017 – June, 2018 Fiscal Year 2018 G&A Expenses Split.....	34
Schedule 16 - Estimate Of Interest Income	37
Schedule 17 - Unanticipated Revenue	38
Schedule 18 - Fund Balances as of 6/30/18.....	39
Schedule 19 - Operations & Maintenance Expense Component and Debt Service Cost Component Sales Base.....	40
Schedule 20 - Operations And Maintenance Rate Component (19.443mgd).....	41
Schedule 21 - Computation Of Base Debt Service Rates	42
Schedule 22 - Computation Of Delayed Water Purchase Debt Service Rates	43
Schedule 23 - Computation Of Base Debt Service Rates	44
Schedule 24 – 2020 Bond Debt Service Coverage	45
Schedule 25 - Rehabilitation Reserve and Capital Improvement Program	46
PART III – PROPOSED RULE AMENDMENTS	53
Appendix I. Report of Mercadien PC – Allocation of Headquarters General and Administrative Expenses – FY 2020	i
Appendix II. Report of Mercadien PC – Allocation of Headquarters General and Administrative Expenses – Audited FY 2018 Expenditures	ii

PART I – EXPLANATION OF PROPOSED REVISED RATE STRUCTURE

Overview of Rate Proposal for Fiscal Year 2020

(July 1, 2019 - June 30, 2020)

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, 2019.

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 (FY2019) Rates Per MG 7/1/2018 – 6/30/2019	Proposed (FY2020) Rates Per MG 7/1/2019 – 6/30/2020
Operations & Maintenance Component	\$432.87	\$432.87
Source Water Protection Fund Component	15.00	15.00
Debt Service Cost Component	570.55	570.55
NJEIFP Debt Component	24.93	24.93
TOTAL RATE	\$1,043.35/mg	\$1,043.35/mg

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

Component	Current (FY2019) Rates Per MG 7/1/2018 – 6/30/2019	Proposed (FY2020) Rates Per MG 7/1/2019 – 6/30/2020
Operations & Maintenance Component	\$432.87	\$432.87
Source Water Protection Fund Component	15.00	15.00
Debt Service Cost Component	664.96	664.96
NJEIFP Debt Component	24.93	24.93
TOTAL RATE	\$1,137.76/mg	\$1,137.76/mg

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The General Rate Schedule for Operations and Maintenance (O&M) was last adjusted effective July 1, 2018 to cover the operating expenses of the System for FY2019. The FY2019 sales base was 19.443 million gallons per day (mgd). The Authority anticipates that the applicable raw water O&M sales base for FY2020 will remain the same at 19.443 mgd. The initial sales base will remain the same at 15.008mgd and 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 \$3,069,858 in O&M component revenue required during FY2020 with an O&M rate component of \$432.87 per million gallons, no change from FY2019, starting on July 1, 2019 (Schedule 20, page 41). The proposed operating expense budget for FY2020 is \$111,450 more than FY2019 and the proposed Capital Equipment Budget, net of depreciation reserve, is \$22,400 less than FY2019. In FY2020 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 FY2019. In FY2020 there will be no contribution to the Other Post-Employment Benefits Reserve and no Supplemental Renewal and Replacement Fund contribution. The OPEB Reserve is fully funded. See Budget Summary on page 19.

A credit of \$79,552 is owed from the SMMUA Water Treatment Plant and Transmission System to the Manasquan Reservoir for actual FY2018 salaries and fringe expenses and will be applied to the CY2019 SMMUA budget (Schedule 15, pages 34-36).

Miscellaneous revenue and interest income in FY2020 is projected to increase by \$26,370 relative to FY2019 reflecting stable interest earnings (Schedule 16, page 37) and an increase in the use of year end surplus available from FY2018 (Schedule 17, page 38). Overdraft revenue of \$38,719 is available from the summer of 2017 and 2018.

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 were 15 and 25 years respectively. The bond proceeds also fully funded the Debt Service Reserve Account.

On April 26, 2016, the Authority issued \$17,460,000 in Manasquan Reservoir Water Supply System Refunding Bonds, Series 2016. The proceeds, together with other monies on deposit, were used to prepay \$23,242,358 in Manasquan Reservoir Water Supply System Revenue Bonds, Series 2005 and Current Manasquan State Loan Notes and Completion Notes. The Refunding Bonds carry a bond yield of 1.59%, and mature in incremental annual principal amounts through 2031. The debt service component of the rate represents 120 percent of the principal and interest requirements and debt service coverage must remain at 120 percent through the life of the bonds.

The current refunding resulted in a difference between the par amount of the refunding bonds and the par amount of the refunded bonds of \$5,782,358. The net premium on the refunding bonds was \$1,821,414. The economic gain was a net present value debt savings of \$2,999,861.

The Debt Service component of the rate for the Initial Water Purchase Contracts will be \$570.55 (no change from FY2019) and \$664.96 (no change from FY2019) for the Delayed Water Purchase (DWP) Contracts in FY2020. These changes reflect 120 percent 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. In order to cover program needs the Authority increased the rate by \$5.00 per million gallons to restore the rate to \$15.00 per million gallons in FY2018. The Authority recommends no change to the rate of \$15.00 per million gallons in FY2020.

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 \$24.93 per million gallons in FY2020 is required to cover debt

service payments in accordance with the schedule and is no change from the FY2019 rate.

The base contract O&M Rate (\$432.87), Source Water Protection Program Rate (\$15.00), Debt Service Rate (\$570.55) and NJEIFP Debt Rate (\$24.93) comprise the total base contract rate for raw water of \$1,043.35 per million gallons, and represent no change relative to FY2019. 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 FY2020 is \$1,137.76 per million gallons representing no change relative to the FY2019 delayed water purchase rate. The O&M Component (\$432.87), the Source Water Protection Fund Component (\$15.00), the Debt Service Rate Component (\$664.96) and NJEIFP Debt Rate (\$24.93) 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, 2019 through June 30, 2020. 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, 2018, January 10, 2019, April 10, 2019 and July 10, 2019.

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 10, 2019, 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 7, 2019, also at the Authority's Manasquan Administration Building in Wall, New Jersey. The public hearing record is scheduled to close on March 18, 2019.

The Authority will take final action on the proposed rate adjustment at its May 6, 2019 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 2018 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 FY2020 budget based on the FY2018 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, 2018. The percentages used to provide the basis for the salary allocation for FY2020, were established from the time records from FY2015 through FY2018. 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 FY2020.

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 were renewed effective July 1, 2015 and expire June 30, 2040. 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. Of the 13 contracts, six 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 and the New Jersey American Contract. 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 total sales base dropped from 20.560 to 19.443mgd effective July 1, 2015 and remains the total for FY2020.

Overview of Projected Operational Expenses

The Authority's proposed FY2020 Manasquan Reservoir Total Expense budget is \$111,450 more than the current FY2019 budget. The allocation of Authority Headquarters General and Administrative Expenses in FY2020 decreases by \$98,000 versus FY2019. Capital Equipment budget for FY2020 is \$22,400 less than FY2019. There will be no FY2020 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. There will be no contribution to the reserve for other post-employment benefits (accrued sick leave payments for retirees) which was created in FY2017. Miscellaneous revenue and interest income increases by \$26,370. These factors contribute to a \$33 increase in the total FY2020 O&M Component requirement relative to FY2019 (\$3,069,858 vs. \$3,069,825). (Budget Summary on page 19)

Total O&M Direct Expenses are decreasing by \$11,068 from FY2019. The largest contributor is a decrease in insurance costs. 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. General and Administrative Expenses allocated to the Reservoir System are increasing by \$24,614 from FY2019.

Salaries, Overtime and Benefits

Authority employees within Communications Workers of America (CWA), International Brotherhood of Electrical Workers (IBEW) and International Federation of Professional Technical Engineers (IFPTE) are currently operating under a contract that expires June 30, 2019. The FY2020 budget assumes a 2.0 percent cost of living adjustment payable July 1, 2019. The IFPTE/AFL-CIO represents the Authority's Maintenance, Craft and Security Units and the CWA represents the Authority's Administrative and Clerical, Primary Level and Higher Level Supervisors Units. The IBEW represents several management employees. The Authority did not include any cost of living adjustments in the FY2020 budget for management.

The Authority has built in 25 percent per year growth for Pension contributions over actual FY2018. The average increase in actual payments to Treasury for pension contributions since FY2015 is 4.5 percent. 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.

Total salary and fringe is increasing by \$55,203 for FY2020 from FY2019, and the portion allocated to the Reservoir System is increasing by \$97,900. The four-year averaging of allocation between the Reservoir System and the Treatment Plant projects has stabilized the movement of salary dollars to the Reservoir System from the Treatment Plant. In FY2020, 48 percent of total salary and fringe is allocated to the Reservoir System and 52 percent to the Treatment Plant. The

number of budgeted positions in FY2020 is 27, which is the same as FY2019. (Schedule 2, page 21) The Authority is budgeting 54 percent of the salary budget for fringe benefits in FY2020 which is exclusive of retiree medical.

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. Those who attain 25 years on or after July 1, 1997 share some portion of post-retirement health benefit costs with the employer as determined by union contract or bargaining unit agreement. The Authority retiree health benefits expense item is decreasing in FY2020 from \$204,300 to \$179,900. The New Jersey State Health Benefits Commission projects a 0.0 percent premium increase in 2019 for early retiree medical and a 12.7 percent decrease for Medicare retirees. The Authority budgeted 0.0 percent and 0.0 percent increases for FY2019 and FY2020 respectively. Because there are only six retirees at present in the Manasquan System, each additional retiree will drive a large increase on a percentage basis. The FY2020 budget plans for two additional retirees.

Insurance Program

The Authority is recommending a \$44,868 decrease in insurance expenses for FY2020, 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 FY2020 in February 2019 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 FY2020 budgetary line item of \$35,500 for fees and permits reflecting no change over FY2019.

Headquarters General and Administrative Expenses

Budgeted Headquarters General and Administrative Expenses in FY2020 total \$753,893 of which \$649,479 is charged to the Manasquan Reservoir System and \$104,414 is charged to the Manasquan Water Treatment Plant (Schedule 13, page 32). Because actual audited Headquarters Expenses were lower than the budget for FY2018 by \$81,417, that difference must be credited in FY2020 resulting in an adjusted charge to the Reservoir System of \$568,000. Headquarters charges are driven primarily by salary and fringe.

Interest Income and Miscellaneous Revenue

The projected interest earnings on reserve funds for FY2020 are \$23,400. This reflects an increase of \$6,100 relative to FY2019 and is based upon an interest rate of 1.0 percent for short-term investments (See Schedule 16, page 37).

Reserve Contributions

Consistent with FY2019, there will be no FY2020 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 were two new reserve fund contributions in FY2017 which will not be funded in FY2020. There was a supplemental contribution of \$350,000 to the Renewal and Replacement Fund in FY2017 that is not required in FY2020. 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 would have drawn the fund down below the \$2 million requirement without the supplemental deposit. Finally, the Authority funded a reserve for other post-employment benefits (accrued sick leave) in FY2017 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. Long term investment earnings are being used to fund the Depreciation Reserve.

Self Insurance Reserve

The Self Insurance Fund 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 FY2020.

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, 2016 and as a result, no contribution will be needed in FY2020.

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 June 30, 2018 is \$3,885,517. 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.

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 June 30, 2018 is \$1,573,796. Because of overall rate considerations in prior years, the Authority reduced the Source Water Protection Fund Component from \$15.00 per million gallons to \$10.00 per million gallons in FY2016 and FY2017 and reinstated the rate to \$15.00 per million gallons in FY2018 to ensure adequate funding for these initiatives. The Authority proposes no change to the rate in FY2020.

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 FY2020.

PART II – DETAILED SUPPORTING INFORMATION

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Table 1 - Summary Of Proposed Fiscal Year 2020 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, 2019 to June 30, 2020

Rate Component	Current	Original Proposal 11/05/18	Difference	Percentage Increase (Decrease)
Operations & Maintenance Expense Component	\$432.87	\$432.87	⇒ \$0.00	0.00%
Source Water Protection Fund Component	\$15.00	\$15.00	⇒ \$0.00	0.00%
Debt Service Cost Component	\$570.55	\$570.55	⇒ \$0.00	0.00%
NJEIFP Debt Component	\$24.93	\$24.93	⇒ \$0.00	0.00%
Total Rate	\$1,043.35/mg	\$1,043.35/mg	⇒ \$0.00	0.00%

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, 2019 to June 30, 2020

Rate Component	Current	Original Proposal 11/05/18	Difference	Percentage Increase (Decrease)
Operations & Maintenance Expense Component	\$432.87	\$432.87	⇒ \$0.00	0.00%
Source Water Protection Fund Component	\$15.00	\$15.00	⇒ \$0.00	0.00%
Debt Service Cost Component	\$664.96	\$664.96	⇒ \$0.00	0.00%
NJEIFP Debt Component	\$24.93	\$24.93	⇒ \$0.00	0.00%
Total Rate	\$1,137.76/mg	\$1,137.76/mg	⇒ \$0.00	0.00%

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Table 2 - Rate History of Water Charges per Million Gallons of Raw Water - Initial
FY1999-FY2020

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, 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	636.61	25.10	\$1,104.58	4.46%
July 1, 2017	432.87	15.00	570.55	24.93	\$1,043.35	-5.54%
July 1, 2018	432.87	15.00	570.55	24.93	\$1,043.35	0.00%
July 1, 2019	432.87	15.00	570.55	24.93	\$1,043.35	0.00%

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Table 3 - Rate History of Water Charges per Million Gallons of Raw Water - Delayed
FY2004-FY2020

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, 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	770.07	25.10	\$1,238.04	3.96%
July 1, 2017	432.87	15.00	664.96	24.93	\$1,137.76	-8.10%
July 1, 2018	432.87	15.00	664.96	24.93	\$1,137.76	0.00%
July 1, 2019	432.87	15.00	664.96	24.93	\$1,137.76	0.00%

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, 2019

2018

- SEPTEMBER 27 Advise Water Users of informal meeting.
- NOVEMBER 1 Informal meeting with Water Users – 11:00 AM.
- 5 Board reviews and approves proposed Rates.
- DECEMBER 21 Mail Official Notice to water customers, Rate Payer Advocate, interested parties and advertise in newspapers.

2019

- JANUARY 7 Publication in the New Jersey Register.
- 10 Pre-Public Hearing – 11:00 AM (within 45 days of Official Notice).
Deadline for responses to inquires received prior to pre-public hearing.
- FEBRUARY 4 Deadline for receipt of comments to be addressed at Public Hearing
(15 days after pre-public hearing).
- 7 Public Hearing Meeting. (Manasquan Administration Building) – 11:00
AM Deadline for responses to inquires received between pre-public and
public hearing.
- 25 Written responses to questions raised at Hearing (within 10
business days of the public hearing).
- MARCH 8 NJ Register Comment Period Ends.
- 18 Public Hearing record closes (25 business days after
Public Hearing).
- MAY 6 Board approval of FY 2020 Rates (Budget approval option)
- JUNE 3 Board approval of FY 2020 Budgets.
- JULY 1 Effective date.

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Proposed Fiscal Year 2020 Budget Summary

(07/01/19-06/30/20)

	ADOPTED F/Y2019 <u>Reservoir Budget</u>	PROPOSED F/Y2020 <u>Reservoir Budget</u>
Proposed Operating Expense Budget (Schedule 1)	\$ 2,551,580	\$ 2,663,030
Allocation of Headquarters General & Administrative Expenses to the Manasquan Reservoir System (Schedule 13)	<u>\$ 666,000</u>	<u>\$ 568,000</u>
Proposed Total Expense Budget	\$ 3,217,580	\$ 3,231,030
Proposed Capital Equipment Budget (Schedule 14)	\$ 22,800	\$ 400
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	\$ -	\$ -
- Supplemental Renewal & Replacement	\$ -	\$ -
Adjustment for F/Y18 Salary and Fringe Expenses to be paid (from)/to WTP/TS Account (Schedule 15)		(\$79,552)
Adjustment for F/Y17 Salary and Fringe Expenses to be paid (from)/to WTP/TS Account	<u>\$ (114,905)</u>	
Total Budget Requirements	<u>\$ 3,275,475</u>	<u>\$ 3,301,878</u>
Interest Earnings on Funds (Except Renewal and Replacement and Depreciation Reserve Fund) (Schedule 16)	\$ (17,300)	\$ (23,400)
Unanticipated Revenue (Schedule 17)	<u>\$ (188,350)</u>	<u>\$ (208,620)</u>
Total Miscellaneous Revenue & Interest Income	<u>\$ (205,650)</u>	<u>\$ (232,020)</u>
Net Amount to be paid for O & M Component	<u>\$ 3,069,825</u>	<u>\$ 3,069,858</u>

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 1 - Total Operations & Maintenance Budget

Fiscal Year 2020

	F/Y2018 Reservoir Actual	F/Y2019 Reservoir Adopted	F/Y2020 Reservoir Proposed
Salaries & Fringe Benefits (Schedule 2)*	\$1,368,816	\$1,423,000	\$1,520,900
O & M Direct Expense (Schedule 3)	829,677	1,019,652	1,008,584
G&A Expenses (Schedule 5)	<u>126,227</u>	<u>108,929</u>	<u>133,543</u>
Total Operations & Maintenance Budget	<u>\$2,324,720</u>	<u>\$2,551,581</u>	<u>\$2,663,027</u>
Estimate	<u>\$2,687,830</u>	<u>\$2,551,580</u>	<u>\$2,663,030</u>

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

	F/Y2018 Actual		F/Y2019 Adopted		F/Y2020 Proposed	
	Reservoir	WTP/TS	Reservoir	WTP/TS	Reservoir	WTP/TS
Salaries/Fringe*	\$1,368,816	\$1,501,871	\$1,423,000	\$1,695,614	\$1,520,900	\$1,652,917
O & M Direct Expense	829,677	652,350	1,019,652	929,660	1,008,584	855,400
G & A Expense	<u>126,227</u>	<u>98,198</u>	<u>108,929</u>	<u>108,071</u>	<u>133,543</u>	<u>89,907</u>
Total	\$2,324,720	\$2,252,419	\$2,551,581	\$2,733,345	\$2,663,027	\$2,598,224

*Actual fringe includes GASB 68 non-cash Pension expense

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 2 - Labor Projection
Fiscal Year 2020 (7/01/19-6/30/20)

TITLES	RANGE	SALARY	FRINGE BENEFITS	OVERTIME	CLOTHING ALLOWANCE	SHIFT DIFFERENTIAL	TOTAL	ALLOCATION RESERVOIR %	AMOUNT RESERVOIR	ALLOCATION WTP/TS %	AMOUNT WTP/TS
Director	36	119,500	76,379	-	-	-	195,879	50%	98,000	50%	97,879
Project Engineer II	26	85,600	54,711	-	-	-	140,311	51%	71,900	49%	68,411
Water Supply Tech.	17	62,400	40,235	-	550	-	103,185	62%	63,900	38%	39,285
Administrative Assistant	18	67,400	43,079	-	-	-	110,479	50%	55,200	50%	55,279
Supervisor Technical Facilities Maint	23	84,900	60,764	9,619	550	-	155,833	47%	72,500	54%	83,333
Sr. Water Supply Tech.	20	73,900	47,747	253	550	-	122,450	43%	52,600	57%	69,850
Maintenance Worker I	10	46,100	29,817	-	550	-	76,467	93%	71,400	7%	5,067
Supervisor Operations	29	102,300	65,386	-	-	-	167,686	25%	41,100	76%	126,586
Equipment Operator	12	42,900	27,771	-	550	-	71,221	94%	66,900	6%	4,321
Foreman Bldg & Grounds Maint	19	73,900	47,816	360	550	-	122,626	94%	114,700	6%	7,926
Foreman Facilities Maintenance	20	73,900	48,491	1,417	550	-	124,358	47%	58,300	53%	66,058
Facilities Mechanic (3 Positions)	18	186,100	120,807	1,260	1,650	-	309,817	48%	148,500	52%	161,317
Supervisor Plant Operator	22	81,100	53,524	2,088	550	4	137,266	37%	50,500	63%	86,766
Maintenance Worker I Operations	10	46,100	29,817	-	550	-	76,467	92%	70,200	8%	6,267
Reservoir System Operator (3 Positions)	15	165,400	120,898	20,207	1,650	1,896	310,051	97%	301,900	3%	8,151
Asst. Reservoir System Operator (2 Positions)	13	78,500	57,181	9,863	1,100	-	146,644	95%	139,300	5%	7,344
Plant Operator (3 Positions)	20	217,800	160,362	31,447	1,650	-	411,259	6%	24,700	94%	386,559
Plant Operator (3 Positions)	19	207,900	152,781	29,486	1,650	-	391,817	5%	19,300	95%	372,517
TOTAL:		<u>1,815,700</u>	<u>1,237,567</u>	<u>106,000</u>	<u>12,650</u>	<u>1,900</u>	<u>3,173,817</u>		<u>1,520,900</u>		<u>1,652,917</u>

TOTAL = 27 Positions

Director and Adm. Assistant, Water Supply Tech and Sr. Water Supply Tech percentages modified based on work load. All others are four-year average.

NOTE: A. PERCENTAGES ARE FROM THE AVERAGE OF FISCAL YEARS 2015 THROUGH 2018 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 2020, Adopted F/Y 2019, and Actual F/Y 2016-2018

Cost Center: Reservoir Direct
(40)

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

CODE	ACCOUNT	FY '16 ACTUAL	FY '17 ACTUAL	FY '18 ACTUAL	FY '19 ADOPTED	FY '20 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					
5210	Heating Fuel	1,422			648	648
5220	Utilities -Electrical Service	89,648	87,640	76,695	90,500	90,500
5230	-Gas Service	3,382	6,799	6,759	8,000	8,000
5240	-Propane					
5250	Electricity for Pumping Station	245,856	278,032	218,469	333,000	305,000
5260	Fuel - Vehicular					
5270	Oil & Grease					
5280	Tires					
5290	Maintenance Supplies	4,563	3,511	5,244	2,000	4,000
5300	Maint. Supplies - Vehicular					
5310	Major Vehicle Service & Repair					
5320	Agricultural Supplies					
5330	Maintenance Equipment	45,509	46,318	28,963	51,500	51,500
5340	Serv. & Maintenance Contracts	13,073	17,303	17,379	42,450	42,450
5350	Equipment Rental	1,575	4,477	4,400	6,500	6,500
5360	Household - Safety Supplies	1,670	523	835	1,000	1,000
5370	Uniforms					
5380	Special & Professional Services	192,376	66,612	130,420	110,186	123,686
5390	Protective Services	242,108	228,411	232,093	283,868	239,000
5400	Telephone	7,792	6,810	7,204	8,700	8,000
5410	Postage & Freight Out					
5420	Data Processing					
5430	Printing & Office Supplies	1,194	1,704	964	1,500	1,500
5440	Scientific & Photographic	2,975	3,350	2,258	5,500	5,500
5450	Dues & Subscriptions					
5460	Advertising & Promotional	257	487	433	2,000	2,000
5480	Staff Training & Tuition Aid					
5490	Fees & Permits	31,180	31,430	31,080	35,500	35,500
5500	In - Lieu Taxes	36,756	36,756	36,756	36,800	36,800
5510	Sediment Removal	33,184		29,724		47,000
5520	Chemicals					
5525	Carbon Filter Replacement					
	Total Other Expenses	\$954,521	\$820,162	\$829,677	\$1,019,652	\$1,008,584
	Total Operating Expenses	\$954,521	\$820,162	\$829,677	\$1,019,652	\$1,008,584
	ANNUAL BUDGET	\$1,072,500	\$1,018,478	\$1,049,600	\$1,019,652	\$1,008,584

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 2020, Adopted F/Y 2019, and Actual F/Y 2016-2018

Cost Center: Treat/Trans Direct
(50)

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

CODE	ACCOUNT	FY '16 ACTUAL	FY '17 ACTUAL	FY '18 ACTUAL	FY '19 ADOPTED	FY '20 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					
5210	Heating Fuel	5,862	1,403	0	6,000	6,000
5220	Utilities -Electrical Service	328,035	317,968	269,231	329,500	304,500
5230	-Gas Service	21,465	29,683	24,309	60,000	30,000
5240	-Propane					
5250	Electricity for Pumping Station					
5260	Fuel - Vehicular					
5270	Oil & Grease	3,634		1,365	4,000	4,000
5280	Tires					
5290	Maintenance Supplies	2,491	2,062	4,217	6,000	6,000
5300	Maint. Supplies - Vehicular					
5310	Major Vehicle Service & Repair					
5320	Agricultural Supplies			64		
5330	Maintenance Equipment	69,270	65,951	44,048	112,500	112,500
5340	Serv. & Maintenance Contracts	30,861	14,919	22,084	37,000	37,000
5350	Equipment Rental	3,077	76,515	1,507	4,800	4,800
5360	Household - Safety Supplies	1,782	5,900	216	2,000	2,000
5370	Uniforms					
5380	Special & Professional Services	25,705	18,158	28,673	34,600	34,600
5390	Protective Services	79,204	78,902	79,836	94,260	92,000
5400	Telephone	416	435	481		
5410	Postage & Freight Out			969		
5420	Data Processing					
5430	Printing & Office Supplies	3,949	2,153	5,077	6,800	6,800
5440	Scientific & Photographic	11,882	8,839	11,868	15,000	15,000
5450	Dues & Subscriptions					
5460	Advertising & Promotional	407	494	587	1,500	1,500
5470	Travel & Subsistence	17	27	55		
5480	Staff Training & Tuition Aid	0	1,400	5,102	5,200	6,700
5490	Fees & Permits	8,103	7,117	5,621	8,600	9,600
5500	In - Lieu Taxes	140	140	0	400	400
5510	Residual Removal	4,400	10,478	4,466	22,000	15,000
5520	Water Treatment Chemicals	99,829	116,894	88,979	129,500	117,000
5525	GAC Replacement	48,702	238	49,871	50,000	50,000
5528	Reimb of O&M Capital Expenditures	28,113		3,725		
	Total Other Expenses	\$777,344	\$759,677	\$652,350	\$929,660	\$855,400
	Total Operating Expenses	\$777,344	\$759,677	\$652,350	\$929,660	\$855,400
	ANNUAL BUDGET	\$1,094,200	\$1,059,546	\$941,860	\$929,660	\$855,400

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 2020, Adopted F/Y 2019, and Actual F/Y 2016-2018

Cost Center: G & A

(60)

MANASQUAN WATER SUPPLY SYSTEM
GENERAL & ADMINISTRATIVE
EXPENSE BUDGET

CODE	ACCOUNT	FY '16 ACTUAL	FY '17 ACTUAL	FY '18 ACTUAL	FY '19 ADOPTED	FY '20 PROPOSED
5110	Regular Salaries & Wages	\$1,626,536	\$1,665,410	\$1,761,247	\$1,796,450	\$1,830,250
5120	Overtime-Salaries & Wages	91,116	81,085	77,313	106,000	106,000
5130	New positions-Salaries & Wages					
5140	Seasonal Help-Salaries & Wages					
5150	Fringe Benefits	1,090,482	1,835,551	928,393	1,006,864	1,052,667
5160	Retiree Health Benefits	102,036	110,587	125,373	204,300	179,900
5168	Workers Comp. (Self-Insured)	1,172	483	1,006	5,000	5,000
	Total Salary, Wages & Fringe	\$2,911,342	\$3,693,116	\$2,893,334	\$3,118,614	\$3,173,817
	Budget - salary and fringe					
5200	Residences					
5210	Heating Fuel					
5220	Utilities -Electrical Service					
5230	-Gas Service					
5240	-Propane					
5250	Electricity for Pumping Station					
5260	Fuel - Vehicular	15,127	14,726	20,387	20,450	22,000
5270	Oil & Grease	466	4,764	865	8,200	5,700
5280	Tires	4,147	2,485	5,873	7,000	7,000
5290	Maintenance Supplies	18,501	9,551	10,278	27,300	27,300
5300	Maint. Supplies - Vehicular	5,809	6,751	6,022	10,600	10,600
5310	Major Vehicle Service & Repair	31,394	20,241	39,086	44,500	50,000
5320	Agricultural Supplies	2,355	2,250	2,876	7,600	7,600
5330	Maintenance Equipment	10,981	4,468	4,412	9,800	9,800
5340	Serv. & Maintenance Contracts	13,676	12,610	13,066	20,750	20,550
5350	Equipment Rental	2,312	2,124	2,348	3,700	3,900
5360	Household - Safety Supplies	6,912	11,592	8,145	7,500	7,500
5370	Uniforms				0	0
5380	Special & Professional Services	2,228	7,318	7,099	4,000	7,300
5390	Protective Services				0	0
5400	Telephone	5,587	5,649	6,304	7,000	7,000
5410	Postage & Freight Out	884	789	447	500	1,000
5420	Data Processing	4,105	4,000	4,417	5,000	5,000
5430	Printing & Office Supplies	3,217	4,530	2,242	7,800	5,800
5440	Scientific & Photographic	531	180	91	300	300
5450	Dues & Subscriptions	440	840	1,085	3,000	3,000
5460	Advertising & Promotional	971	631	1,379	1,500	2,000
5470	Travel & Subsistence	291	324	70	900	500
5480	Staff Training & Tuition Aid	5,847	12,246	5,920	11,900	11,900
5490	Fees & Permits	3,601	2,961	2,794	7,700	7,700
5500	In - Lieu Taxes					
5510	Residual Removal					
5520	Water Treatment Chemicals					
5525	GAC Replacement					
	Total Other Expenses	\$139,381	\$131,030	\$145,206	\$217,000	\$223,450
	Total Operating Expenses	\$3,050,723	\$3,824,146	\$3,038,539	\$3,335,614	\$3,397,267
	Budget- other expenses					
	TOTAL ANNUAL BUDGET					
	Reservoir System	\$81,058	\$70,909	\$126,227	\$108,929	\$133,543
	Treatment/Transmission System	\$58,323	\$60,121	\$98,198	\$108,071	\$89,907

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 2020

		Adopted F/Y19	Proposed F/Y20
		<u> </u>	<u> </u>
1	HVAC/Dehumidifier Service	\$ 500	\$ 500
2	Instrumentation & Control System Service/Upgrade	3,000	3,000
3	Electrical Upgrade & Repair	14,000	14,000
4	Overhead Crane Service & Inspection	3,000	3,000
5	Fire & Intrusion Alarm Service	1,500	1,500
6	Potable Well/Septic Service	1,500	1,500
7	Fertilization-Dam Dike	3,750	3,750
8	Roadway Crack Sealing	2,000	2,000
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	3,000
13	Fios Fiber Optic for Security Cameras	1,200	1,200
		<u> </u>	<u> </u>
	Total Service & Maintenance Contracts	<u>\$ 42,450</u>	<u>\$ 42,450</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 2020

		<u>Adopted</u> <u>F/Y19</u>	<u>Proposed</u> <u>F/Y20</u>
1	HVAC Service	\$ 2,000	\$ 2,000
2	Electrical Service Contract	1,000	1,000
3	Instrumentation & Control System Service & Upgrade	5,000	5,000
4	Electrical Upgrade & Repair	2,000	2,000
5	Overhead Crane Service	1,500	1,500
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	2,500	2,500
10	Auxiliary Generator Service	3,500	3,500
11	Lab Equipment Service	2,500	2,500
12	Backflow Preventor Service	500	500
13	Gas-Fired Hot Water Heater Service	700	700
14	Instrumentation & Control System Service & Upgrade (Transmission System)	5,000	5,000
15	Electrical Upgrade & Repair (Transmission System)	2,000	2,000
16	Meter Vault Internet Service (Transmission System)	5,400	5,400
Total Service & Maintenance Contracts		<u>\$ 37,000</u>	<u>\$ 37,000</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 2020

		<u>Adopted F/Y19</u>	<u>Proposed F/Y20</u>
1	Refuse & Waste Disposal	\$ 2,000	\$ 2,000
2	Office Equipment/Computers	1,800	1,800
3	Waste Oil Disposal	200	200
4	Fire Extinguisher Service	1,100	1,100
5	UST Monitor Service	-	2,000
6	Building Maintenance	1,750	1,750
7	Internet Service	2,000	2,000
8	Janitorial Service	8,200	6,000
9	Vehicle Lift Inspection	500	500
10	Generator Service & Maintenance	2,000	2,000
11	Forklift Service & Maintenance	<u>1,200</u>	<u>1,200</u>
	Total Service & Maintenance Contracts	<u><u>\$ 20,750</u></u>	<u><u>\$ 20,550</u></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 2020

		Adopted F/Y19	Proposed F/Y20
		<u> </u>	<u> </u>
1	Laboratory Services - Water Quality Sampling	\$ 2,000	\$ 10,000
2	Services-USGS Cooperative Agreement	34,000	34,000
3	Annual Trustee Fund	9,500	9,500
4	Dam Management-Surveying	2,500	2,500
5	Wetland Monitoring Management	4,000	8,000
6	Lake Management Consultants	20,000	20,000
7	Engineering Services	2,500	4,000
8	Financial Advisory Services	4,850	4,850
9	USGS Gaging Station Squankum	<u>30,836</u>	<u>30,836</u>
	Total Special & Professional Services	<u>\$ 110,186</u>	<u>\$ 123,686</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 2020

		Adopted F/Y19	Proposed F/Y20
1	Water Quality Sampling	\$ 17,200	\$ 17,200
2	Residual Quality Analysis	800	800
3	Consultant Services	4,000	4,000
4	USGA Allenwood Gage-Parameters	11,000	11,000
5	Underground Markout Service (Transmission System)	1,600	1,600
	Total Special & Professional Services	\$ 34,600	\$ 34,600

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 2020

		<u>Adopted</u> F/Y19	<u>Proposed</u> F/Y20
1	Pulmonary Testing	\$ 1,500	\$ 1,500
2	CDL Medical Testing	500	1,000
3	EAS Service	1,200	4,000
4	Pre-Employment Physicals	<u>800</u>	<u>800</u>
	Total Special & Professional Services	<u>\$ 4,000</u>	<u>\$ 7,300</u>

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 12 - Projected FY 2020 New Jersey Water Supply Authority Insurance Program

Policy	Raritan Basin System	Manasquan Reservoir System	Manasquan Water Treatment Plant and Transmission System	Total Premium
Property Limit \$150 million, Limit \$25m BI Deduct: \$100k all perils \$250k Deduct dams, dikes / \$1m Deduct Canal flood	\$521,658	\$173,719	\$44,623	\$740,000
General/Products Liability Limit \$1 million Deduct: \$150k	\$102,350	\$8,625	\$4,025	\$115,000
Environmental Impairment Liability Limit \$10 million Deduct: \$100k	\$22,250	\$1,875	\$875	\$25,000
Workers' Compensation Limit \$1 million	\$186,027	\$23,915	\$25,058	\$235,000
Employer Liability Limit \$1 million	Included in Workers' Comp	Included in Workers' Comp	Included in Workers' Comp	Included in Workers' Comp
Umbrella Liability Limit \$23 million	\$267,000	\$22,500	\$10,500	\$300,000
Business Automobile Limit: \$1 million G/L, \$0 pd Deduct: \$50k, G/L	\$22,985	\$4,091	\$924	\$28,000
Management Liability Public Officials Liability Cyber Risk Fidelity & Crime Limit \$5 million/\$1million/\$1 million Deduct: \$100k/\$10k/\$50k	\$44,500 \$5,340 <hr/> \$49,840	\$3,750 \$450 <hr/> \$4,200	\$1,750 \$210 \$4,000 <hr/> \$5,960	\$50,000 \$6,000 \$4,000 <hr/> \$60,000
Travel Accident Limit \$2 million	\$890	\$75	\$35	\$1,000
TOTAL:	\$1,173,000	\$239,000	\$92,000	\$1,504,000

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 2020 (7/1/19-6/30/20)

	Total Headquarters Charge	Manasquan Reservoir System	Manasquan WTP/TS
Budgeted-Appendix I, amount to be charged to Manasquan System for FY20 (7/1/19-6/30/20)	\$753,893	\$649,479	\$104,414
F/Y18 Adjustment as per audited Expenditures:			
Budgeted as per rate schedule for F/Y18 (7/1/17-6/30/18). Amounts paid during F/Y17 to Raritan Basin System.	\$772,000	\$666,000	\$106,000
Actual allocation based upon audited expenditures F/Y18 (7/1/17-6/30/18) - Appendix II	<u>\$677,639</u>	<u>\$584,583</u>	<u>\$93,056</u>
Adjustments F/Y18	<u>(\$94,361)</u>	<u>(\$81,417)</u>	<u>(\$12,944)</u>
Net Allocation for F/Y2020 Budget	<u><u>\$659,532</u></u>	<u><u>\$568,062</u></u>	<u><u>\$91,470</u></u>
Estimate	<u>\$660,000</u>	<u>\$568,000</u>	<u>\$92,000</u>

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 15 (Continued) July, 2017 – June, 2018 Fiscal Year 2018 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	
13 26529 SR. WATER SUPPLY TECH - WSA			43%	57%	34%	66%		
	74,376.00	31,981.68	42,394.32	25,287.84	49,088.16	6,693.84	(6,693.84)	
	1,650.00	709.50	940.50	561.00	1,089.00	148.50	(148.50)	
	926.83	398.54	528.29	315.12	611.71	83.42	(83.42)	
	41,320.31	17,767.73	23,552.58	14,048.91	27,271.40	3,718.82	(3,718.82)	
5 36810 MAINT. WORKER 1			95%	5%	93%	7%		
	43,662.80	41,479.66	2,183.14	40,606.40	3,056.40	873.26	(873.26)	
	550.00	522.50	27.50	511.50	38.50	11.00	(11.00)	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	25,102.90	23,847.76	1,255.14	23,345.70	1,757.20	502.06	(502.06)	
17 41950 PLANT OPERATOR			6%	94%	6%	94%		
	70,072.80	4,204.37	65,868.43	4,204.37	65,868.43	0.00	0.00	
	550.00	33.00	517.00	33.00	517.00	0.00	0.00	
	8,128.83	487.72	7,641.11	487.73	7,641.10	(0.01)	0.01	
	45,876.84	2,752.64	43,124.20	2,752.61	43,124.23	0.03	(0.03)	
18 47397 SUPERVISOR TECH. ASST. & FAC. MAINT			44%	56%	50%	50%		
	82,053.60	36,103.58	45,950.02	41,026.80	41,026.80	(4,923.22)	4,923.22	
	1,650.00	726.00	924.00	825.00	825.00	(99.00)	99.00	
	7,509.43	3,304.15	4,205.28	3,754.72	3,754.71	(450.57)	450.57	
	50,877.55	22,386.13	28,491.42	25,438.78	25,438.77	(3,052.65)	3,052.65	
3 50121 SUPERVISOR OPERATION MWSS-WSA			24%	76%	26%	74%		
	94,969.34	22,792.63	72,176.71	24,692.03	70,277.31	(1,899.40)	1,899.40	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	54,466.10	13,071.85	41,394.25	14,161.19	40,304.91	(1,089.34)	1,089.34	
1 50461 DIR. MWSS/D&R CANAL OPERATIONS			60%	40%	40%	60%		
	114,025.81	68,415.49	45,610.32	45,610.32	68,415.49	22,805.17	(22,805.17)	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	64,201.44	38,520.85	25,680.59	25,680.58	38,520.86	12,840.27	(12,840.27)	
2 50802 ADMIN. ASSISTANT			60%	40%	40%	60%		
	63,948.69	38,369.22	25,579.47	25,579.48	38,369.21	12,789.74	(12,789.74)	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	36,358.99	21,815.40	14,543.59	14,543.60	21,815.39	7,271.80	(7,271.80)	
19 63738 PLANT OPERATOR			6%	94%	6%	94%		
	70,726.59	4,243.60	66,482.99	4,243.60	66,482.99	0.00	0.00	
	550.00	33.00	517.00	33.00	517.00	0.00	0.00	
	5,648.13	338.89	5,309.24	338.89	5,309.24	0.00	0.00	
	43,455.72	2,607.35	40,848.37	2,607.34	40,848.38	0.01	(0.01)	
6 69555 MAINT WORKER I			95%	5%	91%	9%		
	45,009.60	42,759.12	2,250.48	40,958.74	4,050.86	1,800.38	(1,800.38)	
	550.00	522.50	27.50	500.50	49.50	22.00	(22.00)	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	26,196.75	24,886.92	1,309.83	23,839.04	2,357.71	1,047.88	(1,047.88)	

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

Schedule 15 (Continued) July, 2017 – June, 2018 Fiscal Year 2018 G&A Expenses Split

EMPLOYEE NUMBER	TOTAL	BUDGETED %		ACTUAL % (Timesheets)		VARIANCE		
		(40)	(50)	(40)	(50)	(40)	(50)	
		RESERVOIR	WTP/TS	RESERVOIR	WTP/TS	RESERVOIR	WTP/TS	
22 91500 FAC MECHANIC -WSA	TIME SPLIT		47%	53%	50%	50%		
	REGULAR	49,352.80	23,195.82	26,156.98	24,676.40	24,676.40	(1,480.58)	1,480.58
	CLOTH.	1,650.00	775.50	874.50	825.00	825.00	(49.50)	49.50
	O.T.	37.05	17.41	19.64	18.53	18.52	(1.12)	1.12
	FRINGE	27,566.44	12,956.24	14,610.20	13,783.22	13,783.22	(826.98)	826.98
26 9373 ASST. RESERVOIR SYSTEM OPER-WSA	TIME SPLIT		97%	3%	93%	7%		
	REGULAR	28,125.61	27,281.83	843.78	26,156.82	1,968.79	1,125.01	(1,125.01)
	CLOTH.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	O.T.	1,115.88	1,082.40	33.48	1,037.77	78.11	44.63	(44.63)
	FRINGE	16,104.60	15,621.47	483.13	14,977.28	1,127.32	644.19	(644.19)
23 87000 PLANT OPERATOR	TIME SPLIT		5%	95%	5%	95%		
	REGULAR	67,362.00	3,368.10	63,993.90	3,368.10	63,993.90	0.00	0.00
	CLOTH.	550.00	27.50	522.50	27.50	522.50	0.00	0.00
	O.T.	7,227.01	361.35	6,865.66	361.35	6,865.66	0.00	0.00
	FRINGE	42,682.44	2,134.13	40,548.31	2,134.12	40,548.32	0.01	(0.01)
24 87750 RESERVOIR SYSTEM OPERATOR	TIME SPLIT		97%	3%	99%	1%		
	REGULAR	56,435.65	54,742.59	1,693.06	55,871.29	564.36	(1,128.70)	1,128.70
	CLOTH.	550.00	533.50	16.50	544.50	5.50	(11.00)	11.00
	O.T.	5,337.25	5,177.14	160.11	5,283.88	53.37	(106.74)	106.74
	FRINGE	36,166.06	35,081.08	1,084.98	35,804.40	361.66	(723.32)	723.32
15 88875 WATER SUPPLY TECH-WSA	TIME SPLIT		62%	38%	89%	11%		
	REGULAR	62,853.20	38,968.98	23,884.22	55,939.35	6,913.85	(16,970.37)	16,970.37
	CLOTH.	1,650.00	1,023.00	627.00	1,468.50	181.50	(445.50)	445.50
	O.T.	25.20	15.62	9.58	22.43	2.77	(6.81)	6.81
	FRINGE	32,556.50	20,185.04	12,371.46	28,975.29	3,581.21	(8,790.25)	8,790.25
11 90000 SUPERVISING PLANT OPERATOR	TIME SPLIT		36%	64%	38%	62%		
	REGULAR	78,362.65	28,210.55	50,152.10	29,777.81	48,584.84	(1,567.26)	1,567.26
	CLOTH.	1,650.00	594.00	1,056.00	627.00	1,023.00	(33.00)	33.00
	O.T.	1,434.76	516.53	918.23	545.21	889.55	(28.68)	28.68
	FRINGE	45,584.06	16,410.26	29,173.80	17,321.94	28,262.12	(911.68)	911.68
25 93000 PLANT OPERATOR	TIME SPLIT		5%	95%	5%	95%		
	REGULAR	67,298.16	3,364.91	63,933.25	3,364.91	63,933.25	0.00	0.00
	CLOTH.	550.00	27.50	522.50	27.50	522.50	0.00	0.00
	O.T.	8,954.67	447.73	8,506.94	447.73	8,506.94	0.00	0.00
	FRINGE	43,561.27	2,178.06	41,383.21	2,178.06	41,383.21	0.00	0.00
10 87005 EQUIPMENT OPERATOR	TIME SPLIT		95%	5%	89%	11%		
	REGULAR	35,879.96	34,085.96	1,794.00	31,933.16	3,946.80	2,152.80	(2,152.80)
	CLOTH.	275.00	261.25	13.75	244.75	30.25	16.50	(16.50)
	O.T.	742.01	704.92	37.09	660.39	81.62	44.53	(44.53)
	FRINGE	21,579.23	20,500.28	1,078.95	19,205.51	2,373.72	1,294.77	(1,294.77)
27 10574 PROJECT ENGINEER II	TIME SPLIT		50%	50%	41%	59%		
	REGULAR	75,882.72	37,941.36	37,941.36	31,111.92	44,770.80	6,829.44	(6,829.44)
	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	42,753.67	21,376.86	21,376.81	17,529.00	25,224.67	3,847.86	(3,847.86)
		(60)	(40)	(50)	(40)	(50)	(40)	(50)
	REGULAR	1,742,272.49	887,158.20	855,114.29	836,394.61	905,877.88	50,763.59	(50,763.59)
	CLOTH.	18,975.00	10,265.75	8,709.25	10,496.75	8,478.25	(231.00)	231.00
	O.T.	77,313.23	30,307.98	47,005.25	30,792.76	46,520.47	(484.78)	484.78
	FRINGE	1,032,126.87	520,635.98	511,490.89	491,132.26	540,994.61	29,503.72	(29,503.72)
	GRAND TOTAL	<u>2,870,687.59</u>	<u>1,448,367.91</u>	<u>1,422,319.68</u>	<u>1,368,816.38</u>	<u>1,501,871.21</u>	<u>79,551.53</u>	<u>(79,551.53)</u>

*PLANT OPERATORS ADJUSTED TO ACTUAL %'S OF 5%/95% ORIGINAL %'S AS FOLLOWS:
C. BENNETT 1%/99% J. TESTA 4%/96%
R. KARECKY 4%/96 C. ZIEGLER 4%-96%
E. OTREBA 4%/96%

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 16 - Estimate Of Interest Income

Fiscal Year 2020 Budget

Fund/Reserve	TD Bank Funds	
Operating	\$665,000	
Reserve for O & M	1,245,000	
General Reserve (Rate Stabilization Fund)	40,000	
Pumping Reserve	125,000	
Self-Insurance Reserve	38,000	
Sediment Reserve	225,000	
Estimated Total	\$2,338,000	
	\$2,338,000 x 1.0% =	\$23,380
	Total	\$23,380
	Estimate	\$23,400

Note: Long-term investment earnings are being used to fund depreciation reserve.

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 2020

	Amount																								
F/Y2018 Net Year-End Balance	\$ 169,900.00																								
Excess D/S Coverage FY2019	\$ -																								
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Overdraft</th> <th style="text-align: left; border-bottom: 1px solid black;">Invoice No.</th> <th style="text-align: left; border-bottom: 1px solid black;">Inv. Date</th> <th style="text-align: right; border-bottom: 1px solid black;">Amount</th> </tr> </thead> <tbody> <tr> <td>NJ American</td> <td>M758</td> <td>Sep-17</td> <td style="text-align: right;">\$ 16,789.59</td> </tr> <tr> <td></td> <td>MM13</td> <td>Dec-17</td> <td style="text-align: right;">776.25</td> </tr> <tr> <td></td> <td>MM320</td> <td>Mar-18</td> <td style="text-align: right;">14,739.52</td> </tr> <tr> <td></td> <td>MM322</td> <td>Jun-18</td> <td style="text-align: right;">2,226.83</td> </tr> <tr> <td></td> <td>MM324</td> <td>Jul-18</td> <td style="text-align: right;">4,187.08</td> </tr> </tbody> </table>	Overdraft	Invoice No.	Inv. Date	Amount	NJ American	M758	Sep-17	\$ 16,789.59		MM13	Dec-17	776.25		MM320	Mar-18	14,739.52		MM322	Jun-18	2,226.83		MM324	Jul-18	4,187.08	
Overdraft	Invoice No.	Inv. Date	Amount																						
NJ American	M758	Sep-17	\$ 16,789.59																						
	MM13	Dec-17	776.25																						
	MM320	Mar-18	14,739.52																						
	MM322	Jun-18	2,226.83																						
	MM324	Jul-18	4,187.08																						
Used in FY19	-																								
Available for use in FY20	\$ 38,719.27																								

Additional Sources

Total Available	\$ 208,619.27
Estimate for FY/20	\$ 208,620.00
Available for Future Years	\$ -

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

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

Final

	REVENUE FUND	OPERATING ACCOUNT	OPERATING FUND	O & M RESERVE	LONG TERM INVESTMENTS O & M RESERVE	TOTAL
BALANCE 6/30/18						
(Does not include Debt Service payment)	\$ 70,560	\$ 665,029	\$ 4,723,630	\$ 1,244,939	\$ 392,644	\$ 7,096,802
Add: Adjustment for uncollected water revenues at 6/30/18			-			-
Add: NJ-American, JCP&L expenses for June 2018			18,776			18,776
Deduct: Accrued expenses to be paid as of 6/30/18			(48,699)			(48,699)
Deduct: June 10th billing, received			(157,237)			(157,237)
Adjusted Balances 6/30/18	\$ 70,560	\$ 665,029	\$ 4,536,470	\$ 1,244,939	\$ 392,644	\$ 6,909,642
 INCOME						
Operating Transfer	(70,000)		70,000			-
Receipt of WTP/TS G&A expenses for the month of June 2018, 7/31/18 billing			190,775			190,775
 EXPENSES						
O & M Expenses - (A/P-6/30/18) includes accrued payroll and pension thru 6/30/18			(168,283)			(168,283)
Capital items to be purchased by 6/30/18			(3,000)			(3,000)
Payment of Headquarters overhead expenses - to be paid 7/01			(163,000)			(163,000)
Contributions to Various Reserves- 7/18			(37,500)			(37,500)
ADJUSTED BALANCE AT 6/30/18	\$ 560	\$ 665,029	\$ 4,425,462	\$ 1,244,939	\$ 392,644	\$ 6,728,634
Less: O & M Reserve Balance (Goal is 3 months O & M Expenses as dictated by Bond Resolution)						(810,095)
Balance of projected funds available						\$ 5,918,539
Use of Available Funds						
Unanticipated revenues (overdrafts in FY18 to be available to the General Fund for FY20) NJ American Water						\$ (17,566)
Appropriate FY19 net fund balance into the General Fund (Rate Stabilization) to be used for rate stabilization						(188,350)
Balance of funds to be used for future years						\$ 5,712,623

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 2020

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 2020

Funds Required for F/Y2020 Budget

Total Budget Requirements	\$	3,301,878
Miscellaneous Revenues	\$	(232,020)
Net Budget Requirement	\$	3,069,858
Less - Quarterly O&M payment on July 10, 2019 (cash received in July for water used in April, May and June of 2019 based on \$432.87/mg)	\$	(765,883)
Additional Revenue required from last three (3) Quarterly payments in F/Y2020 to cover Operations & Maintenance expenses through 6/30/20	\$	2,303,976

Computation of Operations & Maintenance Rate for Fiscal Year 2020

Required Operations & Maintenance Rate F/Y2020	$\frac{\$2,303,976}{5,322.52^*}$	=	\$	432.87/mg
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* Four (4) Quarters Sales =

	19.443 mgd x 365	=	7,096.70mg/yr	
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Rate Calculation for Required revenues due for payment on
10/10/19, 1/10/20 and 4/10/20:

Sales Base =	7,096.70 x 3/4	=	5,322.52/mg	
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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 2020	\$ 2,622,984	
Debt Service Fund Interest Income and Other Available Resources	<u>\$ (18,450)</u>	
Net Debt Service Obligation	\$ 2,604,534	
Coverage Requirement = Net Debt Service Obligation x 20%	<u>\$ 520,907</u>	
Total to be Recovered by Rates	\$ 3,125,441	
Debt Service Rate Effective 7/01/19 365 x 15.008/mgd = 5,477.92mg	<u>\$ 3,125,441</u> 5,477.92mg	= \$ 570.55mg

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

Delayed Debt Service

Debt Service for Fiscal Year 2020 \$ 902,604

Debt Service Fund Interest Income and Other
Available Resources \$ (5,590)

Net Debt Service Obligation \$ 897,014

Coverage Requirement = Net Debt Service
Obligation x 20% \$ 179,403

Total to be Recovered by Rates \$ 1,076,417

Debt Service Rate Effective 7/01/19 \$ 1,076,417 = \$ 664.96mg
365 x 4.435/mgd = 1,618.78mg 1,618.78mg

NEW JERSEY WATER SUPPLY AUTHORITY
 MANASQUAN RESERVOIR WATER SUPPLY SYSTEM

Schedule 23 - Computation Of Base Debt Service Rates

INTAKE PUMP STATION BUILDING

Initial Water Purchasers (14.980 MGD) – 7/01/15
 Shorelands Delayed Purchase Contract (.028MGD) – 7/01/06
 NJ American Delayed Purchase Contract (4.435MGD)*

NJEIFP Debt Service for Fiscal Year 2020	\$	175,717		
Rate Equalization Adjustment	\$	1,200		
Debt Service Rate Effective 7/01/19	\$	176,917	=	\$ 24.93/mg
365 x 19.443/mgd =7,096.70mg		7,096.70mg		

*Delayed Water Purchase Contracts
 NJ American 1.000mgd 07/01/01
 1.935mgd 10/01/02
 1.500mgd 01/01/05

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR SYSTEM

Schedule 24 - 2020 Bond Debt Service Coverage

Fiscal Year 2020
(7/1/19-6/30/20)

DEBT SERVICE COVERAGE

	<u>Budgeted F/Y2020</u>
<u>Revenues</u>	
Uninterruptible Water Sales	\$ 7,557,171
Interest Income	<u>\$ 23,400</u>
Total Revenues	<u><u>\$ 7,580,571</u></u>
<u>Expenses</u>	
O&M Costs	\$ 2,663,030
Overhead Allocation	<u>\$ 568,000</u>
Total O&M	<u><u>\$ 3,231,030</u></u>
Cash Available for Debt Service - A	\$ 4,349,541
Net Debt Service Expense	\$ 3,501,548
Debt Service Coverage Calculation - A/B	1.24
Cash After Debt Service A-B	\$ 847,993

NEW JERSEY WATER SUPPLY AUTHORITY
MANASQUAN RESERVOIR SYSTEM

Schedule 25 - Rehabilitation Reserve and Capital Improvement Program

Manasquan Reservoir Project Description	Renewal & Repl. Reserve	FY2019	FY2020	FY2021	FY2022	FY2023+
Dam Emergency Contingency	\$400,000					
Pipeline Replacement Under I-195	\$950,000					
Pumping Equipment Replacement	\$650,000					
Replace 2400 Volt Variable Frequency Drive at the Intake		\$200,000				
Resize Intake - Motor/Pump, VFD# 3		\$50,000		\$270,000		
Rehabilitation Pump and Motors at Reservoir & Intake Pumping Stations					\$50,000	
Security System Upgrades at Reservoir			\$120,000		\$50,000	
Replace Control Panel at Reservoir IO building		\$80,000				
Replace Adas Embankment Monitoring computer and software at Reservoir		\$30,000				
Renovation of Traveling Water Screens			\$50,000			
Replace 2 Fueling Systems USTs			\$130,000			
Replace balance of metal roof on Admin portion of RPS building		\$80,000				
Replace Valve Operator on 36" Reservoir Return Guardian Valve						
Variable Frequency Drive Control Conversion at RPS		\$50,000				
Total	2,000,000.00*	\$490,000	\$300,000	\$270,000	\$100,000	\$0
Renewal and Replacement Balance June 30, 2018	\$3,885,517					
Projected Balance End of Fiscal Year with annual regular deposit		\$3,515,517	\$3,335,517	\$3,185,517	\$3,205,517	\$3,325,517
*Minimum Balance Requirement		\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Revised Balance		\$1,515,517	\$1,335,517	\$1,185,517	\$1,205,517	\$1,325,517
Additional Deposit Requirements		\$0	\$0	\$0	\$0	\$0

**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 2019-2023
Updated July 2018**

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 from 1987 to 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 percent (effective February 1, 1994) of the annual debt service, identified as 120 percent debt service coverage. During the initial years, this excess payment flowed into the debt service reserve account until an amount equal to 50 percent of the annual debt service had been accumulated. Thereafter, the 20 percent 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 March of 2016. 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.

\$950,000 is included in the Renewal and Replacement Reserve to insert a 66” 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 with retesting of some units in 2016 and 2018. The reservoir pumps typically each operate only 100 hours per year and at an average speed of only 630 rpm. Therefore wear on these units is minimal. Additionally, only one of the 5 river intake pumps gets significant hours of use each year. However, 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.

These funds could also be used to rehabilitate or replace other major equipment such as a large 500 KVA 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 percent of the total construction cost.

Planned Capital Improvements - Fiscal Years 2019 – 2023

Replace Variable Frequency Drive (“VFD”) at the Intake

The existing pump #1 has a pump curve suited to using a VFD. Replacing one of the VFDs at the intake for use with pump #1 will allow for capturing the exact amount of water that is needed to meet system demand in the winter when the reservoir is full.

Resize Intake - Motor/Pump #4

A 2014 safe yield review has determined that replacing one of the 600-hp motor and pump at the intake with a 300-hp motor and a pump that can deliver up to 15 MGD will improve the reliable safe yield of the system. This project was programmed to be designed in calendar year 2017 and constructed in 2020. Design has been pushed forward to FY 2019. This project will allow a closer match between the anticipated average customer sales from the intake pool and the intake pump capacities. The project is planned for 2021 to spread out the capital funds and because Pump #4 is in acceptable condition currently having been used for only 20 hours in 2017.

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

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

The Authority has undertaken a multi-faceted – multiyear program to service all ten pumps and motors. The first phase, which 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 once per year. In 2016, all but one were within acceptable performance tolerances. In FY2017, Pump #1 at the intake was fully rehabilitated at a cost of \$40,000.00

Security System Upgrades at the Reservoir

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 to implement the 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.

The schematic design report for implementing the recommendations was and continues to be evaluated and improvements are being phased in. A web-based, seven-camera system and DVR was designed for the reservoir embankment and IO tower area and was installed in FY 2017 at a cost of \$75,000.00. In FY2018, a gate with side wings at the entrance to the bridge of the IO tower added a measure of security that was needed to keep trespassers away from the tower structure.

Replace Control Panel at Reservoir IO Building

The control panel at the reservoir IO tower is 25 years old and only the reservoir dam indicators report automatically. The system should be upgraded to maintain reliability of control from the central location at the top level of the IO tower. Also, by replacing the panel with a PLC, staff will be able to combine all of the valve position information and operations into one LCD display and relay this information back to the office in Wall using the FIOS service in the building. Presently only one of the eight electric valves can be controlled from the office in Wall Township.

Replace ADAS Embankment Monitoring computer and software at Reservoir

This system is original to the reservoir construction. The computer that collects and records information from the sensors will be replaced as well as the software and reporting system at the receiver end in the Administration office. Staff procured an outside consultant to review the existing system with the expectation that recommendations will be made as to replace the existing system with a state of the art system that will integrate with existing sensors and provide the most value and data reporting going forward.

Renovation of Traveling Water Screens

The eight traveling water screens at the Intake Pumping Station are periodically in need of service over time. A 2015 inspection found all units to be in good condition except one which was refurbished in 2016. Funding is included to install new reducers, drive sprockets, screen sections, and chain guard assemblies on any of the remaining seven units. This also includes funding to rebuild the wash water pumps and motors if needed.

Replace balance of metal roof on Admin portion of RPS building

Two thirds of the metal roof is original to the building in 1990. This portion of the roof needs to be replaced as there are several leaks during driving rains.

Variable Frequency Drive Control Conversion at the RPS

The existing ASI Robicon Corporation VFDs are controlled by an antiquated computer system for the operation and speed control of the variable frequency drives based on clearwell level. The conversion package would consist of replacing the computer sequencer at the 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 along with expensive computer board repairs.

Replace two Fueling system Underground Storage Tanks (“USTs”) with Above Ground Storage Tanks (“AST’s”) at the Reservoir Pump Station

The existing USTs are 30 years old and have now come under more stringent regulations in 2018 by the NJDEP. To limit our liability and the possibility of a fine, staff plans to replace the two 1000-gallon tanks with a 3000-gallon split fuel above ground fuel tank.

New above ground, fuel and oil storage systems can feature a three-layered containment system that is engineered for safety; meeting all government, environmental and fire safety requirements for primary/secondary containment, leak monitoring, spill containment, and overfill protection.

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, 2019

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 19.443 per day sales base)
July 1, [2018] 2019	\$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 15.008 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/[2018]2019 to 6/30/[2019]2020	(Coverage 120%) \$570.55

(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/[2018]2019 to 6/30/[2019]2020	(Coverage 120%) \$664.96

(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/[2018]2019 to 6/30/[2019]2020	\$15.00

7:11-4.6 New Jersey Environmental Infrastructure Financing Program debt component

(a) The New Jersey Environmental Infrastructure Financing Program debt component rate per million gallons listed at (b) below is established to fund debt service costs with respect to each annual payment period or portion thereof, and will be that amount accruing in the bond year (starting on August 1 of each calendar year and ending on the next following July 31) or corresponding portion thereof, commencing during the fiscal year (starting on July 1 of each calendar year and ending on the next following June 30) within which such annual payment period or portion thereof falls. The debt service costs include the aggregate amounts payable during the specified period for interest accruing during such period on the bonds and that portion of each required principal payment, which would accrue during such period.

(b) The New Jersey Environmental Infrastructure Financing Program debt component is as follows:

<u>Period</u>	<u>Rate/Million Gallons</u>
7/1/[2018] <u>2019</u> to 6/30/[2019] <u>2020</u>	\$24.93

**Appendix I. Report of Mercadien PC – Allocation of Headquarters General and
Administrative Expenses – FY 2020**

Appendix II. Report of Mercadien PC – Allocation of Headquarters General and Administrative Expenses – Audited FY 2018 Expenditures