

NEW JERSEY WATER SUPPLY AUTHORITY



2018 ANNUAL REPORT

AND THE

COMPREHENSIVE ANNUAL FINANCIAL REPORT

FOR THE YEAR ENDED JUNE 30, 2018



Government Finance Officers Association

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Presented to

New Jersey Water Supply Authority

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2017

Christopher P. Morrill

Executive Director/CEO

NEW JERSEY WATER SUPPLY AUTHORITY

2018 ANNUAL REPORT

AND THE

COMPREHENSIVE ANNUAL FINANCIAL REPORT

A COMPONENT UNIT
OF THE STATE OF NEW JERSEY



FOR THE FISCAL YEARS ENDED
JUNE 30, 2018 AND 2017

Prepared by:
Finance and Accounting Staff

Beth Gates
Executive Director

2018 Annual Report

Governor
Philip D. Murphy



Authority Members

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Steven J. Picco
Vice Chair
Chair, Audit Committee

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Chair, Insurance Committee

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Chair, Watershed Lands Acquisition Committee
Chair, Personnel Committee

Ellsworth Havens
Chair, Capital Projects Committee

Staff

Beth Gates
Executive Director

Kathrine Hunt, Esq.
Deputy Attorney General

2019 Monthly Meetings

The 2019 Monthly Meetings of the New Jersey Water Supply Authority are scheduled to be held in the Conference Room of the Authority's Clinton Administration Building, 1851 Highway 31, Clinton, New Jersey, unless otherwise indicated, beginning at 2:00 p.m. on the following Mondays:

January 7, 2019

February 4, 2019

March 4, 2019

April 1, 2019

May 6, 2019

June 3, 2019 (Canal Office)

July 1, 2019 (Canal Office)

August 5, 2019 (Manasquan Office)

September 9, 2019

October 7, 2019

November 4, 2019

December 2, 2019

The period from 12:00 p.m. to 2:00 p.m. on the above dates is set aside, as needed, for separate Committee meetings of the Personnel, Finance, Capital Projects and other Committees of the Authority.

Cover

Photo by Heather Desko, Manasquan Reservoir

The New Jersey Water Supply Authority was created on October 7, 1981 (P.L. 1981, c. 293) to operate, on a self-supporting basis, the existing State water supply facilities and to develop future State water supply projects as recommended in the State Water Supply Master Plan. The Authority's Spruce Run/Round Valley Reservoirs System and the Delaware and Raritan Canal Water Transmission Complex (the Raritan Basin System), provides the basic source of water supply to a number of public and private water utilities serving more than 1,500,000 people in central New Jersey. The Manasquan Water Supply System in Monmouth County commenced delivery of this new surface water supply to a number of public and private water utilities, serving more than 250,000 people in the Monmouth County area, on July 1, 1990. Under agreement with the Southeast Monmouth Municipal Utilities Authority, the Authority also operates and maintains a four million gallon per day water treatment plant and distribution system for five municipalities in Monmouth County.

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Introductory Section

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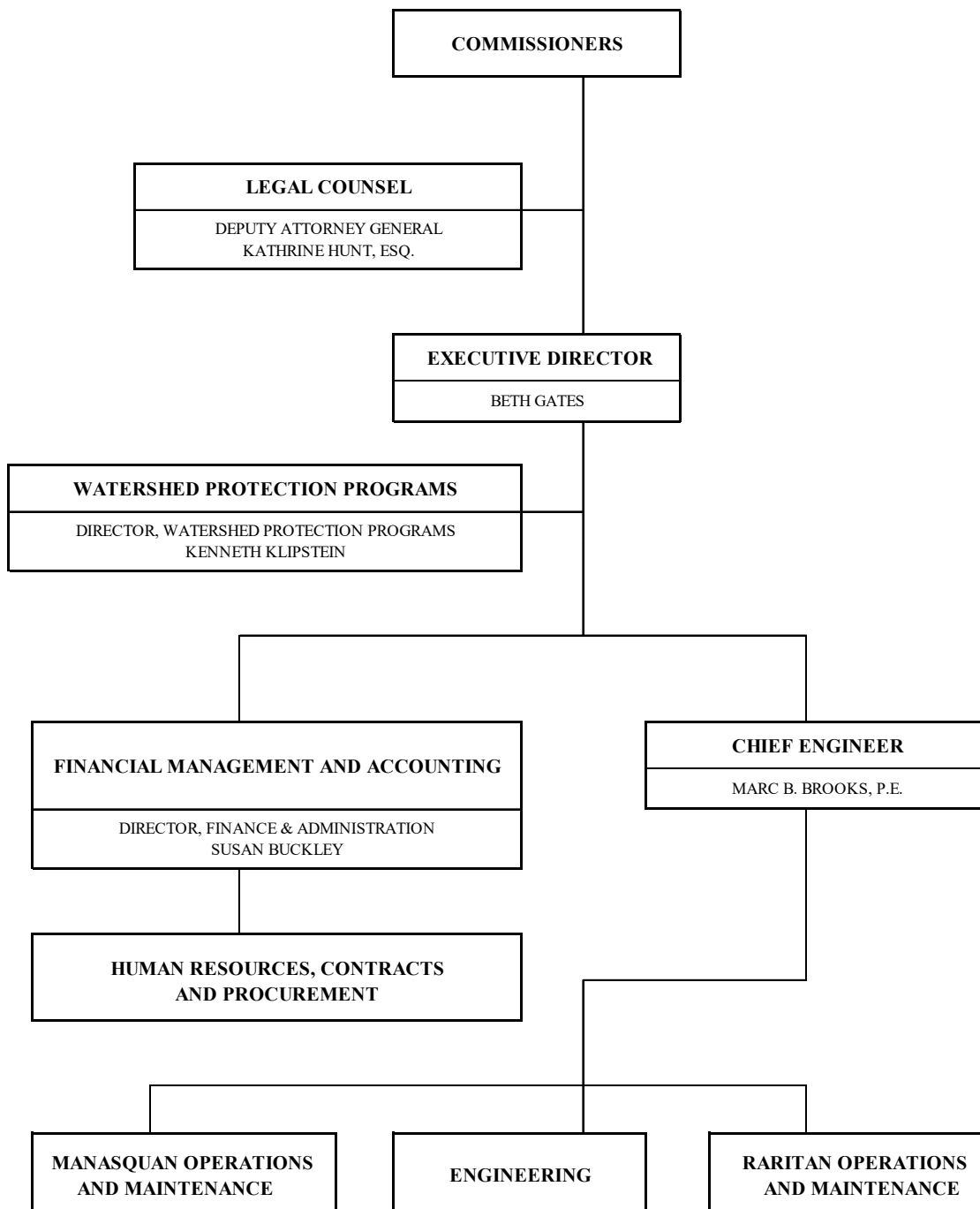
Watershed Protection Programs Unit

Letter of Transmittal

New Jersey Water Supply Authority

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Letter to Governor and Legislature

NEW JERSEY WATER SUPPLY AUTHORITY



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April 2019

To the Honorable Philip D. Murphy, Governor and Members of the New Jersey Legislature

I am pleased to submit the 37th Annual Report of the New Jersey Water Supply Authority. The Authority was created on October 7, 1981 (P.L. 1981, c.293) and was established in but not of the Department of Environmental Protection of the State of New Jersey. The “New Jersey Water Supply Authority Act,” under N.J.S.A. 58:1 B-20, calls for the Authority to publish an Annual Report of its finances on or before the last day of February for the preceding calendar year. This report contains the Authority's Independent Auditors' Report, and all required reporting to be in compliance with Executive Order No. 37 (2006), for FY2018. This report is issued after the February deadline so that the Authority could comply with requirements of GASB 75, the recording of a liability in FY2018 for Other Post-Employment Benefits, data for which was recently provided by the Department of the Treasury.

In recent years, the Authority has been furthering its studies of the Round Valley and Spruce Run embankments. As part of these efforts, the Authority convened Technical Review Boards (“TRBs”) in 2014 and 2015 and again in 2017 and 2018 to discuss the conditions of the Spruce Run and Round Valley embankments. The Round Valley and Spruce Run embankments were both constructed in the early 1960s. The Spruce Run dam was constructed on a limestone foundation, which necessitates special treatment during construction and regular, continuous monitoring.

The TRB recommended the installation of additional instrumentation at the Spruce Run and Round Valley facilities to monitor the phreatic (saturation) line through the embankments, and evaluation of the materials and methods used to construct the embankments. Once the additional instruments were installed and the initial data obtained and evaluated, the TRB was reconvened to perform an evaluation referred to as Potential Failure Mode Analyses (“PFMA”). A PFMA is a common analysis in the dam safety community and analyzes construction and performance records of an embankment. The PFMA for the three Round Valley embankments was conducted in early July 2015. The 2015 TRB and PFMA resulted in a recommendation that *“the Authority begin budgeting, engineering, and planning for the required modifications to the Round Valley Embankments.”* Investigations and designs are well underway and will result in significant rehabilitation projects. Individual projects include the grouting of the abutments at the Round Valley North and South Dams, dredging of the inlet to the Round Valley South Dam Tower and embankment improvements to retrofit the downstream slopes of all three Round Valley embankments with improved filters. The grouting design was completed in 2018 and the permits are in place. Project bids were received in February of 2019 and construction is anticipated to begin in late Spring of 2019. The dredging design is also complete and permits are in place. Construction is anticipated to start in June of 2019.

Along with the major rehabilitation of the slopes, ancillary work will be done that includes improvements to the Round Valley auxiliary buildings, replacement of the ten-inch cast iron pipe at the Round Valley South Dam, and abandonment of hydraulic valve and pipeline that controls the low-level release at the Round Valley South Dam. The embankment improvements are expected to begin late in 2019 and continue through 2021.

The Authority began dredging the ten-mile reach of the Canal between Lincoln Highway (Route 27) and Amwell Road in Franklin Township, Somerset County. Bathymetric (underwater) surveys of the area were completed. Approximately 7,300 tons of debris and 16,400 tons of submerged aquatic vegetation were removed prior to the start of dredging in July 2018. The total estimate of sediment to be removed over the three-year life of the project is approximately 248,000 cubic yards. During the 2018 cycle approximately 50,000 cubic yards of sediment were removed through hydraulic dredging. The dredged slurry was pumped through piping to geobags, each 300 feet long by 75 feet in circumference, to dewater in a staging area. The dewatered material is hauled to a beneficial reuse facility. Dredging will continue for two more seasons between May and October of 2019 and 2020.

Aquatic plants, specifically a number of aggressive invasive aquatic plants, are creating operations and water quality challenges Authority-wide. After the discovery of hydrilla (*Hydrilla verticillata*) in the Canal in 2016, the Authority engaged a qualified consultant to assist the Authority in developing and implementing an Aquatic Plant Management Plan for the Delaware & Raritan Canal for the purpose of maintaining passing flow while protecting water quality for all water users. As recommended in the plan, the Authority initiated a 120 day low-dosage herbicide application beginning in the late spring of 2017 and 2018. The Authority engaged stakeholders, including all water purveyors, prior to and throughout the process. A post-treatment survey was conducted each year which documented effective aquatic plant suppression throughout the Canal and only a few fragments of remaining hydrilla. The D&R Canal Aquatic Plant Management Plan will continue in 2019.

The Authority is implementing an Aquatic Plant and Cyanobacteria Management Plan in the Manasquan Reservoir. The Authority monitors the reservoir on a regular basis for changes in the chemical and physical conditions. In 2016, monitoring indicated that the reservoir had a significant blue-green algae bloom (*Anabaena*). In response, Monmouth County Parks issued a warning advisory to avoid contact and ingestion (humans and animals). In July 2017, Authority staff confirmed the presence of two aquatic invasive plants of concern, hydrilla and fanwort (*Cabomba caroliniana*), among other submersed aquatic vegetation growing in the reservoir and wetland areas. These plants, if left unmanaged, have the potential to affect water intakes, impair water quality including dissolved oxygen, inhibit recreational activities, and impact habitat for fish, waterfowl and other wildlife within the Reservoir and wetlands. In 2018, the Authority implemented a pilot program for the treatment of Hydrilla in the Manasquan Reservoir.

The New Jersey Chapter of the American Water Resources Association has awarded the 2018 Peter Homack Award to a member of the Authority's Watershed Protection Unit. The Peter Homack Award is presented to an individual who has made an outstanding contribution to the field of water resources.

The Authority operates three separate systems: the Raritan Basin System, the Manasquan Water Supply System, and the Manasquan Water Treatment Plant and Transmission System. Each system must generate sufficient revenue each year to cover its own operating expenses and debt service. Rates have been generally stable and the Authority is in good financial health. Total net position was approximately \$88.4 million as of June 30, 2018 and has increased over June 30, 2017 and decreased over June 30, 2016. In fiscal year 2018, total assets and deferred outflows were \$278.3 million and total liabilities were \$189.9 million.

The Authority was presented with the "Certificate of Achievement for Excellence in Financial Reporting Award" from the Government Finance Officers Association for FY2017, our 26th consecutive award.

Sincerely,



Beth Gates
Executive Director

Operations - Raritan System

Operation and maintenance activities at all Authority facilities have been typical. The Round Valley pumping program ran from April 12 to May 31, 2018 and transported 3.85 billion gallons into the reservoir. The pool elevation increased from its low level of 368.00 feet to a peak of 374.24.

Dam Inspections and Round Valley Project

As part of the recommendations from the 2013 dam inspections, the Authority convened a Technical Review Board (“TRB”) in 2014 to discuss the conditions of the Spruce Run and Round Valley embankments. Two previous TRBs were convened in the 1980s to evaluate the conditions at the Spruce Run dam, but similar TRBs had never been used to evaluate the embankments at Round Valley Reservoir. The 2014 TRB recommended several steps to further document the conditions of the embankments including the following:

- Installation of additional instrumentation at both facilities to monitor the phreatic line through the embankments and evaluation of the materials and methods used to construct the embankments.
- Side Scan Sonar Surveys at Spruce Run aimed at locating sinkholes on the upstream side of the dam.
- Visual camera inspections of the drain pipes at Round Valley and Spruce Run.
- Perform a thorough review of existing records including, but not limited to, preconstruction reports, construction records (1960s), and subsequent construction records (1981 to present).

- Reconvene the TRB to perform a Potential Failure Mode Analysis (“PFMA”) for the Spruce Run Dam and all Round Valley embankments.



Round Valley South Dam and vault

All recommended studies were performed in 2014-2016. The TRB reconvened in July 2015 to perform a PFMA on the three Round Valley Embankments. A PFMA is a common analysis in the dam safety community and consists of a robust study of the construction and past performance records of the embankments.

At the conclusion of its 2015 session, the TRB recommended that *“the Authority begin budgeting, engineering, and planning for the required modifications to the Round Valley Embankments.”*

The Authority procured a consultant to act as the Engineer of Record to investigate, plan, design, and provide full time construction management services for the efforts recommended by the TRB including:

- Consider rehabilitation alternatives and design repair for the existing hydraulic valve on the low-level release at the Round Valley South Dam
- Remove and replace 10-inch Cast Iron Pipe that connects the RV Force Main to the RV South Vault
- Dredging of the Round Valley South Tower Intake Channel
- Repairs to the Round Valley building structures (towers and vaults)
- Security improvements at Round Valley Reservoir

- Install chimney drains and improved drainage features at all three embankments
- Grout abutments at the Round Valley North and South Dams

Plans and specifications for the dredging of the Round Valley South Tower Intake Channel, the security improvements, and the grouting of the abutments at the Round Valley North and South Dams are being prepared separately so that they may be bid on an accelerated basis relative to the other parts of this large project.

The grouting of the abutments is anticipated to be completed before the end of summer 2019. The dredging of the intake channel should be completed before the end of summer 2019.

It is anticipated that the excavation work on the embankments will be initiated in the spring of 2020.



Construction of Round Valley Reservoir in the 1960s.

The Authority's consultant created and will maintain a project-specific website to keep the public informed about the status of the project. The website can be accessed at <http://www.roundvalleyproject.com/>.

Authority staff conducted the 2017 Regular Inspections of Round Valley and Spruce Run Dams on September 26, 2017.

Dredging the Intake Pond and Rehabilitation of the Ice Deflectors at the South Branch Pumping Station

The intake pond at the South Branch Pumping Station ("SBPS") was designed

with a capacity of 21,000,000 gallons during low flow pumping periods. Sediment has accumulated in the pond reducing its capacity, thereby reducing the efficiency of the pumping operation. Sediment was last removed from the pond in 1986 when it was removed in the dry. The intent of this project is to dredge the intake pond to return it to its original design depth and capacity.

Also at the SBPS, there are twelve steel wide flange beams set in a concrete bed that function as an ice deflector at the release works of the channel of the South Branch Raritan River adjacent to the pond. The ice deflectors protect the structure from damage from ice and trees floating down the river. They are deteriorating and need to be replaced. The ice deflectors are intended to be repaired as part of the pond dredging project.

The Authority retained an engineering consultant who prepared a design and applied for permits. The potential existence of a threatened and endangered species has necessitated surveying by an expert on that species. It is now anticipated that the dredging will take place in the summer of 2019.



South Branch Pumping Station Intake Pond

Dredging of the D & R Canal

Flow in the 10.5-mile section of the D&R Canal ("Canal") in Franklin Township between Route 27 and Amwell Road, near Millstone Borough, is being impeded by sediment accumulation. This is compounded by the growth of weeds during the summer months when flow demand is

the greatest. The water surface elevation is typically raised during these periods, which causes water to discharge over the lower elevation spillways.

The Authority procured a consultant who developed a design to procure contractors to remove up to an estimated 248,000 cubic yards of sediment from the Canal. Development of the program included a proactive public participation element including meetings with stakeholders along the Canal and a website to keep the public informed about the status of the project. The website can be accessed at <http://www.njwsa.org/canal-dredging.html>.



Public information poster for the Canal Dredging Project.

The consultant considered four alternatives for the proposed dredging project; mechanical excavation (in dry), mechanical dredging (in wet), hydraulic dredging with Geobags, and hydraulic dredging with mechanical dewatering. After reviewing the alternatives, hydraulic dredging with either method of dewatering the sediment was selected as the preferred alternative.

The Authority reached an agreement with Wyeth Holdings LLC for beneficial reuse of the sediment at the American Cyanamid Superfund Site in Bridgewater, New Jersey. Guidelines for material acceptance and appropriate testing protocols have been agreed upon by all parties including NJDEP and the Environmental Protection Agency.

A Level Two Environmental Impact Document was prepared and the required Public Hearing was held on May 13, 2013. The project is being financed by the New Jersey Environmental Infrastructure Financing Program (now known as the New Jersey Infrastructure Bank).

This project also includes disposal of up to 53,000 cubic yards of sediment from the US Route 202 temporary stockpile site being used to temporarily store material removed from the Canal as part of the Authority's Maintenance Dredging program of the Canal.

A contract was executed with the lowest responsive bidder, J.F. Brennan Company, Inc., La Crosse, Wisconsin for \$40,993,060.00.

The contractor mobilized March 14, 2018 and completed all tree trimming work at access areas and along the Canal in the reaches of the Canal where dredging is planned for calendar year 2018. The contractor has prepared all of the access areas that will be used this year. The dewatering "platform" has been constructed at the staging area.



Geobags in constructed drying (staging) area during dredging operations. Silt-laden water is directed to the geobags that act like a filter. Clean (elutriate) water is discharged back to the Canal.

Dredging started in the second week of July 2018. Work is now ongoing in three separate reaches where there is a dredge and a floating excavator removing both debris and sub-aqueous vegetation ahead of the dredging operation.



Photo shows one of three dredges currently in operation in July 2018. Note the boom extending into water in front of dredge in photo. Note three vertical square “spuds” keep equipment in place while dredging. Square plates at base of “spuds” prevent damage to clay liner at bottom of Canal. On-board computer and GPS maintain location and depth of boom and cutter head to prevent damage to the clay liner.

Actual dredging work in the first of a 3-year program was extended through October 2018 at which time all work on the Canal will cease. Trucking the dried dredge material continued into the winter months.

Sediment Removal in the Trenton Conduits

Another flow bottleneck in the Canal is sediment accumulation in the conduit under the US Route 1 Highway, commonly referred to as the Trenton Freeway. During construction of Route 1, the NJDOT constructed the conduits to convey the Canal under the highway. During that agreement, NJDOT accepted maintenance responsibility for the conduits. The NJDOT procured a contractor that removed all sediment from the conduits. This work was completed in May 2018.

Rehabilitation of the Western Embankment downstream of the Prallsville Lock of the D & R Canal

The western embankment makes up the western bank of the Canal that extends one mile south from the Prallsville Lock to an abandoned railroad crossing. The embankment has been affected by numerous flooding events in the past decade that caused two full breaches of the embankment in 2005 and 2006, and nearly breached again in 2011 following Tropical Storms Irene and Lee. Both breaches were repaired on an emergency basis to restore flow in the Canal, however a more stable and permanent solution to restore the embankment is being considered. The following two photographs are indicative of the repairs conducted in 2011.



D&R Canal embankment in Stockton Borough in 2011.

The preceding photograph illustrates the partial failure of the western embankment in Stockton Borough following Tropical Storms Irene and Lee in 2011. Note level of the Delaware River (to left in photo) relative the crest of the embankment and the seepage through the embankment. At the peak elevation, the river was only about six inches from overtopping certain sections of the embankment.

Dense graded aggregate (“DGA”) was placed by conveyor belt across the Canal since it was unsafe to work from the embankment immediately after the event.



Placement of DGA by conveyor across the Canal.

Pictured above is the placement of the DGA by conveyor across the Canal. The DGA was used to restore the embankment to prevent a breach. The DGA was compacted as conditions permitted.

Failures of an earth embankment are caused by a variety of reasons including overtopping and seepage through the embankment which causes the slope to become unstable. The Authority has retained both an engineering and a cultural resources consultant to work together to develop a potential long-term solution to the embankment problems that will be constructible and acceptable to the numerous regulating bodies and permitting agencies.

Rehabilitation of the Upper Canal Embankment

The right bank of the Canal from Raven Rock Lock to Prallsville Lock is a narrow embankment that separates the Canal from the Delaware River. Both sides of the trapezoidal embankment core wall are armored with hand laid stone. In this section, the width of the embankment crest varies from 20 feet to 100 feet. The narrow nature of the embankment precludes access of vehicles and/or heavy machinery, providing significant maintenance challenges for the Authority. This section of the embankment overtops frequently from the river side, which causes erosion and could potentially lead to failure of the

embankment. It appears that the embankment was designed with full knowledge of these high flows, keeping in mind that at the time, they had the “luxury” of being able to drain the Canal for maintenance each year.

High flows during rain events, specifically, Tropical Storms Irene and Lee, caused significant erosion at various locations of this section of the embankment. After these storms, Authority staff made temporary emergency repairs to some sections of the embankment to stabilize and to prevent complete breach. It was intended to make final repairs in accordance with approved plans as soon as practicable. The embankment was primarily repaired by installing rip-rap and cement bags to protect the embankment from further deterioration. In some locations, slopes were protected by reinstalling the missing stone with mortar patches, and some locations were not repaired. In most cases, the size and shape of the original embankment was not maintained.

The Authority has contracted with both engineering and cultural resources consultants to investigate and provide a design for rehabilitation of the embankment. Construction is anticipated to initiate in 2019 or 2020.

Griggstown Waste Gate and Embankment Seepage Repair Station 2083+40



Griggstown Waste Gate. New concrete placed in upper part of structure.

The Griggstown Waste Gate is located on the Canal left bank, approximately 160 feet upcanal from the Griggstown Lock in Franklin Township. The waste gate system consists of a concrete headwall on the Canal side housing a 36-inch wide x 48-inch high manually operated cast iron sluice gate. The sluice gate connects to a 6-foot diameter reinforced concrete pipe extending beneath the multi-use trail. The outlet pipe (river side of embankment) is held by a stone masonry headwall and wingwalls. The sluice gate discharges to the Millstone River. The structure was last rehabilitated in 1991.

In January 2017, during the recurrent inspection of the Canal appurtenant structures, the inspection team found steady seepage coming from near the bottom of the downstream stone masonry headwall. Physical indications of a possible structural issue, including sinking in the multi-use trail and settlement/deflection of the nearby wood guard rail fencing were also noticed.

The presence of the visible seepage, in conjunction with the sinkhole, led staff to be concerned that there was an ongoing internal erosion condition. It was believed that the structural deficiencies were leading to the potential internal erosion of soil particles within the embankment.

An engineering consultant was procured to design a repair for the structure. The consultant provided a design that considered the high historic sensitivity of the structure.

The consultant recommended cementitious grouting of the embankment between the headwall structures and in-kind repairs to the upstream concrete headwall. Bids were received and a construction contract was awarded in May 2018. All work on the project was completed in mid-August 2018.

Rehabilitation of the Ten-Mile Waste Gate

The Ten-Mile Waste Gate is located just upcanal of the Ten Mile Lock. It is a

concrete structure with twin 36-inch x 48-inch cast iron gates that are routinely opened and closed to adjust discharge flow from the Canal to the Millstone River near its confluence with the Raritan River. Canal flow in excess of that required by downcanal water purveyors is used to augment flow in the Raritan River and to control levels in the Canal. The existing waste gates were installed in 1958 and are in need of replacement. One of the two gates is inoperable and the second gate is difficult to operate. Construction plans and specifications to replace the existing gates were prepared by Authority staff. By temporarily placing a stop log at the downstream end of the gate, staff designed a plan to remove and replace the gates in the wet. This was prudent due to the depth of water in front of the gate that precluded the use of typical temporary cofferdams. The project also included provisions to provide powered actuators to open and close the gates. The contractor initiated work in July 2017. The project is now complete.



10-Mile Waste Gate was replaced “in the wet.” After flow through the gate was temporarily stopped on the river side of the structure, the gate was replaced without dewatering. In this photo, a diver enters the water to perform work on the replacement gates.

Landing Lane Spillway

The Landing Lane Spillway is located immediately upcanal of the Landing Lane Bridge in New Brunswick. This spillway was rehabilitated in 1991 with the construction of a concrete cutoff wall on the Canal side slope to control leakage. Timber planks were installed on the concrete wall for historical appearance. The spillway was

finished with hand-placed stones across the crest and the river side slope. The stones were laid in a sand bed without the benefit of mortar. The spillway is deteriorating. Seepage over the top of the cutoff wall is infiltrating and eroding the structure below the river side slope. Further, the stones are being dislodged and the spillway crest needs to be stabilized. The planned rehabilitation is expected to consider removal of all stones from the crest and installation of a concrete slab as a substructure to the stones, which would likely be anchored with mortar.



River side slope of Landing Lane Spillway.

Authority staff solicited the services of an engineering consultant to design repairs to the spillway. A cultural resources consultant has also been procured to work on the same project.

It is anticipated that construction will likely take place in 2019.

Embankment Repairs Downstream of Island Farm Weir

A narrow embankment separates the Canal from the Raritan River just downstream of the Island Farm Weir on the Raritan. The river side slope just downstream has experienced significant erosion and is in need of rehabilitation. Continued erosion and deterioration could lead to a breach of the Canal.

The engineering and cultural resources services contracts for this project were combined with the Landing Lane Spillway project noted above. It is anticipated that this work will be completed in 2019.



Note erosion of embankment between Raritan River (left in photo) and D&R Canal just downstream of Island Farm Weir.

Rehabilitation of Six Mile Run Culvert on the D&R Canal

The Six Mile Run Culvert is located in Franklin Township, Somerset County at Station 2298+17, just south (upcanal) of Blackwells Mill Road and adjacent to the Six Mile Run State Park site at 625 Canal Rd. The culvert carries the Six Mile Run stream under Canal Road and the Delaware and Raritan Canal and multi-use trail. The culvert consists of three stone masonry arches. The structure presumably dates to the original construction of the Canal (1830's) and was rehabilitated in the 1980's. Additional work was performed on the outlet end in 2009. The culvert is considered a "bridge" as it spans greater than 20 linear feet. The culvert structure is maintained by the Authority and the roadway portion (Canal Road) is maintained by Franklin Township.

In March 2018, Franklin Township alerted the Authority to a significant sink hole that had formed in the area of the road that had received many patches in the pavement over an area of the culvert. This significant sinkhole had occurred after two Nor'easter storms in a period of a few days. The Authority procured a contractor who made an emergency repair to the road surface and subsurface over the culvert.

The inlet ends of the culvert barrel have missing stones which need to be repaired. Authority staff is in the process of procuring

an engineer to evaluate the entirety of the three-barrel structure and prepare a design for a complete rehabilitation. It is anticipated that construction will take place in 2020.



Upstream side of Six Mile Run Culvert.

Replace Fuel System Pumps and Software/Inventory System at Spruce Run Administration Building

The Spruce Run fuel facility was installed in 1991 and includes one 5,000-gallon underground storage tank (“UST”) for unleaded gasoline, one 2,000-gallon UST for diesel fuel, a fuel dispensing island with computerized pumps, a canopy for weather and stormwater runoff protection, associated piping and electrical wiring, leak detection, overfill protection, spill prevention, and corrosion protection for both tanks and piping. The Authority also maintains a 5000-gallon heating oil tank and a 550-gallon waste oil tank, both underground.

The fuel dispenser system has performed adequately but inspections revealed that the dispenser frames, supplementary connection piping, containment chambers, junction boxes and the fuel island steel curb forms are rusted and have lost much of their structural integrity. The dispensing units are in poor condition and are discontinued from the current market. The fuel storage and management system requires an upgrade to match newly installed fuel systems at the

Canal Field Office in West Trenton and the Manasquan Water Supply System Office in Wall Township. It is also noted that parts for both the dispensing units and the fuel storage and management system are very difficult to locate. It is noted that the double-wall underground storage tanks are reported in good condition.

Engineering services have been procured to inspect, investigate and design a new fuel dispensing system including replacement of card readers system, expansion of the Veeder-Root system to fuel oil and waste tanks, and replacement of the fuel island and the existing canopy. The engineering is on track for planned construction in 2019.

Operations - Manasquan System

Raw water contracts were maintained at a total of 19.443 MGD in 2018. Wetter weather and cooler temperatures in the spring and summer of 2018 allowed the reservoir to be at historically high volume. A detailed cyanobacteria study was undertaken by a limnologist who was contracted to study causes and potential factors for blooms in the reservoir and review the Authority’s cyanobacteria control plan. The results are expected in 2019. No electrical, mechanical or weather events interrupted operations in 2018. A variable frequency drive was replaced on one of the reservoir pumps in 2017 that allows for better control of the raw water being pumped to the reservoir. This control, along with associated SCADA modifications, is proving to be a significant operational improvement by allowing the reservoir to remain at a greater percentage of volume for a greater portion of the year.



Variable speed controls for reservoir fill pump motors

Reservoir water quality was good during all months of the year. There were no significant blue-green algae blooms at the end of the summer, unlike 2017 when there was a bloom.



Variable speed motors on reservoir fill pumps

In accordance with New Jersey State Dam Safety regulations, a formal inspection took place in May of 2018. In addition, Authority engineering staff performed quarterly inspections during the other three quarters. The consultant contracted to perform the formal inspection helped staff interpret data from existing dam piezometers and made recommendations for replacement of the automated data acquisition system and addition of new instruments. That system is scheduled to be replaced in early 2019.

Operations - Manasquan Water Treatment Plant (“MWTP”)

The treatment plant provided water that met all NJDEP standards throughout 2018. Above average rainfall was managed through use of the new distribution tank separation wall, allowing for more practical treatment of the discolored Manasquan River water that occasionally occurs during the summer.



Variable speed controls for Motors at the MWTP



Instrumentation to determine water clarity replaced in 2017

In July 2016, the filter media support and water conveyance underdrain system on one of the three main filtration units failed. The unit had to be taken out of service for several months. A new system of improved design was installed in Filter 1 in the spring of 2017. The filter media and air scour system was replaced at the same time and the filter interior was painted. The same rehabilitation was completed on Filters 2

and 3 during the winter of 2017 and spring of 2018.



Underdrain reconstruction at the MWTP



Underdrain at filter support laterals at the MWTP

Improvements at the MWTP

The Authority developed an asset management plan for the MWTP in 2008. The asset management plan development included a thorough evaluation of the condition of the existing equipment and an analysis of proposed legislation or changes in regulations that could have an impact on plant operations. The asset management

plan identified the need to evaluate the treatment process and design additional filtration in the summer months to improve reliability. This study is moving forward, as are improvements to the motor speed control on the third of the three distributive water pumps.

Watershed Protection Programs Unit

The New Jersey Water Supply Authority's Watershed Protection Programs Division administers a systematic source water protection program for the watersheds that the Authority relies upon for its water supply. The Division's primary objectives include the development and implementation of projects that afford protection to the quantity and quality of the source water in the Raritan and Manasquan River Basins, and the Delaware & Raritan Canal and its tributaries for the benefit of the Authority and its customers. In 2018, the Watershed Office partnered with government and not-for-profit organizations to implement a variety of cost effective strategies, guided by the results of detailed watershed restoration protection plans for priority sub-watersheds.

Watershed Quality Conservation Practice Implementation

The Authority engaged with several agricultural producers to implement projects under a Federal Regional Conservation Partnership Program ("RCPP") Grant for the South Branch Raritan River and Lockatong/Wickecheoke Creek watersheds. In addition to the original five participants in this RCPP project, two new contracts were signed in 2018 to implement conservation practices with water quality benefits. The Authority also partnered with the New Jersey Conservation Foundation to apply for and receive an additional RCPP project award focused on the Black River watershed.



Heavy use area protection at a farm participating in the RCPP program. This project will help reduce soil erosion and sediment transport into nearby waterways.

The Watershed Office joined with the Somerville Environmental Commission, Boys Scouts of America and community volunteers to plant 500 live stakes along the Peters Brook Greenway. In addition, the office staff partnered with the AmeriCorps Watershed Ambassador from the Middle Delaware, The Hunterdon Land Trust, The Nature Conservancy and community volunteers to plant 800 trees and 400 live stakes along the Lockatong Creek in Kingwood Township.

The Authority once again worked with the Lower Raritan AmeriCorps Watershed Ambassador and Union Township to enhance the riparian buffer at Milligan Farms, a property preserved by the Authority and the Township. In 2018, the crew completed two plantings of 500 live willow and dogwood stakes and 50 trees.



Lower Raritan AmeriCorps Watershed Ambassador Rob Hughes with 150 trees to be planted at Milligan Farms

River-Friendly Programs

The Watershed Office works closely with Raritan Headwaters Association and The Watershed Institute (formerly Stony Brook Millstone Watershed Association) to implement the suite of River-Friendly programs. The three organizations worked with more than 40 golf courses, businesses and schools to improve their land management practices. The Authority worked with Green Knoll Golf Course and Spooky Brook Golf Course to plant 500 willow and dogwood stakes to improve the riparian corridors at the two golf courses. The Authority partnered with Gill St. Bernard School to plant 500 willow and dogwood stakes along the Peapack Brook. In addition, the Authority continued implementation of the River-Friendly Resident and Farm programs.



Authority staff worked with Spooky Brook Golf Course staff to plant live willow and dogwood stakes to improve a riparian corridor

Aquatic Plant Management

Aquatic plants, specifically a number of aggressive invasive aquatic plants, are creating operations and water quality challenges Authority-wide. Dense aquatic vegetation can cause a myriad of issues including: inhibiting water flow, obstructing intakes, impairing water quality, reducing dissolved oxygen, suppressing the desirable native aquatic plant community, altering sediment chemistry, and reducing water

depth. The introduction and spread of invasive aquatic plants in our water supply sources exacerbates these effects, and necessitates thoughtful planning and management.

After the 2016 discovery of hydrilla in the Canal, the Authority engaged a qualified consultant in 2017 to assist the Authority in developing and implementing an Aquatic Plant Management Plan for the Delaware & Raritan Canal. The plan focuses on managing aquatic plants for the purpose of maintaining passing flow while protecting water quality for all water users. As recommended in the plan, the Authority initiated a second year of a low-dosage continuous herbicide application in June 2018. The Authority continued engaging stakeholders, including all water purveyors, prior to and throughout the process. A post-treatment survey was conducted which documented effective aquatic plant suppression throughout the Canal and no remaining fragments of hydrilla; however, tubers continue to be found in the sediment. Overall, plant growth was reduced in the Canal, both above and within the treatment area. After the 2017 discovery of fanwort, another highly invasive aquatic plant, an additional survey was conducted this year, and no fanwort plants were found. The D&R Canal Aquatic Plant Management Plan will continue in 2019.

The presence of hydrilla and fanwort was confirmed in the Manasquan Reservoir in 2017. In response, the Authority hired a consultant in 2018 to prepare an Aquatic Plant and Cyanobacteria Management Plan for the Manasquan Reservoir. As part of this contract, the consultant will also develop a Cyanotoxin Management Plan, as recommended by the USEPA for all water purveyors. The Authority also initiated a 4-acre pilot herbicide treatment at the Manasquan Reservoir boat launch. This area has some of the most dense hydrilla growth, and is the potential point of transfer of hydrilla to other water bodies.



Manasquan Reservoir hydrilla: outside the treatment area (left), within the 4-acre pilot treatment area (right)

The Authority has been battling the aquatic invasive water chestnut in the South Branch Raritan River since it was first identified there in 2012. Authority staff, with the assistance of volunteers, removed 38 pounds of water chestnut from Lake Solitude, a dammed section of the South Branch, in High Bridge. The Authority is committed to working with local partners and broad array of stakeholders to increase awareness, educate the public, and document and address aquatic invasive plants that negatively impact our water supply resources and infrastructure.



Volunteers with water chestnut removed from Lake Solitude, High Bridge

Green Infrastructure Incentive Programs (Rain Garden/Rain Barrel Rebates)

Since 2010 the Authority has sponsored a Rain Barrel Rebate Program in the Somerset Regional Center communities of Bridgewater Township, and Raritan and Somerville Boroughs. In 2018, the Authority extended the rain barrel rebate initiative to residents of Manville Borough. Since the program's inception, rain barrel rebates have been issued to over 70 residents. Rain barrels installed through our rebate program, in addition to the rain barrels distributed through NJWSA sponsored workshops in these three communities have the capacity to collect and store more than 25,000 gallons per rain event.

Stormwater Management and Monitoring

With the NJDEP's concurrence, the Authority modified the scope of the Delaware & Raritan Canal Infall Drainage Improvement Project to include projects throughout Franklin Township, Somerset County. The modified scope will more fully capture water quality improvement opportunities identified in the Raritan Basin Total Nutrient Total Maximum Daily Load ("TMDL"). Accordingly, in 2017 designs and construction specifications were completed for four stormwater basin retrofit projects. Construction is anticipated to occur in the spring of 2019. The Authority deployed two automated ISCO Avalanche Samplers inside the outlet structures of two detention basins to collect stormwater runoff samples in advance of the retrofits. To date, we have captured four storm events with the objective of monitoring an additional three storms before retiring the Samplers for the season.



Pre-retrofit monitoring of the Renoir Detention Basin in Franklin Township, Somerset County

In 2018, the Authority continued to monitor the effectiveness of the roadside drainage improvement projects that were installed in 2016 in the Lockatong and Wickecheoke Watersheds. The automated ISCO Avalanche Samplers were deployed at two sites and captured 15 storm events collectively. This winter the Authority will compare the pollutant loads in the stormwater pre- and post- construction. Many of the roadside channels within the Lockatong and Wickecheoke watersheds are eroded and unstable from the combination of annual maintenance cleaning and increased runoff volumes. The Authority estimates that 4,000 tons of sediment from eroded roadside drainage ravines and deicing materials are washed into the Lockatong and Wickecheoke creeks, and ultimately into the Delaware and Raritan Canal, each year. The goal is for this project to serve as a model for the municipalities in these watersheds to replicate.



Post-implementation monitoring, Oak Grove Road, Kingwood Township, Hunterdon County

Policies and Economic Growth Strategies of the State of New Jersey

The Highlands Water Protection and Planning Act, N.J.S.A. 13:20-1 et seq. protects drinking water for over 5.4 million people and helps preserve New Jersey's dwindling open space. Approximately 17 percent of the Raritan Basin is in the Highlands, providing nearly all of the water stored in Round Valley and Spruce Run Reservoirs. The Authority's land acquisition program has been suspended temporarily; however, to date, the Authority has committed \$15,224,781 since 2003 to purchase and preserve along with its partners, 3,954 acres within the Raritan and Manasquan Basins. The Authority also continues to contribute soft costs and stewardship expenses in order to assist project partners in closing open space parcels within the basin.

One of the stated goals of the NJDEP is to ensure that adequate, safe and reliable water supplies are provided to the people of the State of New Jersey. Specifically, the State ensures that surface and ground water

diversions do not exceed the sustainable yield of available water resources. The Raritan Basin Safe Yield Model was developed based on the results of the Authority's operations model, and the Manasquan Reservoir System Safe Yield Model, currently under development, will be used in support of future water allocation permit applications and System operations.

During 2018, the Authority's operations continued to support the sustainability of the State's water resources through its operation of the reservoir systems, through managing passing flow requirements at certain stations along the river system, with the implementation of a \$75 million Round Valley Reservoir Rehabilitation Project and through continuous maintenance and dredging of the Delaware and Raritan Canal to assure adequate flow and the long-term integrity of that structure.

Annual Review of Authority Operations

Each year during the budget process, senior management of the Authority reviews operations to identify inefficiencies and cost savings which, when implemented, will provide direct benefit to the Authority's customers. During 2018, the Authority undertook several steps to implement cost savings and other measures in several areas. The Authority continued its close review of staffing levels, resulting in significant labor savings from careful management of staffing efforts for open positions. As normal vacancies occurred in staffing during 2018, the Authority made certain that personnel were promoted, or hired from outside the Authority into salaries which were lower than the departing incumbent. During FY2018, the Authority filled 21 vacancies and saved \$63,970 in annual salary and \$230,400 in turnover savings through exercising this diligence. Over the past ten years, the Authority has saved nearly \$470,000 in starting salaries when filling vacancies.

General operations and maintenance expenses were approximately 6 percent under budget, mainly in the areas of insurance expense (\$220,000), maintenance related expenses (\$183,000), reflecting effective equipment replacement and maintenance programs, and facility electric

costs (\$87,000). Rates were further stabilized in FY18 by the use of unanticipated revenue of \$1,236,590 resulting from prior year surpluses, overdrafts and excess debt service coverage.

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Letter of Transmittal

NEW JERSEY WATER SUPPLY AUTHORITY



Post Office Box 5196 • Clinton, NJ 08809 • (908) 638-6121
www.njwsa.org Fax • (908) 638-5241

May 6, 2019

Formal Transmittal of the CAFR

To the Commissioners of the New Jersey Water Supply Authority

The Comprehensive Annual Financial Report of the New Jersey Water Supply Authority ("Authority") for the year ended June 30, 2018 is submitted herewith. Responsibility for both the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with the Authority. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and are reported in a manner designed to present fairly the Authority's financial position, results of operations, and cash flows in accordance with generally accepted accounting principles. In accordance with these accounting principles, the Authority is a component unit of the State of New Jersey and, as such, is included in the State of New Jersey's Annual Report.

Profile of the Government

Reporting Entity and its Services

The Authority was created on October 7, 1981 (P.L. 1981, c.293) and was established in but not of the Department of Environmental Protection of the State of New Jersey. This "New Jersey Water Supply Authority Act" established the Authority to acquire, finance, construct, and operate water systems under certain circumstances, and authorizes the issuance of bonds of the Authority.

The Authority operates three separate systems: the Raritan Basin System, the Manasquan Water Supply System, and the Manasquan Water Treatment Plant and Transmission System. The Manasquan Water Treatment Plant and Transmission System is owned by the Southeast Monmouth Municipal Utilities Authority (SMMUA), and is operated and maintained by the Authority under the terms of an operating agreement. Each of these systems provides sufficient revenues to cover their own operating expenses, and each System's debt service.

A seven member Board of Commissioners governs the Authority. The Authority's Executive Director heads a full-time staff of professional, technical, and operational personnel totaling 117 employees, consisting of 90 employees of the Raritan Basin System and 27 employees of the Manasquan Reservoir System.

The meetings of the Authority are normally scheduled for the first working Monday of each month. Four members of the Authority constitute a quorum at any meeting. Action may be taken, and motions and resolutions adopted by the Authority at any meeting by the affirmative vote of at least four members of the Authority. All meetings held by the Authority are in accordance with the Open Public Meetings Act, which requires that all meetings of public bodies be open to the public.

Accounting System and Budgetary Control

The Authority's financial statements are prepared in accordance with generally accepted accounting principles. The Authority operates and reports as a single enterprise fund utilizing the accrual basis of accounting. The enterprise fund concept is similar to how private business enterprises are financed and operated. The intent is that the costs of providing service to water users on a continuing basis be financed primarily through user charges.

In an effort to ensure compliance with the Authority's By-Laws and to safeguard its assets, an internal control structure has been developed and implemented by management. The internal control structure is outlined in Accounting Policies and Procedures Manuals maintained by the Authority and include: description of methods, procedures and accounting principles to be followed with explanations and examples of principal transactions; standards setting out authorization levels for expenditure of Authority funds and very specific procedures to follow when executing purchase orders, receiving goods and payment for services; separation of accounts payable and receivable function; limitations on access to the vendor management system; bank reconciliation review; controls over deposits and generation of automated and manual checks. The internal control structure also includes approved organization structures, and approved budgets for capital and operating expenditures.

The Authority's By-Laws also set out standards for procurement, which have been codified in policies and procedures. The standards include a threshold, after which the Board of Directors must approve all transactions. The Authority is in compliance with Executive Order No. 37 (2006) with respect to procurement, and has amended its procedures to ensure 100 percent compliance.

To the best of our knowledge and belief, the Authority followed all of its standards, procedures and internal control safeguards for the year in question. Because the cost of a control should not exceed the benefits to be derived, the objective is to provide reasonable, rather than absolute assurance, that the financial statements are free of any material misstatements.

The Authority adopts an annual budget for its operations and establishes water rates accordingly.

Information Useful in Assessing the Government's Economic Condition

Financial Position

The total assets of the Authority as of June 30, 2018 were \$270,881,557, an increase of 29.6% percent over the previous year's total of \$209,023,402. Net capital assets increased by \$4,970,553, or 3.6 percent, from \$139,466,728 to \$144,437,281.

The total of cash, cash equivalents and investments for the Authority increased \$9,561,979, or 14.7 percent, from \$64,940,103 to \$74,502,082. The increase in this category of asset is associated with normal fluctuations in cash balances and market value adjustments in investments in addition to an increase in rates principally to cover anticipated debt service for major rehabilitation projects. Current liabilities increased \$7,605,229, or 88.6 percent, from \$8,585,118 to \$16,190,347 due primarily to an increase in the current portion of bonds, notes, and loans payable. Total non-current liabilities increased from \$128,466,486 to \$162,703,934 or 26.7 percent. The increase is primarily due to the issuance of debt to finance the Canal Dredging Project. Total Net Position of the Authority increased \$7,179,148, or 8.8% percent, from \$81,244,109 to \$88,423,257.

Total Operating Revenue increased by \$4,636,069 or 16.5 percent, from \$28,037,199 to \$32,673,268 due to an increase in the contract rate in the Raritan

Reservoir Basin System from \$253.00 per million gallons to \$336.00 per million gallons. Total Operating Expenses increased \$350,223, or 1.4 percent, from \$24,686,037 to \$25,036,260, because of increases in payroll resulting from negotiated union contract cost of living adjustments payable in FY2018 and retroactive payment of step increases. Non-operating Revenue increased \$557,012 or 19,167.65 percent, from \$2,906 to \$559,918, reflecting increases in investment income. Non-operating expenses increased \$3,043,157, or 150.2 percent, from (\$2,025,379) to \$1,017,778 primarily due to an increase in cost recovery related deferred inflows of resources.

Independent Audit

In accordance with the "New Jersey Water Supply Authority Act" (P.L. 1981, c.293), before the last day of February, an Annual Report of the Authority's activities of the preceding calendar year is due to the Governor and the Legislature. This Annual Report must include an audit of the Authority's books and accounts. Mercadien, P.C. was retained to perform an audit of the 2018 Fiscal Year in accordance with Auditing Standards generally accepted in the United States and *Government Auditing Standards* issued by the Comptroller General of the United States. In June 1999, the GASB adopted their Statement No. 34, *Basic Financial Statements—and Management's Discussion and Analysis—for State and Local Governments*. The Authority adopted GASB Statement No. 34 in Fiscal Year 2001, including the Management's Discussion and Analysis ("MD&A"). The MD&A is considered to be required supplemental data and precedes the financial statements. This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. The Authority's MD&A can be found immediately following the Report of the Independent Auditors. Mercadien, P.C. reports directly to the Audit Committee of

the Board of Commissioners. Mercadien, P.C. also issued, as part of the annual audit, a report on internal control and compliance.

The Authority has previously established rates, and intends to continue establishing rates on the basis of its cash needs in any fiscal year to meet its requirements for Operations and Maintenance Expenses, Debt Service, Capital Fund and the Source Water Component.

Awards and Acknowledgements

Certificate of Achievement for Excellence in Financial Reporting

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the New Jersey Water Supply Authority for its Comprehensive Annual Financial Report for the fiscal year ended June 30, 2017. This was the 26th consecutive year that the Authority has achieved this prestigious award.

In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized Comprehensive Annual Financial Report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. The Authority cannot submit for FY2018 due to the delay of the release of the State of New Jersey's Other Postretirement Benefit ("OPEB") financial report, which details the Authority's portion of the state's OPEB liability. It is the Authority's intention to submit the FY2019 Comprehensive Annual Financial Report to the GFOA.

Acknowledgements

The preparation of this report on a timely basis could not be accomplished without the efficient and dedicated services of the Financial and Accounting staff of the New Jersey Water Supply Authority. Any

financial report is also only as good as the accounting records that supply its supporting data. The Authority's entire staff deserves recognition for their dedication, perseverance and attention to detail that result in the Authority's records being kept in a manner which reflects credit on the staff as a unit as well as each employee individually.

Economic Outlook

The continuing economic viability of the Authority is ensured by the water contracts the Authority maintains with our water users. The water users have entered into long-term contracts for a supply of water for their respective systems, which they are authorized to continuously withdraw without interruption, for potable or industrial water supply purposes. During Fiscal Year 2018, the Authority supplied water to 32 contractual customers of the Raritan Basin System, which provided water to approximately 1,500,000 people in central New Jersey, and 13 contractual customers of the Manasquan System, which provides water to approximately 250,000 people in the Monmouth County area. Two customers accounted for approximately 84 percent of total Raritan Basin System operating revenues. Three customers accounted for approximately 85 percent of total Manasquan System operating revenues.

The total sales base for the Raritan Basin System remained the same at 182.353 million gallons per day for fiscal year 2018, and the total sales base for the Manasquan

Reservoir System remained the same at 19.443 million gallons per day. We are expecting our major water customers in both Systems to continue to maintain their approximate contractual water allocations in the future. Payments for uninterruptible service are based upon the mgd amount specified in each water user contract, and are payable to the Authority whether or not the water user actually withdraws the full amount of water available as defined in the contract as daily uninterruptible service.



Beth Gates
Executive Director



Susan Buckley
Director, Finance & Administration



Rita Shaw
Controller

Financial Section

Report of Independent Auditors

Management's Discussion and Analysis

Basic Financial Statements

Statements of Net Position

Statements of Revenues, Expenses and
Changes in Net Position

Statements of Cash Flows

Notes to Financial Statements

Combining Statements and Schedule

**NEW JERSEY WATER SUPPLY AUTHORITY
(A COMPONENT UNIT OF THE STATE OF NEW JERSEY)**

**FINANCIAL STATEMENTS AND SUPPLEMENTARY INFORMATION
JUNE 30, 2018**



INDEPENDENT AUDITORS' REPORT

To the Commissioners of
New Jersey Water Supply Authority

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities of the New Jersey Water Supply Authority (the "Authority"), a component unit of the State of New Jersey, as of and for the years ended June 30, 2018 and 2017, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

INDEPENDENT AUDITORS' REPORT (CONTINUED)

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the business-type activities of the Authority as of June 30, 2018 and 2017, and the changes in financial position and cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note L to the financial statements, in 2018 the Authority adopted new accounting guidance Governmental Accounting Standards Board Statement No. 75 - Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages four through eleven and the required supplementary schedules on pages 44 and 45 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Supplementary Information

Our audits were conducted for the purpose of forming opinions on the financial statements that collectively comprise the Authority's basic financial statements. The other supplementary information, as listed in table of contents, is presented for purposes of additional analysis and are not a required part of the basic financial statements.

INDEPENDENT AUDITORS' REPORT (CONTINUED)

Other Matters (Continued)

Other Supplementary Information (Continued)

The other supplementary information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America.

In our opinion, the other supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated April 29, 2019, on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements and other matters. The purpose of those reports is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the internal control over financial reporting or on compliance. Those reports are an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.

Mercadieu, P.C.
Certified Public Accountants

April 29, 2019

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MANAGEMENT'S DISCUSSION AND ANALYSIS

Year Ended June 30, 2018

This section of the Annual Financial Report of the New Jersey Water Supply Authority (the "Authority"), a Component Unit of the State of New Jersey, presents discussion and analysis of the Authority's financial performance during the fiscal years ended June 30, 2018 and June 30, 2017. Please read it in conjunction with the Authority's basic financial statements and accompanying notes.

FINANCIAL HIGHLIGHTS – FISCAL YEAR 2018

- Operating revenue for fiscal year 2018 was \$32.7 million, a 16.5% increase over fiscal year 2017, which was the result of a 31.2% increase in Raritan, and an 8.3% decrease in Manasquan sales. In the Raritan Basin System, rates increased to \$336.00 per million gallons, and the sales base increased slightly to 182.353 million gallons per day ("mgd"). In the Manasquan Reservoir System, rates decreased to \$1,043.35 per million gallons. The fiscal year 2018 sales base remained at 19.443mgd.
- Unrestricted cash and cash equivalents for fiscal year 2018 were \$48.2 million, an increase of 8.5% over fiscal year 2017. Income from operations increased for the Raritan System 1150.1% and decreased 21.6% for the Manasquan System.
- Total liabilities for fiscal year 2018 were \$178.9 million. This is an increase of 30.5% from fiscal year 2017 and reflects the February 2018 interim financing in the amount of \$49.5 million with the New Jersey Infrastructure Bank for the D&R Canal Dredging project in the Raritan Basin System less the change in the total OPEB liability from \$37 million to \$33.5 million.
- Total operating expenses for fiscal year 2018 increased to \$25.0 million, which represents a 1.4% increase from fiscal year 2017. Payroll increased 6.1% because of retroactive cost of living and step increments awarded to union employees and the filling of funded vacancies. Fringe benefits decreased 9.1% due largely to one-time recognition of pension expense in 2017, which was partially offset by recognition of additional expense in connection with implementation of GASB Statement No. 75, Accounting and Financial Reporting for the Postemployment Benefits Other Than Pensions (OPEB). Direct operations and maintenance expenses increased 10.3% to \$5.7 million.
- Other changes for fiscal year 2018 include the following: non-operating revenue increased 19167.7% to \$559.9 thousand; investment income increased 2044.4% because of a fiscal year 2017 arbitrage payment made in connection with the 2016 bond refunding. The receipt of grant program reimbursement decreased 81.7% from the previous year, and other income increased because of a one-time repayment to FEMA in fiscal year 2017 of funds that had already been reimbursed by the Authority's insurance.
- Non-operating expenses for fiscal year 2018 increased 150.2% to \$1.0 million. The interest component of debt service decreased 4.5% with the continued pay-down of the system debt. There was an increase in the reduction in costs to be recovered from future revenue, (deferred inflows of resources) and the change in the rate model is outlined in Note B to the basic financial statements.



MANAGEMENT'S DISCUSSION AND ANALYSIS

Year Ended June 30, 2018

FINANCIAL HIGHLIGHTS – FISCAL YEAR 2017

- Operating revenue for fiscal year 2017 was \$28.0 million, an increase of .7% over fiscal year 2016, which was the result of a 1.2% decrease in Raritan, and a 5.1% increase in Manasquan sales. In the Raritan Basin System, rates remained at \$253.00 per million gallons, and the sales base remained at 182.339 million gallons per day ("mgd"). In the Manasquan Reservoir System, there was an increase in the rate from \$1,057.40 per million gallons to \$1,104.58 per million gallons. The fiscal year 2017 sales base remained at 19.443mgd.
- Unrestricted cash and cash equivalents for fiscal year 2017 were \$44.4 million, an increase of 7.9% from fiscal year 2016. Income from operations decreased for the Raritan System 87.3% and increased 4.2% for the Manasquan System.
- Total liabilities for fiscal year 2017 were \$137.4 million. This is an increase of 48.1% from fiscal year 2016 and reflects the recognition of the Authority's portion of the State of New Jersey's net unfunded pension liability as required by GASB 68, which is effective for fiscal years beginning after June 15, 2014 as well as the Authority's portion of the State of New Jersey's net unfunded OPEB liability as required by GASB 75, which is effective for fiscal years beginning after June 15, 2017. The Authority continues to pay down long-term debt in both systems and completed a current refunding of the 2005 Manasquan Water Supply System Revenue Bonds in FY2016.
- Total operating expenses for fiscal year 2017 increased to \$24.7 million, which represents a 15.3% increase from fiscal year 2016. Payroll increased 2.8% because of step increments awarded to union employees and the filling of funded vacancies. Fringe benefits increased 57.7% due largely to an increase in the Authority's portion of the State of New Jersey's pension expense. Direct operations and maintenance expenses increased 3.5% to \$5.2 million.
- Other changes for fiscal year 2017 include the following: non-operating revenue decreased 99.8% to \$2.9 thousand; investment income decreased 102.6% because of the timing of recognition of earnings and associated arbitrage payment made in connection with the 2016 bond refunding. The receipt of grant program reimbursement increased 174.7% from the previous year, and other income decreased because of a one-time repayment to FEMA of funds that had already been reimbursed by the Authority's insurance.
- Non-operating expenses for fiscal year 2017 decreased 196.4% to \$(2.0) million. The interest component of debt service decreased 62.1% with the refunding of the 2005 Manasquan Water Supply System Revenue Bonds and the continued pay-down of the system debt. There was a decrease in the reduction in costs to be recovered from future revenue, (deferred inflows of resources) and the change in the rate model is outlined in Note B to the basic financial statements.



MANAGEMENT'S DISCUSSION AND ANALYSIS

Year Ended June 30, 2018

OVERVIEW OF THE FINANCIAL STATEMENTS

The annual financial report consists of two parts: Management's Discussion and Analysis (this section) and the financial statements. The Authority is a self-supporting entity and follows enterprise fund accounting. The enterprise fund concept is similar to the manner in which private business enterprises are financed and operated. The Authority presents its financial statements on the accrual basis of accounting. The statements offer short and long-term financial information about the activities and operations of the Authority. The intent is that the costs of providing service to water users on a continuing basis are financed primarily through user charges. The Authority has established certain restricted "funds or accounts," as directed by internal resolution and bond indentures. In an effort to ensure compliance with the Authority's by-laws and to safeguard its assets, internal controls have been developed and implemented by management. These internal controls include policies, procedures, approved organizational structures and approved budgets for capital and operating expenditures.

FINANCIAL ANALYSIS OF THE AUTHORITY

The Authority's total net position was approximately \$88.4 million as of June 30, 2018. In fiscal year 2018, total assets and deferred outflows increased 27.3% to \$278.4 million, primarily due to an increase in accounts receivable related to the 2018 interim financing for the Raritan Basin canal dredging project. Total liabilities increased 30.5% to \$178.9 million, due to an increase in non-current portion of bonds, notes and loans payable related to the interim financing for the Raritan Basin canal dredging project and the recognition of the OPEB liability. Total net position as of June 30, 2017, was approximately \$81.2 million. Total assets at June 30, 2017 increased 4.5% to \$218.6 million, and total liabilities increased 48.1% to \$137.4 million. The majority of the increase was due to implementation of GASB 75 and recognizing \$37.7 million in OPEB liability. Total net position as of June 30, 2016, was \$113.6 million. Changes in assets, liabilities and net position at June 30, 2018, 2017 and 2016, are summarized in the following table:



MANAGEMENT'S DISCUSSION AND ANALYSIS

Year Ended June 30, 2018

	2018	2017	2016	Percentage Change 2018-2017	Percentage Change 2017-2016
Assets and deferred outflows of resources					
Current assets	\$ 115,729,179	\$ 58,452,649	\$ 53,645,149	97.99 %	8.96 %
Capital assets, net	144,437,281	139,466,728	140,382,085	3.56	(0.65)
Other non-current assets	10,715,097	11,104,025	11,527,173	(3.50)	(3.67)
Total assets	270,881,557	209,023,402	205,554,407	29.59	1.69
Deferred outflows of resources	7,402,086	9,612,405	3,646,920	(22.99)	163.58
Total assets and deferred outflows of resources	278,283,643	218,635,807	209,201,327	27.28	4.51
Liabilities, deferred inflows of resources, and net position					
Current liabilities	16,190,347	8,585,118	6,027,320	88.59	42.44
Non-current liabilities	56,508,420	67,630,932	21,534,789	(16.45)	214.05
Non-current portion of bonds, notes and loans payable	106,195,514	60,835,554	64,954,602	74.56	(6.34)
Total liabilities	178,894,281	137,051,604	92,516,711	30.53	48.14
Deferred inflows of resources	10,966,105	340,094	3,075,869	3,124.43	(88.94)
Net investment in capital assets	59,275,272	61,887,512	98,890,303	(4.22)	(37.42)
Restricted for debt service	13,434,461	7,262,065	3,876,937	85.00	87.31
Unrestricted	15,713,524	12,094,532	10,841,507	29.92	11.56
Total net position	\$ 88,423,257	\$ 81,244,109	\$ 113,608,747	8.84	(28.49)
Total liabilities, deferred inflows of resources, and net position	\$ 278,283,643	\$ 218,635,807	\$ 209,201,327	27.28	4.51



MANAGEMENT'S DISCUSSION AND ANALYSIS

Year Ended June 30, 2018

OPERATING ACTIVITIES

The Authority operates three separate systems: the Raritan Basin System, the Manasquan Water Supply System, and the Manasquan Water Treatment Plant and Transmission System. The Manasquan Water Treatment Plant and Transmission System is owned by the Southeast Monmouth Municipal Utilities Authority, which sets the rates, and is operated and maintained by the Authority under the terms of an operating agreement. Each system must generate sufficient revenue each year to cover its own operating expenses and debt service. The following rates were adopted at the June 2018 and June 2017 Authority meetings, respectively, based on anticipated operating expenses:

	Rate Effective <u>7/01/2018</u>	Rate Effective <u>7/01/2017</u>	Percent <u>Change</u>
Raritan Basin System	\$ 336.00/mg	\$ 336.00/mg	0 %
Manasquan Water Supply System			
Initial users	\$1,043.35/mg	\$1,043.35/mg	0 %
Delayed water users	\$1,137.76/mg	\$1,137.76/mg	0 %

The Authority's total operating revenue for fiscal year 2018 was \$32.7 million, an increase of 16.5% from fiscal year 2017, due to a 31.2% increase in Raritan water sales and a 8.3% decrease in Manasquan water sales. The Authority's total operating expenses for fiscal year 2018 were \$25.0 million, an increase of 1.4% from fiscal year 2017, mainly because of a decrease in pension expense. The Authority's total operating revenue for fiscal year 2017 was \$28.0 million, an increase of .7% from fiscal year 2016. The Authority's total operating expenses for fiscal year 2017 were \$24.7 million, an increase of 15.3% from fiscal year 2016. The following table summarizes the changes in revenue, expenses and net position between fiscal years 2018, 2017 and 2016:



MANAGEMENT'S DISCUSSION AND ANALYSIS

Year Ended June 30, 2018

	2018	2017	2016	Percentage Change 2018-2017	Percentage Change 2017-2016
Operating revenues:					
Water sales	\$ 30,030,868	\$ 25,394,799	\$ 25,199,424	18.26 %	0.78 %
Reimbursement of operating expenses	2,642,400	2,642,400	2,642,400	-	-
Total operating revenues	32,673,268	28,037,199	27,841,824	16.54	0.70
Non-operating revenues:					
State of New Jersey - Grant Programs	31,422	171,310	62,375	(81.66)	174.65
Investment income	489,763	(25,188)	975,579	2,044.43	(102.58)
Rental income	49,565	49,606	58,467	(0.08)	(15.16)
Other income	(10,832)	(192,822)	89,744	94.38	(314.86)
Total non-operating revenues	559,918	2,906	1,186,165	19,167.65	(99.76)
Total revenues	33,233,186	28,040,105	29,027,989	18.52	(3.40)
Operating expenses:					
Payroll	7,882,193	7,425,938	7,225,026	6.14	2.78
Operations and maintenance	5,697,087	5,165,250	4,991,547	10.30	3.48
Fringe benefits	6,819,571	7,498,085	4,755,520	(9.05)	57.67
Depreciation	4,637,409	4,596,764	4,441,492	0.88	3.50
Total operating expenses	25,036,260	24,686,037	21,413,585	1.42	15.28
Non-operating expenses:					
Interest component of debt service to the State of New Jersey	444,018	464,824	1,226,563	(4.48)	(62.10)
Bond discount/insurance premium expense	-	12,491	158,053	(100.00)	(92.10)
Recovery of deferred inflows of resources	573,760	(2,502,694)	716,783	122.93	(449.16)
Total non-operating expenses	1,017,778	(2,025,379)	2,101,399	150.25	(196.38)
Total expenses	26,054,038	22,660,658	23,514,984	14.97	(3.63)
Changes in net position	7,179,148	5,379,447	5,513,005	33.46	(2.42)
Net position, beginning of year, as restated	81,244,109	113,608,747	108,095,742	(28.49)	5.10
Net position, end of year, as previously reported	88,423,257	118,988,194	113,608,747	(25.69)	4.74
GASB 75 adjustment	-	(37,744,085)	-	(100.00)	100.00
Net position, end of year, as restated	\$ 88,423,257	\$ 81,244,109	\$ 113,608,747	8.84	(28.49)

See accompanying notes.

CAPITAL ASSETS AND DEBT ADMINISTRATION

At June 30, 2018, the Authority had a total of \$144,437,281 invested in the Systems that it operates: \$90,438,403 invested in the Raritan Basin System, and \$53,998,878 invested in the Manasquan System. This total amount represents a 3.6% increase from last year. At June 30, 2017, the Authority had a total of \$139,466,728 invested in the Systems that it operates: \$83,660,222 invested in the Raritan Basin System, and \$55,806,506 invested in the Manasquan System. This total amount represents a .7% decrease from the prior year.



MANAGEMENT'S DISCUSSION AND ANALYSIS

Year Ended June 30, 2018

The following table summarizes the changes in capital assets, net of depreciation, between fiscal years 2018, 2017 and 2016:

	2018	2017	2016	Percentage Change 2018-2017	Percentage Change 2017-2016
Land and land rights	\$ 26,444,952	\$ 26,444,952	\$ 26,444,952	- %	- %
Dams	46,609,025	47,407,020	48,205,015	(1.68)	(1.66)
Building, structures and improvements	53,827,471	54,876,544	51,714,341	(1.91)	6.11
Machinery and equipment	1,425,417	1,411,333	1,303,991	1.00	8.23
Construction work in progress	16,130,416	9,326,879	12,713,786	72.95	(26.64)
Total capital assets	\$ 144,437,281	\$ 139,466,728	\$ 140,382,085	3.56	(0.65)

More detailed information about the Authority's capital assets is presented in Note C to the basic financial statements.

The following table summarizes the changes in capital debt between fiscal years 2018, 2017 and 2016:

	2018	2017	2016	Percentage Change 2018-2017	Percentage Change 2017-2016
Bonds payable	\$ 15,748,257	\$ 18,802,335	\$ 19,281,414	(16.24) %	(2.48) %
Notes payable	33,566,892	33,566,892	33,566,892	-	-
Loans payable	60,811,617	12,318,018	13,382,948	393.68	(7.96)
Total	\$ 110,126,766	\$ 64,687,245	\$ 66,231,254	70.24	(2.33)

At year-end, the Authority had \$110,126,766 in bonds, notes and loans principal outstanding, compared to \$64,687,245 at June 30, 2017. This change represents an increase of 70.2%. The change in bonds, notes and loans principal outstanding at June 30, 2017, compared to the total of \$66,231,254 at June 30, 2016, represents a decrease of 2.3%, as shown in the above table.

More detailed information about the Authority's long-term debt is presented in Note E to the basic financial statements.



MANAGEMENT'S DISCUSSION AND ANALYSIS

Year Ended June 30, 2018

CURRENT AND NEW BUSINESS

During fiscal year 2018, the Authority supplied water to 32 contractual customers of the Raritan Basin System, who, in turn, supplied water to approximately 1,500,000 people in central New Jersey. Two customers accounted for approximately 84% of total Raritan Basin System operating revenue. There was a slight increase in the sales base of the Raritan Basin System of 182.339 mgd to 182.353 mgd in fiscal year 2018. In addition, during fiscal year 2018, the Authority provided water to 13 contractual customers of the Manasquan Water Supply System, who provided water to approximately 250,000 people in the Monmouth County area. During fiscal years 2018 and 2017, three customers accounted for approximately 85% and 88%, respectively, of the total Manasquan System operating revenue. There is no expected change in the sales base of the Manasquan Water Supply system of 19.443 mgd in fiscal year 2019.

CONTACTING THE AUTHORITY'S FINANCIAL MANAGEMENT

This financial report is designed to provide the water customers, New Jersey citizens, investors and creditors with a general overview of the Authority's finances and to demonstrate the Authority's accountability as a self-supporting entity. The Authority's overall financial position has improved; total net position has increased and the Authority continues to receive favorable bond ratings. If you have questions about this report or need additional financial information, you can contact the New Jersey Water Supply Authority at 1851 Highway 31, P.O. Box 5196, Clinton, New Jersey 08809, (908) 638-6121 or visit our website at www.njwsa.org.

BASIC FINANCIAL STATEMENTS

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY
STATEMENTS OF NET POSITION

	June 30,	
	2018	2017
Assets		
Current assets:		
Unrestricted assets:		
Cash and cash equivalents	\$ 48,177,628	\$ 44,408,430
Unbilled sales	1,501,023	1,174,697
Accounts receivable, less allowance for doubtful accounts of \$1,000 at June 30, 2018 and 2017	49,295,613	2,270,753
Interest receivable	167,778	170,608
Prepaid expenses and other current assets	977,780	1,000,513
Total unrestricted current assets	100,119,822	49,025,001
Restricted assets:		
Cash equivalents	10,231,323	4,098,163
Investments	5,378,034	5,329,485
Total restricted current assets	15,609,357	9,427,648
Total current assets	115,729,179	58,452,649
Non-current assets:		
Investments	10,715,097	11,104,025
Capital assets, net	144,437,281	139,466,728
Total non-current assets	155,152,378	150,570,753
Total assets	270,881,557	209,023,402
Deferred outflows of resources		
Pension related	6,905,770	9,612,405
OPEB related	5,736	-
2018 construction loan DEP fee	490,580	-
Total deferred outflows of resources	7,402,086	9,612,405
Total assets and deferred outflows of resources	\$ 278,283,643	\$ 218,635,807
Liabilities		
Current liabilities:		
Current portion of bonds, notes and loans payable	3,931,252	3,851,691
Accounts payable	7,305,033	431,084
Accrued liabilities	2,779,166	2,136,760
Unearned revenue	2,174,896	2,165,583
Total current liabilities	16,190,347	8,585,118
Non-current liabilities:		
Non-current portion of bonds, notes and loans payable	106,195,514	60,835,554
Net pension liability	23,038,776	29,886,847
Total OPEB liability	33,469,644	37,744,085
Total non-current liabilities	162,703,934	128,466,486
Total liabilities	178,894,281	137,051,604
Deferred inflows of resources:		
Cost recovery	(567,296)	(896,366)
Pension related	5,345,883	525,390
OPEB related	5,589,091	-
Gain on refunding	598,427	711,070
Total deferred inflows of resources	10,966,105	340,094
Total liabilities and deferred inflows of resources	189,860,386	137,391,698
Net Position		
Net investment in capital assets	59,275,272	61,887,512
Restricted for debt service	13,434,461	7,262,065
Unrestricted	15,713,524	12,094,532
Total net position	88,423,257	81,244,109
Total liabilities, deferred inflows of resources, and net position	\$ 278,283,643	\$ 218,635,807

See accompanying notes.

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY

STATEMENTS OF REVENUE, EXPENSES AND CHANGES IN NET POSITION

	Years Ended June 30,	
	2018	2017
Operating revenues:		
Water sales	\$ 30,030,868	\$ 25,394,799
Reimbursement of operating expenses	2,642,400	2,642,400
Total operating revenues	32,673,268	28,037,199
Operating expenses:		
Payroll	7,882,193	7,425,938
Operations and maintenance	5,697,087	5,165,250
Fringe benefits	6,819,571	7,498,085
Depreciation	4,637,409	4,596,764
Total operating expenses	25,036,260	24,686,037
Income from operations	7,637,008	3,351,162
Non-operating revenues:		
State of New Jersey - Grant Programs	31,422	171,310
Investment income	489,763	(25,188)
Rental income	49,565	49,606
Other income	(10,832)	(192,822)
Total non-operating revenues	559,918	2,906
Non-operating expenses:		
Interest component of debt service to the State of New Jersey	444,018	464,824
Bond discount/insurance premium expense	-	12,491
Recovery of deferred inflows of resources	573,760	(2,502,694)
Total non-operating expenses	1,017,778	(2,025,379)
Changes in net position	7,179,148	5,379,447
Net position, beginning of year, as restated	81,244,109	113,608,747
Net position, end of year, as previously reported	88,423,257	118,988,194
GASB 75 adjustment	-	(37,744,085)
Net position, end of year, as restated	\$ 88,423,257	\$ 81,244,109

See accompanying notes.

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY
STATEMENTS OF CASH FLOWS

	Years Ended June 30,	
	2018	2017
Cash flows from operating activities		
Cash received from water sales	\$ 29,965,054	\$ 26,150,080
Cash received from reimbursable expenses	2,591,994	2,641,113
Cash received from rental income	36,533	38,126
Cash paid to or on behalf of employees	(12,128,509)	(12,681,123)
Cash paid to suppliers	(5,402,207)	(5,202,949)
Net cash provided by operating activities	<u>15,062,865</u>	<u>10,945,247</u>
Cash flows from noncapital financing activities		
Cash received for grant programs	31,422	171,310
Net cash provided by non-capital financing activities	<u>31,422</u>	<u>171,310</u>
Cash flows from capital and related financing activities		
Principal paid on bonds, notes and loans	(4,847,782)	(2,302,554)
Interest paid on bonds, notes and loans	(472,615)	(314,752)
Acquisition and construction of capital assets	(691,954)	(3,661,204)
Proceeds from sale of capital assets	(12,550)	321,222
Net cash used in capital and related financing activities	<u>(6,024,901)</u>	<u>(5,957,288)</u>
Cash flows from investing activities		
Sale of investment securities	3,877,084	7,313,765
Purchase of investment securities	(3,592,424)	(10,470,306)
Interest received on investments	492,593	76,647
Premium on matured investments	55,719	741,223
Net cash provided/(used) by investing activities	<u>832,972</u>	<u>(2,338,671)</u>
Net increase in cash and cash equivalents	9,902,358	2,820,598
Cash and cash equivalents, beginning of year	48,506,593	45,685,995
Cash and cash equivalents, end of year	<u>\$ 58,408,951</u>	<u>\$ 48,506,593</u>
Reconciliation of income from operations to net cash provided by operating activities:		
Income from operations	\$ 7,637,008	\$ 3,351,162
Adjustments to reconcile income from operations to net cash provided by operating activities:		
Non-cash items expensed to operations and maintenance	-	49,606
Cash received for operating activity included in other income	51,283	(514,044)
Depreciation	4,637,409	4,596,764
Increase (decrease) in cash from:		
Unbilled sales	(326,326)	(92,191)
Accounts receivable	207,193	839,893
Prepaid expenses and other current assets	22,733	11,567
Accounts payable	274,457	(43,871)
Accrued liabilities	9,487	(13,302)
Accrued payroll and taxes	561,651	868,751
Net pension liability	679,057	1,890,912
Net OPEB liability	1,308,913	-
Net cash provided by operating activities	<u>\$ 15,062,865</u>	<u>\$ 10,945,247</u>
Non-cash investing activities		
Decrease in fair value of investments	\$ (383,171)	\$ (369,015)

See accompanying notes.

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY
NOTES TO FINANCIAL STATEMENTS

A. ORGANIZATION AND OPERATIONS

The New Jersey Water Supply Authority (the “Authority”), a component unit of the State of New Jersey (the “State”), consisting of the Spruce Run/Round Valley Reservoirs Complex, the Delaware and Raritan Canal Transmission Complex (the “Raritan Basin System”) and the Manasquan Reservoir Water Supply System (the “Manasquan System”), is a public body, corporate and politic, constituted as an instrumentality of the State, exercising public and essential governmental functions. The Authority was created by the New Jersey Water Supply Authority Act (the “Act”) on October 7, 1981, and in connection with the Act, all water supply facilities owned or operated by the State (*i.e.*, *Raritan Basin System*) were transferred or leased to the Authority. The Act empowers the Authority to acquire, finance, construct and operate water systems and issue bonds. Members of the Authority consist of the Commissioner of the New Jersey Department of Environmental Protection (“NJDEP”), ex officio member and six public members appointed by the Governor upon the advice and consent of the New Jersey Senate. The public members represent the agricultural community, industrial water users, residential water users, private watershed associations, public finance and water resource management and distribution. The Authority prepares an annual budget that is used to establish rates and as a management tool but the budget does not constitute a legal budget or establish spending limitations.

The Authority does not have component units that should be included within its financial statements.

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting

The Authority is a component unit of the State of New Jersey and is included in their general purpose financial statements.

The accompanying basic financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America as prescribed by the Governmental Accounting Standards Board (“GASB”).

In its accounting and financial reporting, the Authority follows the pronouncements of the GASB and other entities that promulgate accounting principles. GASB Statement 76, *The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments*, establishes the order of priority of pronouncements and other sources of accounting and financial reporting guidance that a governmental entity should apply. Per the Statement, the sources of authoritative generally accepted accounting principles (“GAAP”) are categorized in descending order of authority as follows: GASB Statements and Interpretations, GASB Technical Bulletins, GASB Implementation Guides, and literature of the American Institute of Certified Public Accountants (“AICPA”) cleared by the GASB. Authoritative GAAP is incorporated periodically into the Codification of Governmental Accounting and Financial Reporting Standards (Codification), and when presented in the Codification, it retains its authoritative status. If the accounting treatment for a transaction or other event is not specified within a source of authoritative GAAP described above, a governmental entity should first

**NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY**

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Basis of Accounting (CONTINUED)

consider accounting principles for similar transactions or other events within a source of authoritative GAAP described above and then may consider nonauthoritative accounting literature from other sources. These include GASB Concepts Statements; pronouncements and other Statements, pronouncements and other literature of the Financial Accounting Standards Board ("FASB"), Federal Accounting Standards Advisory Board, International Public Sector Accounting Standards Board, and International Accounting Standards Board, and AICPA literature not cleared by the GASB; practices that are widely recognized and prevalent in state and local government; literature of other professional associations or regulatory agencies; and accounting textbooks, handbooks and articles.

The Authority derives most of its revenue from water user charges and is considered to be an enterprise fund; accordingly, the Authority presents its financial statements on the accrual basis of accounting. In addition, the Authority has established certain restricted "funds or accounts" as directed by internal resolution and bond indentures.

Revenue

Charges for wholesale water usage are established to provide revenue sufficient for services, essential repairs and improvements to the utility plant, and repayment of debt service on certain long-term obligations used for plant construction. Sales are recognized as revenue when water is made available to customers, and the customers are billed in the following month or quarter.

The Authority distinguishes operating revenue and expenses from non-operating items. Operating revenue and expenses result from the sale of water to customers. Operating expenses include costs of providing water, administrative expenses and depreciation on capital assets. All revenue and expenses not meeting this definition are reported as non-operating revenue and expenses.

Capital Assets

Capital assets are stated at original cost and consist primarily of amounts expended to license, construct, acquire, complete and place into operation the projects of the Authority. Capital assets are defined by the Authority as assets with an initial individual cost of more than \$1,000 and an estimated useful life in excess of three years. Such expenditures include labor, materials, services and indirect costs. Normal maintenance and repair costs are charged to operations and maintenance expense. Improvements and replacements are capitalized. Interest earned on long-term debt proceeds used for capital asset construction and temporarily invested during the construction period is netted against interest cost. The excess, if any, is capitalized to construction work in progress, and the portion related to completed projects is expensed. The cost of capital assets retired, net of any gain or loss on the disposal of such capital assets, is offset to accumulated depreciation. The Authority also holds several restricted easements for utility access, conservation and water rights. These easements are recorded at the lower of cost or fair market value upon acquisition.

**NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY**

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Depreciation

Capital assets are depreciated on the straight-line basis over the estimated useful lives of the various classes of plant, as follows:

Dams	100 years
Buildings, structures and improvements	15-40 years
D&R canal dredging	20 years
Machinery and equipment	3-10 years

Cash and Cash Equivalents

For purposes of the statements of cash flows, the Authority considers short-term investments that have original maturities of ninety days or less to be cash equivalents.

Investments

Short-term investments and restricted investments used for construction and payment of interest consist of money market funds and U.S. Government-backed securities with various interest rates. Restricted investments are restricted under the terms of the Authority's bond indentures for the payment of debt service. All investments are carried at fair value, in accordance with GASB Statement No. 31, *Accounting and Financial Reporting for Certain Investments and for External Investment Pools* and GASB Statement No. 72, *Fair Value Measurement and Application*.

Accounts Receivable

The Authority considers most of its accounts receivable to be collectible; accordingly, the change in net position is charged with an allowance for estimated uncollectible accounts based on past experience and an analysis of current accounts receivable collectability. Accounts deemed uncollectible are charged to the allowance in the year they are deemed uncollectible.

During fiscal year 2018, two customers accounted for approximately 84% of total Raritan Basin System accounts receivable and five customers accounted for approximately 90% of total Manasquan System accounts receivable. During fiscal year 2017, two customers accounted for approximately 84% of total Raritan Basin System accounts receivable and five customers accounted for approximately 89% of total Manasquan System accounts receivable.

Compensated Absences

All full-time employees accumulate vacation benefits in varying annual amounts up to a maximum allowable accumulation of two years' benefit. Unused sick leave benefits are earned by all full-time employees at a rate of 15 days per year and may be accumulated without limit. In the event of termination, an employee is reimbursed for all accumulated vacation days. Unused sick leave benefits do not vest but are payable only upon retirement up to a maximum of \$15,000. A liability is accrued in the financial statements when incurred.

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Income Taxes

The Authority is exempt from federal income taxes under the Internal Revenue Code, Section 115, and from state income taxes under N.J.S.A. 27:25-16, and accordingly, no provision is recorded for federal or state income taxes.

Net Position

Net position represents the difference between assets and liabilities and is classified into three categories:

- *Net Investment in Capital Assets* – This represents capital assets, net of accumulated depreciation, less the outstanding balances of any bonds, notes, or other borrowings that are attributable to the acquisition construction or improvement of those assets.
- *Restricted Net Position (debt service)* – This represents the net position that is not accessible for general use because its use is subject to restrictions enforceable by third parties. When both restricted and unrestricted resources are available for use, it is the Authority's policy to use restricted resources first and then unrestricted resources, as they are needed.
- *Unrestricted Net Position* – This represents the net position that is available for general use.

Deferred Inflows and Outflows of Resources

In addition to assets and liabilities, the statements of net position report separate sections of deferred outflows of resources and deferred inflows of resources. Deferred outflows of resources represent a consumption of net position that applies to a future period which will not be recognized as an outflow of resources until that time. Deferred inflows of resources represent an acquisition of net position that applies to a future period which will not be recognized as an inflow of resources until that time.

Deferred Inflows of Resources – Cost Recovery

The Authority's cost recovery rate model used to establish rates, fees and charges includes an amount for debt principal repayment (but not for depreciation on the related debt financed assets) and also includes vacation amounts paid. In accordance with GASB No. 62, the Authority has deferred the excess of current depreciation on assets financed with debt proceeds over the costs for debt principal repayment and the excess of vacation expense over vacation paid, and accrued sick pay, which are being classified as deferred inflows of resources. The deferred inflows will be recovered through future revenue in accordance with the rate model. The deferred amounts for the years ended June 30, 2018 and 2017, were determined as follows:

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Deferred Inflows and Outflows of Resources (Continued)

Raritan Basin System	2018	2017
Cost excluded from rate model:		
Depreciation of debt-financed capital assets recoverable from rate payers	\$ 835,209	\$ 835,209
Excess vacation expense over vacation paid	39,416	(19,963)
Accrued sick pay	67,255	(391)
	<u>941,880</u>	<u>814,855</u>
Cost included in rate model:		
Debt principal repayment	-	-
	<u>941,880</u>	<u>814,855</u>
Manasquan System		
Cost excluded from rate model:		
Depreciation of debt-financed capital assets recoverable from rate payers	\$ 1,540,854	\$ 1,540,854
Excess vacation expense over vacation paid	1,633	(1,846)
Accrued sick pay	(8,437)	3,638
	<u>1,534,050</u>	<u>1,542,646</u>
Cost included in rate model:		
Debt principal repayment	(2,805,000)	(230,000)
	<u>(1,270,950)</u>	<u>1,312,646</u>
Total Raritan Basin and Manasquan	(329,070)	2,127,501
Balance, beginning of year	896,366	(1,231,135)
Balance, end of year	<u>\$ 567,296</u>	<u>\$ 896,366</u>

As shown in the statements of revenue, expenses and changes in net position for the years ended June 30, 2018 and 2017, respectively, deferred inflow of resources debit of \$573,760 and a credit balance of \$2,502,694 includes a debit balance \$144,823, and a credit balance of \$356,631 of Manasquan Water Treatment Plant deferred revenue, which is not part of the rate model, and does not include a credit balance of \$99,867 and a debit balance of \$18,562 of accrued vacation and sick pay.

Deferred Inflows/Outflow of Resource – Debt Refunding

Deferred charges for debt refunding result from the difference between the net carrying amount of refunded bonds and the amount deposited to escrow to defease the bonds. In accordance with GASB 23, the Authority has deferred the difference between the reacquisition price and the net carrying amount of the Manasquan Reservoir Water Supply System Revenue Bonds, Series 2005. The deferred amount is reported as a deferred inflow of resources and amortized as a component of interest expense over the remaining life of the Manasquan Reservoir Water Supply System Refunding Bonds, Series 2016.

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Deferred Inflows and Outflows of Resources (Continued)

Deferred Inflows/Outflow of Resources – Pensions & Other Postretirement Benefits (OPEB)

Deferred charges for defined benefit plans result from the difference between expected (actuarial) and actual experience, changes in actuarial assumptions, net difference between projected (actuarial) and actual earnings on plan investments, changes in the State's proportion of expenses and liabilities to the plans as a whole, differences between the Authority's plan contributions and its proportionate share of contributions, and the Authority's pension contributions subsequent to the pension valuation measurement date.

Accounting for Southeast Monmouth Municipal Utilities Authority Agreement

The Authority operates and maintains a Water Treatment Plant/Transmission System for the Southeast Monmouth Municipal Utilities Authority ("SMMUA"). The SMMUA is charged for budgeted operating expenses expected to be incurred by the Authority during the SMMUA's fiscal year (January 1 through December 31).

Because of the difference resulting from billing the SMMUA for budgeted expenses versus actual expenses appearing in the financial statements, the Authority includes unearned costs (actual costs exceeding SMMUA billings) or unearned revenue (SMMUA billings exceeding actual costs) in its statements of net position. These excess costs or billings will be recovered or recognized in future periods. As of June 30, 2018 and 2017, unearned revenue amounting to \$1,835,787 and \$1,690,964, respectively, was determined as follows:

	2018	2017
Reimbursement of operating expenses	\$ 2,655,015	\$ 2,647,704
Operating expenses	2,510,192	3,004,335
Unearned revenue	144,823	(356,631)
Balance, beginning of year	1,690,964	2,047,595
Balance, end of year	<u>\$ 1,835,787</u>	<u>\$ 1,690,964</u>

In previous years, the Authority received additional funds that are restricted for use by the SMMUA for costs associated in operating the Water Treatment Plant. As of June 30, 2018 and 2017, the amount included in unearned revenue was \$339,109 and \$474,619, respectively.

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Accounting for Watershed Protection Program

For the fiscal years ended June 30, 2018 and 2017, the Authority received \$186,793 and \$79,187, respectively, from the federal and/or state environmental agencies for the costs associated with various watershed protection studies of the Raritan Basin System. These funds are restricted to uses specifically identified in grant agreements between the Authority and these agencies and will be recognized as revenue as the related costs are incurred. Eligible project expenses include, but are not limited to, the cost of mapping out streams and other water sources and studying and implementing best land use practices to improve water quality. As of June 30, 2018, all the funds received had been recognized as revenue.

C. CAPITAL ASSETS

Capital assets activity for the years ended June 30, 2018 and 2017, was as follows:

	2018 Beginning Balance	Additions	Retirements	2018 Ending Balance
Capital assets not being depreciated:				
Land	\$ 26,444,952	\$ -	\$ -	\$ 26,444,952
Construction work in progress	9,326,879	9,265,054	(2,461,517)	16,130,416
Total capital assets not being depreciated	35,771,831	9,265,054	(2,461,517)	42,575,368
Capital assets being depreciated:				
Dams	77,369,160	-	-	77,369,160
Building, structures and improvements	140,094,325	2,482,861	(133,908)	142,443,278
D & R canal dredging	21,160,274	-	-	21,160,274
Machinery and equipment	6,443,907	357,145	(161,467)	6,639,585
Total capital assets being depreciated	245,067,666	2,840,006	(295,375)	247,612,297
Less accumulated depreciation for:				
Dams	(29,962,140)	(797,995)	-	(30,760,135)
Building, structures and improvements	(85,217,782)	(3,496,353)	98,327	(88,615,808)
D & R canal dredging	(21,160,273)	-	-	(21,160,273)
Machinery and equipment	(5,032,574)	(343,061)	161,467	(5,214,168)
Total accumulated depreciation	(141,372,769)	(4,637,409)	259,794	(145,750,384)
Total capital assets, being depreciated, net	103,694,897	(1,797,403)	(35,581)	101,861,913
Total capital assets	\$ 139,466,728	\$ 7,467,651	\$ (2,497,098)	\$ 144,437,281

NEW JERSEY WATER SUPPLY AUTHORITY
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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

C. CAPITAL ASSETS (CONTINUED)

	2017 Beginning Balance	Additions	Retirements	2017 Ending Balance
Capital assets not being depreciated:				
Land	\$ 26,444,952	\$ -	\$ -	\$ 26,444,952
Construction work in progress	12,713,786	3,212,708	(6,599,615)	9,326,879
Total capital assets not being depreciated	39,158,738	3,212,708	(6,599,615)	35,771,831
Capital assets being depreciated:				
Dams	77,369,160	-	-	77,369,160
Building, structures and improvements	133,475,474	6,621,815	(2,964)	140,094,325
D & R canal dredging	21,160,274	-	-	21,160,274
Machinery and equipment	6,391,874	452,986	(400,953)	6,443,907
Total capital assets being depreciated	238,396,782	7,074,801	(403,917)	245,067,666
Less accumulated depreciation for:				
Dams	(29,164,145)	(797,995)	-	(29,962,140)
Building, structures and improvements	(81,761,134)	(3,459,612)	2,964	(85,217,782)
D & R canal dredging	(21,160,273)	-	-	(21,160,273)
Machinery and equipment	(5,087,883)	(339,157)	394,466	(5,032,574)
Total accumulated depreciation	(137,173,435)	(4,596,764)	397,430	(141,372,769)
Total capital assets, being depreciated, net	101,223,347	2,478,037	(6,487)	103,694,897
Total net investment in capital assets	\$ 140,382,085	\$ 5,690,745	\$ (6,606,102)	\$ 139,466,728

D. CASH, CASH EQUIVALENTS, AND INVESTMENTS

New Jersey statutes permit the deposit of public funds in the State of New Jersey Cash Management Fund ("NJCMF") or in institutions located in New Jersey that are insured by the Federal Deposit Insurance Corporation (the "FDIC") or by any other agencies of the United States that insure deposits. All funds of the Authority may be invested in, obligations of, or guaranteed by, the U.S. Government.

The Authority's bond resolutions limit the investment of restricted assets to obligations of the U.S. Government or its agencies, investments in certain certificates of deposit of commercial banks that are members of the Federal Reserve System, investments in the NJCMF, and direct and general obligations of any state that meets the minimum requirements of the resolution.

1. Cash

As of June 30, 2018 and 2017, the Authority's bank balance was \$6,635,034 and \$5,490,531, respectively, of which \$250,000 was covered through the FDIC. The remaining balance of \$6,385,034 and \$5,240,531 as of June 30, 2018 and 2017, respectively, was collateralized, and the cash balance per the statements of net position is shown exclusive of outstanding checks totaling \$99,740 and \$102,349, respectively. The statement of net position amount includes petty cash totaling \$300 as of June 30, 2018 and 2017, respectively.

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

D. CASH, CASH EQUIVALENTS, AND INVESTMENTS (CONTINUED)

2. Custodial Credit Risk – Deposits

Custodial credit risk is the risk that, in the event of a bank failure, the Authority's deposits may not be returned. The Authority does not have a deposit policy for custodial credit risk. The Authority's bank balance of \$6,635,034 and \$5,490,531 as of June 30, 2018 and 2017, respectively, was exposed to custodial credit risk as follows:

	<u>2018</u>	<u>2017</u>
Uninsured and uncollateralized	\$ <u>-</u>	\$ <u>-</u>

3. Investments and Cash Equivalents

The Authority does not have a policy to limit interest rate risk; however, its practice is to hold investments to maturity.

The Authority categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

As of June 30, 2018, the Authority had the following recurring fair value measurements using quoted market prices for U.S. Treasuries (Level 1 inputs) and using current sale prices or sale prices of comparable securities for New Jersey General Obligation Bonds (Level 2 inputs) for investments and cash equivalents, and maturities:

Investment and Cash Equivalent Type	Valuation Inputs Level	Fair Value	Investment Maturities (In Years)	
			Less than 1	1-5
U.S. Treasuries	Level 1	\$ 57,151,951	\$ 57,151,951	\$ -
NJ G/O Bonds	Level 2	10,882,875	4,471,756	6,411,119
Total		\$ 68,034,826	\$ 61,623,707	\$ 6,411,119

As of June 30, 2017, the Authority had the following recurring fair value measurements using quoted market prices for U.S. Treasuries (Level 1 inputs) and using current sale prices or sale prices of comparable securities for New Jersey General Obligation Bonds (Level 2 inputs) for investments and cash equivalents, and maturities:

NEW JERSEY WATER SUPPLY AUTHORITY
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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

D. CASH, CASH EQUIVALENTS, AND INVESTMENTS (CONTINUED)

3. Investments and Cash Equivalents (Continued)

Investment and Cash Equivalent Type	Valuation Inputs Level	Fair Value	Investment Maturities (In Years)	
			Less than 1	1-5
U.S. Treasuries	Level 1	\$ 48,447,596	\$ 48,447,596	\$ -
NJ G/O Bonds	Level 2	11,274,633	1,039,588	10,235,045
Total		\$ 59,722,229	\$ 49,487,184	\$ 10,235,045

4. Credit and Custodial Credit Risk

In order to limit exposure to credit risk, the Authority follows the investment policies set forth by the NJCMF. These policies allow investment in securities that achieve a certain rating from the three major ratings organizations as determined annually by the governing board of the NJCMF, as well as limiting investments to certain types of marketable securities.

U.S. Treasury notes are explicitly guaranteed by the U.S. government and are not subject to credit risk or custodial credit risk.

The Authority entered into an agreement with PNC Bank and TD Bank to collateralize all deposits held at a market rate equal to 102% of the daily combined total of all deposits. As of June 30, 2018, all deposits were collateralized.

5. Investment Income

The following comprises investment income for the years ended June 30, 2018 and 2017, respectively:

	2018	2017
Interest earned on bank accounts and certificates of deposit	\$ 325,846	\$ (185,717)
Interest earned on securities	547,088	529,544
Decrease in fair value of securities	(383,171)	(369,015)
	\$ 489,763	\$ (25,188)

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

E. BONDS, NOTES AND LOANS PAYABLE

Manasquan System

1. Notes Due to State of New Jersey

The Authority has a contractual obligation to repay the following debt:

The \$63,600,000 of Manasquan Reservoir Water Supply System State Loan Notes (the "State Loan Notes") issued June 3, 1987, pursuant to the terms of the State Loan Agreement between the Authority and the State of New Jersey (the "State Loan Agreement"), from monies authorized by the 1981 bond appropriation of \$72,000,000 for construction of the Manasquan System and the \$7,416,000 of Interim Advance Notes issued September 12, 1988, from monies made available from the General Fund of the State to finance completion costs of the Manasquan System. The State Loan Notes and the Completion Loan Notes bear interest at 5.93% and 6.24%, respectively, and are collateralized by the property and revenues of the Manasquan System.

In accordance with the terms of the State Loan Agreement, the State Loan Notes are classified as either Current Debt Service Portion Notes ("Current Notes") or Deferred Debt Service Portion Notes ("Deferred Notes"). Principal of the Deferred Notes will be discharged solely by exchange for Current Notes or by the expiration of a period of forty years from the date of their issuance, which was June 3, 1987. The Deferred Notes must be exchanged for Current Notes on a pro rata basis to the extent that the Authority enters into additional long-term contracts to sell water from the Manasquan System on an annual basis. Such Current Notes are payable over a thirty-year period commencing from such date as is defined in the State Loan Agreement.

Interest on the Deferred Notes accreted as principal through July 31, 1993, and is not payable until they have been exchanged for Current Notes. The interest that accreted as principal through July 31, 1990, accrued interest; however, the interest that accreted for the period from August 1, 1990 through July 31, 1993, did not accrue interest. The accretion of interest to the principal amount for the Current Notes and the Deferred Notes is \$25,563,184 at June 30, 2018 and 2017.

On May 12, 2016, the Authority repaid the State of New Jersey \$78,651.22 for principal and all accrued interest on outstanding Current State Loan Notes and Completion Notes. At June 30, 2018 and 2017, the State Loan Notes and Completion Loan Notes are summarized as follows:

State Loan Notes	2018	2017
Current Notes	\$ -	\$ -
Deferred Notes	30,365,115	30,365,115
Completion Loan Notes		
Current Notes	\$ -	\$ -
Deferred Notes	3,201,777	3,201,777
	<u>\$ 33,566,892</u>	<u>\$ 33,566,892</u>

NEW JERSEY WATER SUPPLY AUTHORITY
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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

E. BONDS, NOTES AND LOANS PAYABLE (CONTINUED)

Manasquan System (Continued)

2. Manasquan Reservoir Water Supply System Revenue Bonds, Series 2005

On August 5, 2005, the Authority issued \$47,535,000 in Manasquan Reservoir Water Supply System Revenue Bonds, Series 2005. The proceeds, together with other monies on deposit, were used to prepay \$49,293,438 in Current Manasquan State Loan Notes and Completion Loan Notes, the proceeds of which were used to construct the Manasquan Water Supply System. The Revenue Bonds, Series 2005, carried a bond yield of 3.95%, and were scheduled to mature in incremental annual principal amounts through 2031.

The property, and 100% of the revenue generated by the Debt Service Component of the Rate for both initial system customers and delayed water purchase customers of the Manasquan System, was pledged as collateral for the 2005 Bonds. The Debt Service Component of the Rate represents 120% of the principal and interest requirements. For the years ended June 30, 2018 and 2017, the debt service component of the rate generated \$4,201,848 and \$4,733,869, respectively.

The Revenue Bonds, Series 2005, had a principal balance of \$26,105,000 at June 30, 2015. Those bonds maturing on or after August 1, 2016, were subject to redemption prior to their stated maturity dates at the option of the Authority. The last principal payment of \$2,940,000 was made on August 1, 2015. The remaining 2005 Bonds were redeemed on June 15, 2016, for \$23,596,126 including accrued interest.

For the years ended June 30, 2018 and 2017, interest expense on the 2005 Bonds amounted to \$0 and \$0, respectively, and the related interest income earned on the restricted investments amounted to \$0 and \$0, respectively.

3. Manasquan Reservoir Water Supply System Refunding Bonds, Series 2016

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 in the amount of \$6,340,964, 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 Loan Notes.

The Refunding Bonds, Series 2016, have a principal balance of \$14,425,000 at June 30, 2018, carry a bond yield of 1.59%, and mature in incremental annual principal amounts through 2031. Principal maturities for the year ending June 30, 2019, are \$2,880,000.

The property, and 100% of the revenue generated by the Debt Service Component of the Rate for both initial system customers and delayed water purchase customers of the Manasquan System, was pledged as collateral for the 2016 Bonds. The Debt Service Component of the Rate represents 120% of the principal and interest requirements. The pledged revenue will be unavailable for other purposes until August 1, 2031.

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

E. BONDS, NOTES AND LOANS PAYABLE (CONTINUED)

Manasquan System (Continued)

3. Manasquan Reservoir Water Supply System Refunding Bonds, Series 2016 (Continued)

For the years ended June 30, 2018 and 2017, the Debt Service Component of the Rate generated \$4,201,848 and \$4,733,869, respectively.

For the years ended June 30, 2018 and 2017, interest expense on the 2016 Bonds amounted to \$626,497 and \$617,736, respectively, and the related interest income earned on the restricted investments account amounted to \$0 and \$0, respectively.

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 received on the refunding bonds was \$1,821,414, is reported with bonds payable on the statements of net position and is being charged to operations using a method that approximates the effective interest method over the shorter of the remaining life of the old debt or the life of the new debt. Although the refunding resulted in an accounting gain of \$823,712, it was performed to reduce debt service by approximately \$5,269,268 and resulted in an economic gain (difference between the present values of the old and new debt service payments) of \$2,999,861. The accounting gain, or deferred gain on the refunding, is reported as a deferred inflow of resources.

4. New Jersey Environmental Infrastructure Financing Program ("NJEIFP")

The New Jersey Water Supply Authority, a Component Unit of the State of New Jersey, obtained a loan from the New Jersey Environmental Infrastructure Trust ("the Trust") for the construction of a permanent structure over the Manasquan Intake Pump Station. Under the NJEIFP, the borrowers benefit from a loan formula under which participants borrow a percentage of cost from the State Revolving Fund maintained by the NJDEP at zero interest and the remaining percentage from the Trust at the same interest rate the Trust pays on its bonds. Under the State's Smart Growth Initiative, the interest rate is equivalent to 25 percent of the lowest available rate. Each NJEIFP loan carries a 20-year life. Property and revenue of the Manasquan Reservoir System are pledged as collateral for the loans.

The following table summarizes the NJEIFP loan outstanding for the Manasquan Reservoir System, as of June 30, 2018:

NJEIFP Series	Date of Issuance	State Revolving Fund Original Principal	Percent	Trust Original Principal	Percent	Blended Interest Rate	Outstanding Principal	Maturity
2012B	5/3/2012	\$2,312,250	76%	\$715,000	24%	0.80%	\$2,139,469	8/1/2031

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

E. BONDS, NOTES AND LOANS PAYABLE (CONTINUED)

Raritan System

5. New Jersey Environmental Infrastructure Financing Program ("NJEIFP")

The New Jersey Water Supply Authority, a Component Unit of the State of New Jersey, obtained loans from the New Jersey Environmental Infrastructure Trust (the "Trust") for the acquisition of source water watershed properties critical to the Raritan Basin System. Under the NJEIFP, the borrowers benefit from a loan formula under which participants borrow a percentage of the cost from the State Revolving Fund maintained by the NJDEP at zero interest and the remaining percentage from the Trust at the same interest rate the Trust pays on its bonds. Under the State's Smart Growth Initiative, the interest rate is equivalent to 25 percent of the lowest available rate. Each NJEIFP loan carries a 20-year life, and property and revenue of the Raritan Basin System are pledged as collateral for the loans.

In fiscal year 2018, the Authority borrowed \$49,548,569 from the New Jersey Infrastructure Bank (NJIB - formerly known as the New Jersey Environmental Infrastructure Trust) through an interim note to finance its Raritan Basin System canal dredging project. Upon substantial completion of the project, it is anticipated that the interim loan will convert to permanent long-term financing. Terms of the long-term financing are expected to be similar to those terms of existing loans with the NJEIFP.

The following table summarizes the NJEIFP/NJIB loans outstanding for the Raritan Basin System, as of June 30, 2018:

NJEIFP Series	Date of Issuance	State Revolving Fund Original Principal	Percent	Trust Original Principal	Percent	Blended Interest Rate	Outstanding Principal	Maturity
2003A	11/6/2003	\$627,019	75%	\$235,000	25%	1.19%	\$282,537	8/1/2023
2004A	11/4/2004	1,030,000	75%	350,000	25%	1.31%	526,314	8/1/2024
2005A	11/10/2005	2,940,974	75%	1,050,000	25%	1.25%	1,255,628	8/1/2025
2006A	11/9/2006	2,099,363	75%	745,000	25%	1.26%	1,334,242	8/1/2026
2007A	11/8/2007	1,740,563	75%	620,000	25%	1.06%	1,268,788	8/1/2027
2008A	11/6/2008	1,152,000	64%	660,000	36%	1.74%	1,102,131	8/1/2028
2010A	3/10/2010	300,493	51%	290,000	49%	1.69%	366,686	8/1/2029
2010B	12/2/2010	1,064,338	52%	990,000	48%	1.87%	1,454,548	8/1/2030
2012A	5/3/2012	1,501,455	76%	465,000	24%	0.65%	1,423,384	8/1/2031
CFP-18-1	2/15/2018	36,793,492	74%	12,755,077	26%	tbd	49,548,569	tbd
Total		\$49,249,697		\$18,160,077			\$58,562,827	

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

E. BONDS, NOTES AND LOANS PAYABLE (CONTINUED)

The following table summarizes the changes in bonds, notes and loans payable between fiscal years 2018, 2017 and 2016:

	Fiscal Year 2017	Less Payments, Net of Amortization	Debt Issued	Fiscal Year 2018	Due Within One Year
Bonds payable	\$ 18,802,335	\$ 3,054,078	\$ -	\$ 15,748,257	\$ 2,880,000
Notes payable	33,566,892	-	-	33,566,892	-
Loans payable	12,318,018	1,054,970	49,548,569	60,811,617	1,051,252
Total	\$ 64,687,245	\$ 4,109,048	\$ 49,548,569	\$ 110,126,766	\$ 3,931,252

	Fiscal Year 2016	Payments, Net of Amortization	Debt Issued	Fiscal Year 2017	Due Within One Year
Bonds payable	\$ 19,281,414	\$ 479,079	\$ -	\$ 18,802,335	\$ 2,805,000
Notes payable	33,566,892	-	-	33,566,892	-
Loans payable	13,382,948	1,064,931	-	12,318,018	1,046,691
Total	\$ 66,231,254	\$ 1,544,010	\$ -	\$ 64,687,245	\$ 3,851,691

NEW JERSEY WATER SUPPLY AUTHORITY
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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

E. BONDS, NOTES AND LOANS PAYABLE (CONTINUED)

Principal and interest on aggregate maturities and bonds, notes and loans, net of unamortized bond premium, are as follows:

Year Ending June 30,	Raritan Basin System	Manasquan Reservoir System	Notes Payable Manasquan System	Manasquan System Revenue Bonds Series 2016	Totals
2019	\$ 1,056,125	\$ 174,172	\$ -	\$ 3,443,937	\$ 4,674,234
2020	1,052,571	172,822	-	3,445,962	4,671,355
2021	1,069,652	176,197	-	3,446,338	4,692,187
2022	1,043,168	174,447	-	582,213	1,799,828
2023	1,030,125	172,697	-	581,963	1,784,785
2024-2028	3,702,024	868,835	-	2,888,362	7,459,221
2029-2033	969,183	606,949	-	2,279,794	3,855,926
2034-2038	-	-	-	-	-
TBD	49,548,569	-	-	-	49,548,569
Deferred Portion	-	-	33,566,892	-	33,566,892
Subtotal	59,471,417	2,346,119	33,566,892	16,668,569	112,052,997
Less amounts representing interest	908,590	206,650	-	2,243,569	3,358,809
Plus unamortized bond premium	70,739	38,582	-	1,323,257	1,432,578
Subtotal	58,633,566	2,178,051	33,566,892	15,748,257	110,126,766
Less:					
Current principal portion	903,680	147,572	-	2,880,000	3,931,252
Total	\$ 57,729,886	\$ 2,030,479	\$ 33,566,892	\$ 12,868,257	\$ 106,195,514

NEW JERSEY WATER SUPPLY AUTHORITY
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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

F. EMPLOYEE BENEFITS

Pension and Retirement Plans

Full-time employees of the Authority are covered by the Public Employees' Retirement System of the State of New Jersey ("PERS"). PERS is administered by the State of New Jersey, Division of Pensions and Benefits ("Division"). The Authority has adopted GASB Statement No. 68, *Accounting and Financial Reporting for Pensions* and Statement No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date*. Statements No. 68 and 71 require the Authority to report its share of the defined benefit pension liability and expense, as well as the related deferred outflows of resources and deferred inflows of resources, allocated to it by the PERS. For additional information about PERS, please refer to the Division's Comprehensive Annual Financial Report (CAFR) which can be found at <https://www.nj.gov/treasury/pensions/documents/financial/gasb/gasb68-pers18.pdf>.

Following is the total of the local portion of the System's pension liabilities, pension assets, deferred outflows of resources and deferred inflows of resources related to pensions and the pension expense and expenditures for the fiscal year ended June 30, 2018.

Net Pension Liabilities	\$23,038,776
Deferred Outflow of Resources	6,905,770
Deferred Inflow of Resources	5,345,883
Pension Expense	1,620,169
Contributions Made	916,857

Plan Description and Benefits

PERS is a cost-sharing, multiple-employer defined benefit pension plan. PERS provides retirement and disability benefits, annual cost of living adjustments, and benefits to plan members and their beneficiaries. As a condition of employment, all Authority full-time employees are required to be members of PERS. PERS members can apply for a service retirement at age 60 if enrolled before November 2, 2008 (Tier 1 or Tier 2), or at age 62 if enrolled on or after November 2, 2008, but before June 28, 2011 (Tier 3 or Tier 4), or at age 65 if enrolled on or after June 28, 2011 (Tier 5), regardless of the amount of service credit earned.

Tier 1, 2 or 3: Annual Benefit = Years of Service Credit, divided by 55, times Final Average Salary (average salary of the last three years of credited service or the highest three fiscal years of credited service, whichever provides the higher benefit). Tier 4 or Tier 5: Annual Benefit = Years of Service Credit, divided by 60, times Final Average Salary (average salary of the last five years of credited service or the highest five fiscal years of credited service, whichever provides the higher benefit). Pension benefits fully vest on reaching 10 years of service. Vested employees who were enrolled prior to July 1, 2007, and who have established 25 years or more of creditable service may retire without penalty at or after age 55 and receive full retirement benefits. PERS also provides death and disability benefits. Benefits are established by State statute.

NEW JERSEY WATER SUPPLY AUTHORITY
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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

F. EMPLOYEE BENEFITS (CONTINUED)

Contributions

Employee contribution rates to PERS governed by P.L. 2011, C. 78, effective June 28, 2011, were increased from 5.5% of salary to 6.5% of salary, and a phase-in to 7.5% of salary over a seven-year period. Covered Authority employees are required by PERS to contribute 7.5% of their salaries. State statute requires the Authority to contribute an actuarially determined rate which includes the normal cost and the unfunded accrued liability. The amount of the Authority's contribution is certified each year by PERS on the recommendation of the actuary, who makes an annual actuarial valuation. The valuation is based on a determination of the financial condition of the retirement system. It includes the computation of the present dollar value of benefits payable to former and present members and the present dollar value of future employer and employee contributions, giving effect to mortality among active and retired members and also to the rates of disability, retirement, withdrawal, former service, salary and interest. In accordance with State statute, the long-term expected rate of return on plan investments is determined by the State Treasurer, after consultation with the Directors of the Division of Investments and Division of Pensions and Benefits, the board of trustees and the actuaries. Specific information on actuarial assumptions and rates of return can be found at <https://www.nj.gov/treasury/pensions/documents/financial/gasb/gasb68-pers18.pdf>.

The payroll for employees covered by PERS for the years ended June 30, 2018, 2017 and 2016, was \$7,351,319, \$7,002,687, and \$6,949,632, respectively. The Authority's total payroll for the years ended June 30, 2018, 2017, and 2016, was \$7,882,193, \$7,425,938 and \$7,225,026, respectively. The actuarial contribution requirements and the contributions made for the years ended June 30, 2018, 2017 and 2016, were \$1,459,787, \$1,400,670, and \$1,312,670 respectively, which consisted of \$916,857, \$896,476, and \$823,798 from the Authority, and \$542,930, \$504,194 and \$488,872 from employees, respectively. As required by PERS, the employer and employee contributions represented 12.47% and 7.39% of covered payroll for the year ended June 30, 2018, 12.80% and 7.20% of covered payroll for the year ended June 30, 2017, 11.85% and 7.06% of covered payroll for the year ended June 30, 2016, and 11.73% and 6.92% of covered payroll for the year ended June 30, 2015, respectively. Contributions were made in accordance with the actuarial funding requirement.

Assumptions

The total pension liability for the June 30, 2017, measurement date was determined by an actuarial valuation as of July 1, 2016. The pension liability was rolled forward to June 30, 2017. The actuarial valuation used an inflation rate of 2.25%, projected salary increases through 2026 of 1.65% to 4.15% based on age and thereafter 2.65% to 5.15% based on age and an investment rate of return of 7.00%.

The discount rate used to measure the total pension liability was 5.00% and 3.98% as of June 30, 2017 and 2016, respectively. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current member contribution rates and that contributions from employers will be made based on the contribution rate in the most recent fiscal year. The State employer contributed 40% and 30% of the actuarially determined contributions and the local employers contributed 100% of their actuarially determined contributions as of June 30, 2017 and 2016, respectively. Based on those

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

F. EMPLOYEE BENEFITS (CONTINUED)

Assumptions (continued)

assumptions, the plan's fiduciary net position was projected to be available to make future benefit payments of current plan members through 2040. Therefore, the long-term expected rate of return on plan investments was applied to projected benefit payments through 2040, and the municipal bond rate was applied to projected benefit payments after that date in determining the total pension liability. More information on mortality rates and other assumptions and investment policies, can be found at <https://www.nj.gov/treasury/pensions/documents/financial/gasb/gasb68-pers18.pdf>.

The following presents the Authority's proportionate share of the PERS net pension liability calculated using the discount rate of 5.00% and 3.98% as of June 30, 2017 and 2016, respectively, as well as what the PERS net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the assumed rate.

Sensitivity of the Authority's Proportionate Share of the PERS Local Share Net Pension Liability to Changes in the Discount Rate

	At 1% decrease (4.00%)	At current discount rate (5.00%)	At 1% increase (6.00%)
2017	\$28,581,165	\$23,038,776	\$18,421,279

	At 1% decrease (2.98%)	At current discount rate (3.98%)	At 1% increase (4.98%)
2016	\$36,622,842	\$29,886,847	\$24,325,698

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pension

Although the Division administers one cost-sharing multiple-employer defined benefit pension plan, separate (sub) actuarial valuations are prepared to determine the actuarial determine contribution rate by group. Following this method, the measurement of the collective net pension liability, deferred outflows of resources, deferred inflows of resources and pension expense excluding that attributable to employer-paid member contributions are determined separately for each individual employer of the State and local groups.

To facilitate the separate (sub) actuarial valuations, the Division maintains separate accounts to identify additions, deductions, and fiduciary net position applicable to each group. The allocation percentages presented for each group in the schedule of employer allocations are applied to amounts presented in the schedules of pension amount by employer. The allocation

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

F. EMPLOYEE BENEFITS (CONTINUED)

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pension (Continued)

percentages for each group as of June 30, 2017 and 2016, are based on the ratio of each employer's contributions to total employer contributions of the group for the fiscal years ended June 30, 2017 and 2016, respectively.

GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, requires participating employers in PERS to recognize their proportionate share of the collective net pension liability, collected deferred outflows of resources, collective deferred inflows of resources and collective pension expense excluding that attributable to employer-paid member contributions. The employer allocation percentages presented in the PERS schedule of employer allocations and applied to amounts presented in the PERS schedule of pension amounts by employer are based on the ratio of the contributions as an individual employer to total contributions to the PERS during the years ended June 30, 2017 and 2016. The Authority's proportionate share of the collective net pension liability as of June 30, 2017 and 2016, was .0990% and .1009%, respectively.

At June 30, 2018, the amount recognized as the Authority's proportionate share of the PERS net pension liability was \$23,038,776. At June 30, 2017, the amount recognized as the Authority's proportionate share of the PERS net pension liability was \$29,886,847. For the years ended June 30, 2018 and 2017, the Authority recognized PERS pension expense of \$1,782,151 and \$3,875,761, respectively. At June 30, 2018, deferred outflows of resources and deferred inflows of resources related to the PERS pension are as follows:

	June 30, 2018		June 30, 2017	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Net Difference Between Expected and Actual Experience	\$ 542,484	\$ -	\$ 555,805	\$ -
Change of Assumptions	4,641,519	4,624,503	6,190,958	-
Net Difference Between Projected and Actual Investment Earnings	156,878	-	1,139,613	-
Net Change in Proportions	648,032	721,380	829,553	525,390
Total Contributions and Proportionate Share of Contributions after the Measurement Date	916,857	-	896,476	-
	<u>\$ 6,905,770</u>	<u>\$ 5,345,883</u>	<u>\$ 9,612,405</u>	<u>\$ 525,390</u>

NEW JERSEY WATER SUPPLY AUTHORITY
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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

F. EMPLOYEE BENEFITS (CONTINUED)

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pension (Continued)

The Authority recognizes the \$916,857 and \$896,476 reported as deferred outflows of resources resulting from pension contributions after the measurement date, but before the end of the Authority's reporting period, as a reduction of the PERS net pension liability in the subsequent fiscal year. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pension will be recognized in PERS pension expense as follows:

Years Ending June 30,	Amortization
2018	\$ 486,824
2019	734,630
2020	445,148
2021	(592,048)
2022	(431,524)
Total	<u>\$ 643,030</u>

Post-Retirement Health Care Benefits

Other Post-Employment Benefits Other than Pensions

On July 1, 2017, The Authority adopted GASB Statement No. 75, *Accounting and Financial Reporting for the Post-employment Benefits Other Than Pensions*. Statement No. 75 requires participating employers in the Plan to recognize their proportionate share of the collective total OPEB liability, collective deferred outflow of resources, collective deferred inflow of resources, and collective OPEB expense based on the ratio of plan members of an individual employer to the total members of the plan. For additional information about PERS, please refer to the Division's Comprehensive Annual Financial Report which can be found at <https://www.state.nj.us/treasury/pensions/financial-reports.shtml>.

Plan Description and Benefits

The Authority provides post-employment healthcare benefits (including Medicare Part B reimbursement) and prescription drug coverage through participation in the New Jersey State Health Benefits Program. The plan provides medical and prescription drug coverage to retirees and their covered dependents of the employers. Under the provisions of Chapter 88, P.L. 1974 and Chapter 48, P.L. 1999, local government employers electing to provide post-retirement medical coverage to their employees must file a resolution with the Division of Pension and Benefits. Under Chapter 88, local employers elect to provide benefit coverage based on the eligibility rules and regulations promulgated by the State Health Benefits Commission. Chapter 48 allows local employers to establish their own age and service eligibility for employer paid health benefits coverage for retired employees. Under Chapter 48, the employer may assume the cost of post-retirement medical coverage for employees and their dependents who: 1) retired on a disability pension; or 2) retired with 25 or more years of service credit in a State or locally

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

F. EMPLOYEE BENEFITS (CONTINUED)

Post-Retirement Health Care Benefits (Continued)

Other Post-Employment Benefits ("OPEB") Other than Pensions (Continued)

administered retirement system and a period of service of up to 25 years with the employer at the time of retirement as established by the employer; or 3) retired and reached the age of 65 with 25 or more years of service credit in a State or locally administered retirement system and a period of service of up to 25 years with the employer at the time of retirement as established by the employer; or 4) retired and reached age 62 with at least 15 years of service with the employer. Further, the law provides that the employer paid obligations for retiree coverage may be determined by means of a collective negotiations agreement.

Pursuant to Chapter 78, P.L. 2011, future retirees eligible for post-retirement medical coverage who have less than 20 years of creditable service on June 28, 2011 will be required to pay a percentage of the cost of their health care coverage in retirement provided they retire with 25 or more years of pension service credit. The percentage of premium for which the retiree will be responsible will be determined based on the retiree's annual retirement benefit and level of coverage.

Following is the total of the local portion of the Systems OPEB liabilities, deferred outflows of resources and deferred inflows of resources related to OPEB and the OPEB expense and expenditures for the fiscal year ended June 30, 2018.

Total OPEB Liabilities	\$33,469,644
Deferred Outflow of Resources	5,736
Deferred Inflow of Resources	5,589,091
OPEB Expense	2,021,853

Retirees and Employees Covered by the OPEB Plan

At June 30, 2018, the following employees were covered by the benefit terms: 172

Retired employees and/or beneficiaries currently receiving benefit payments: 169

Total OPEB Liability

The Authority's total OPEB liability of \$33,469,644 was measured as of June 30, 2017, and was based on an actuarial valuation as of June 30, 2016. The results of the June 30, 2016, valuation were rolled forward to June 30, 2017. The Authority has fully recognized this liability in the statement of net position as of June 30, 2018, in accordance with GASB 75.

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

F. EMPLOYEE BENEFITS (CONTINUED)

Post-Retirement Health Care Benefits (Continued)

Other Post-Employment Benefits ("OPEB") Other than Pensions (Continued)

Actuarial Methods and Assumptions

The total OPEB liability in the June 30, 2017, actuarial valuation was determined using the following actuarial assumptions and other inputs, applied to all periods included in the measurement:

Inflation rate	2.50%
Salary increases*:	
Through 2026	1.65% to 8.98%
Thereafter	2.65% to 9.98%

*Salary increases are based on the defined benefit plan that the member is enrolled in and his or her age.

Pre-retirement mortality rates were based on the RP-2006 Headcount-Weighted Healthy Employee Male/Female mortality tables with fully generational mortality improvement projections from the central year using the MP-2017 scale. Post-retirement mortality rates were based on the RP-2006 Headcount-Weighted Healthy Annuitant Male/Female mortality table with fully generational improvement projections from the central year using the MP-2017 scale. Disability mortality was based on the RP-2006 Headcount-Weighted Disabled Male/Female mortality table with fully generational improvement projections from the central year using the MP-2017 scale.

Certain actuarial assumptions used in the July 1, 2016, valuation were based on the results of the pension plans' experience studies for which the members are eligible for coverage under this Plan – the Police and Firemen Retirement System (PFRS) and the Public Employees' Retirement System (PERS). The PFRS and PERS experience studies were prepared for the periods July 1, 2010 to June 30, 2013 and July 1, 2011 to June 30, 2014, respectively.

100% of active members are considered to participate in the Plan upon retirement.

Health Care Trend Assumptions

For pre-Medicare preferred provider organization (PPO) and health maintenance organization (HMO) medical benefits, the trend rate is initially 5.9% and decreases to a 5.0% long-term trend rate after nine years. For self-insured post-65 PPO and HMO medical benefits, the trend rate is 4.5%. For prescription drug benefits, the initial trend rate is 10.5% decreasing to a 5.0% long-term trend rate after eight years. For the Medicare Part B reimbursement, the trend rate is 5.0%. The Medicare Advantage trend rate is 4.5% and will continue in all future years.

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

F. EMPLOYEE BENEFITS (CONTINUED)

Post-Retirement Health Care Benefits (Continued)

Other Post-Employment Benefits ("OPEB") Other than Pensions (Continued)

Discount Rate

The discount rate for June 30, 2017 and 2016, was 3.58% and 2.85%, respectively. This represents the municipal bond return rate as chosen by the State. The source is the Bond Buyer Go 20-Bond Municipal Bond Index, which includes tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher. As the long-term rate of return is less than the municipal bond rate, it is not considered in the calculation of the discount rate, rather the discount rate is set at the municipal bond rate.

Sensitivity of Total OPEB Liability to Changes in the Discount Rate

The following presents the Authority's total OPEB liability as of June 30, 2017 and 2016, calculated using the discount rate as disclosed above as well as what the Authority's total OPEB liability would be if it was calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate:

	At 1% decrease (2.58%)	At current discount rate (3.58%)	At 1% increase (4.58%)
2017	<u>\$39,478,443</u>	<u>\$33,469,644</u>	<u>\$28,701,763</u>
	At 1% decrease (1.85%)	At current discount rate (2.85%)	At 1% increase (3.85%)
2016	<u>\$44,984,528</u>	<u>\$37,744,085</u>	<u>\$32,056,272</u>

Sensitivity of Total OPEB Liability to Changes in the Healthcare Trend Rate

The following presents the total OPEB liability as of June 30, 2017 and 2016, respectively, calculated using the healthcare trend rate as disclosed above as well as what the total OPEB liability would be if it was calculated using a healthcare trend rate that is one percentage point lower or one percentage point higher than the current rate:

	At 1% decrease	Healthcare cost trend rate	At 1% increase
2017	<u>\$27,814,252</u>	<u>\$33,469,644</u>	<u>\$40,833,620</u>
	At 1% decrease	Healthcare cost trend rate	At 1% increase
2016	<u>\$31,281,349</u>	<u>\$37,744,085</u>	<u>\$46,223,077</u>

NEW JERSEY WATER SUPPLY AUTHORITY
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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

F. EMPLOYEE BENEFITS (CONTINUED)

Post-Retirement Health Care Benefits (Continued)

Other Post-Employment Benefits ("OPEB") Other than Pensions (Continued)

GASB Statement No. 75, *Reporting for the Postemployment Benefits Other Than Pensions*, requires participating employers recognize their proportionate share of the collective total OPEB liability, collected deferred outflows of resources, collective deferred inflows of resources, and collective OPEB expense. The Authority's proportionate share of the collective total OPEB liability as of June 30, 2017 and 2016 was .1639% and .1738%, respectively.

At June 30, 2018, the amount recognized as the Authority's proportionate share of the total OPEB liability was \$33,469,644. For the year ended June 30, 2018, the Authority recognized OPEB expense of \$2,255,761. At June 30, 2018, deferred outflows of resources and deferred inflows of resources related to OPEB are as follows:

	June 30, 2018	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Net Difference Between Expected and Actual Experience		\$ -
Change of Assumptions		3,714,846
Net Difference Between Projected and Actual Investment Earnings	5,736	-
Net Change in Proportions		1,874,245
	<u>\$ 5,736</u>	<u>\$ 5,589,091</u>

Deferred inflows and outflows of resources related to OPEB will be recognized in OPEB expense as follows:

Year Ending June 30,	Amortization
2018	\$ (792,158)
2019	(792,158)
2020	(792,158)
2021	(792,158)
2022	(794,317)
Thereafter	<u>(1,620,406)</u>
Total	<u>\$ (5,583,355)</u>

**NEW JERSEY WATER SUPPLY AUTHORITY
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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

G. MAJOR WATER CUSTOMERS

During fiscal years 2018 and 2017, the Authority supplied water to approximately 32 customers of the Raritan Basin System and 13 customers of the Manasquan System.

During fiscal years 2018 and 2017, two customers accounted for approximately 84% of total Raritan Basin System operating revenue. During fiscal years 2018 and 2017, three customers accounted for approximately 85% and 88% respectively, of total Manasquan System operating revenue.

H. RISK MANAGEMENT

The Authority carries insurance for all of its facilities, covering direct physical loss or damage and loss of revenue resulting therefrom, with such deductibles as it deems appropriate. The Authority also carries General and Umbrella Public Liability Insurance with such self-insured retainers as it deems appropriate. Automotive and Public Officials Liability coverage is also maintained with deductibles. Workers' Compensation coverage is also maintained, as required by State law. Settled claims resulting from the aforementioned risks have not exceeded insurance coverage in any of the past three fiscal years.

I. RECENT ACCOUNTING STANDARDS

The Authority has adopted GASB Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not Within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68* ("GASB 73"). Statement No. 73 requires the Authority to present a 10-year schedule of changes in the total net pension liability. The schedule of changes in the total net pension liability is presented in Required Supplementary Information of these financial statements.

In June 2015, GASB issued Statement No 75, *Financial Reporting for Postemployment Benefit Plans Other Than Pensions* ("GASB 75"). This Statement establishes standards of accounting and financial reporting for defined benefit OPEB and defined contribution OPEB that are provided to employees of state and local government employers through OPEB plans that are administered through trusts or equivalent arrangements. This Statement also establishes standards of accounting and financial reporting for defined benefit OPEB and defined contribution OPEB that are provided to the employees of state and local governmental employers through OPEB plans that are not administered through trusts or equivalent arrangements. The provisions of this Statement are effective for financial statements in periods beginning after June 15, 2017. The Authority has adopted GASB 75 effective July 1, 2017.

In March 2016, GASB issued Statement No. 82, *Pension Issues* ("GASB 82"). This Statement requires the presentation of covered payroll, defined as payroll on which contributions to a pension plan are based, and ratios that use that measure, in schedules of required supplementary information. The Statement also addresses issues regarding the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and the classification of payments made by employers

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

I. RECENT ACCOUNTING STANDARDS (CONTINUED)

to satisfy employee (plan member) contribution requirements. The provisions of this Statement are effective for financial statements in periods beginning after June 15, 2016. The Authority has implemented GASB 82 during this fiscal year.

J. INSURANCE REIMBURSEMENTS

There are no insurance or FEMA reimbursements included in "Other income" on the statement of revenue, expenses and changes in net position for the years ended June 30, 2018 and 2017.

K. CONTINGENCIES

The Authority is party to various legal actions and disputes. Although the ultimate effect, if any, of these matters is not presently determinable, management believes that collectively they will not have a material effect on the results of operations or the financial position of the Authority.

L. PRIOR YEAR RESTATEMENT

In 2018 the Authority adopted new accounting guidance Governmental Accounting Standards Board Statement No. 75 - Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions. As a result of this implementation, a restatement of the prior year net position was required in order to record the June 30, 2017 total OPEB liability of \$37,744,085.

M. INFORMATION BY BUSINESS SEGMENT

The Authority issued revenue bonds to finance the construction of various capital assets, including the construction of the reservoir systems for both the Manasquan and Raritan Basin Systems. Each of these Systems must provide sufficient revenue each year to cover its own operating expenses and debt service. Investors in the revenue bonds rely solely on the revenue generated by the individual activities for repayment. The chart represents information by Business Segment and is not consistent with the consolidated balances on the statement of net position. Summary financial information for the operating segments is presented below:

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NOTES TO FINANCIAL STATEMENTS (CONTINUED)

M. INFORMATION BY BUSINESS SEGMENT (CONTINUED)

	June 30, 2018		June 30, 2017	
	Raritan Basin System	Manasquan Reservoir System	Raritan Basin System	Manasquan Reservoir System
Condensed statement of net position				
Assets and deferred outflows of resources:				
Current assets	\$ 84,732,962	\$ 15,560,928	\$ 34,538,852	\$ 14,652,005
Restricted cash	7,708,070	2,523,253	1,969,162	2,129,001
Other restricted assets	-	5,378,034	-	5,329,486
Capital assets	90,438,403	53,998,878	83,660,222	55,806,506
Other non-current assets	9,875,183	839,914	10,237,004	867,021
Deferred outflows of resources	5,780,190	1,621,896	7,272,745	2,339,660
Total assets and deferred outflows of resources	<u>\$ 198,534,808</u>	<u>\$ 79,922,903</u>	<u>\$ 137,677,985</u>	<u>\$ 81,123,679</u>
Liabilities and deferred inflows of resources:				
Current liabilities	\$ 10,008,576	\$ 6,355,839	\$ 2,618,463	\$ 6,132,511
Non-current liabilities	100,799,272	61,904,662	60,388,375	68,078,111
Deferred inflows of resources	20,781,907	(9,815,802)	13,782,179	(13,442,085)
Total liabilities and deferred inflows of resources	131,589,755	58,444,699	76,789,017	60,768,537
Net Position:				
Net investment in capital assets	31,804,837	27,470,435	44,985,111	16,902,401
Restricted for debt service	7,708,070	5,726,391	1,969,162	5,292,903
Unrestricted	27,432,146	(11,718,622)	13,934,695	(1,840,163)
Total net position	<u>66,945,053</u>	<u>21,478,204</u>	<u>60,888,968</u>	<u>20,355,141</u>
Total liabilities, deferred inflows of resources, and net position	<u>\$ 198,534,808</u>	<u>\$ 79,922,903</u>	<u>\$ 137,677,985</u>	<u>\$ 81,123,678</u>

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

M. INFORMATION BY BUSINESS SEGMENT (CONTINUED)

	Year Ended June 30, 2018		Year Ended June 30, 2017	
	Raritan Basin System	Manasquan Reservoir System	Raritan Basin System	Manasquan Reservoir System
Condensed statement of revenues, expenses and changes in net assets				
Total operating revenues	\$ 22,415,908	\$ 7,614,960	\$ 17,088,270	\$ 8,306,529
Operating expenses	14,742,494	3,146,165	13,913,539	3,171,399
Depreciation	2,773,622	1,863,787	2,782,788	1,813,976
Operating income	4,899,792	2,605,008	391,943	3,321,154
Non-operating revenues	475,808	71,495	228,731	(231,129)
Non-operating expenses (recovery)	(680,485)	1,553,440	(678,401)	(990,347)
Changes in net position	6,056,085	1,123,063	1,299,075	4,080,372
Net position, beginning of the year as previously reported	60,888,968	20,355,141	88,275,397	25,333,350
GASB 75 adjustment	-	-	(28,685,504)	(9,058,581)
Net position, beginning of year, as restated	60,888,968	20,355,141	59,589,893	16,274,769
Net position, end of year	\$ 66,945,053	\$ 21,478,204	\$ 60,888,968	\$ 20,355,141
Condensed statement of cash flows				
Net cash provided by:				
Operating activities	\$ 9,859,024	\$ 5,203,841	\$ 5,247,519	\$ 5,694,584
Non-capital financing activities	31,422	-	171,310	-
Capital and related financing activities	(2,119,061)	(3,905,840)	(4,166,916)	(1,787,228)
Investing activities	734,538	98,434	685,245	(3,023,916)
Net increase in cash and cash equivalents	8,505,923	1,396,435	1,937,158	883,440
Beginning cash and cash equivalent balances	33,909,032	14,597,561	31,971,874	13,714,121
Ending cash and cash equivalent balances	\$ 42,414,955	\$ 15,993,996	\$ 33,909,032	\$ 14,597,561

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REQUIRED SUPPLEMENTARY SCHEDULES

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY

SCHEDULE OF PROPORTIONATE SHARE OF PERS NET PENSION LIABILITY (NPL)
DETERMINED AS OF JUNE 30, 2017, PERS MEASUREMENT DATE

Fiscal Year	Authority's Proportion	Authority's Proportion Share	Authority's Covered Payroll	Authority's Proportionate Share of NPL as a % of Covered Payroll	PERS Local Fiduciary Net Position as a % of Total Pension Liability
2018	0.10%	\$ 23,038,776	\$ 7,002,687	329%	47.58%
2017	0.10%	\$ 29,886,847	\$ 6,949,632	430%	40.14%
2016	0.10%	\$ 21,534,789	\$ 6,808,193	316%	47.94%

SCHEDULE OF CONTRIBUTIONS

Fiscal Year	Required Contribution	Contributions Recognized by PERS	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a % of Covered Payroll
2018	\$ 1,620,169	\$ 916,857	\$ 703,312	\$ 7,351,319	12.47%
2017	\$ 2,885,084	\$ 896,476	\$ 1,988,608	\$ 7,002,687	12.80%
2016	\$ 1,261,241	\$ 823,798	\$ 437,443	\$ 6,949,632	11.85%
2015	\$ 819,154	\$ 798,757	\$ 20,397	\$ 6,808,193	11.73%

SCHEDULE OF CHANGES IN TOTAL NET PENSION LIABILITY

Fiscal Year	Beginning Balance Total Net Pension Liability	Difference Between Expected and Actual Experience	Change of Assumptions	Difference Between Expected and Actual Earnings	Change in Proportion and Actual Less Proportion Share	Other Changes and Reclassifications	Ending Balance Total Net Pension Liability
2018	\$ 29,886,847	\$ 542,484	\$ 17,016	\$ 156,878	\$ (73,348)	\$ (7,491,101)	\$ 23,038,776
2017	\$ 21,534,789	\$ 555,805	\$ 6,190,858	\$ 1,139,613	\$ 304,163	\$ 161,619	\$ 29,886,847
2016	\$ 18,141,342	\$ 513,147	\$ 1,739,535	\$ 735,251	\$ (206,140)	\$ 611,654	\$ 21,534,789
2015	\$ 19,250,440	\$ -	\$ 570,440	\$ (1,081,086)	\$ (772,427)	\$ 173,975	\$ 18,141,342

The pension schedules are intended to show information for ten years. The State of New Jersey has issued four years of pension information to the Authority. Additional years' information will be displayed as it becomes available.

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY

SCHEDULE OF THE AUTHORITY'S PROPORTIONATE SHARE OF THE TOTAL OPEB
LIABILITY
STATE HEALTH BENEFIT LOCAL GOVERNMENT RETIRED EMPLOYEES PLAN
DETERMINED AS OF JUNE 30, 2017, OPEB MEASUREMENT DATE

	<u>2018</u>	<u>2017</u>
Authority's proportion of the net OPEB liability	0.1639400%	0.173796%
Authority's proportionate share of the net OPEB liability (asset)	\$ 33,469,644	\$ 37,744,085
Authority's covered payroll	\$ 7,351,319	\$ 7,002,687
Authority's proportionate share of the net OPEB liability (asset) as a percentage of its covered-employee payroll	455.3%	539.0%
Plan fiduciary net position as a percentage of the total OPEB liability	264.2%	215.2%

The OPEB schedules are intended to show information for ten years. The State of New Jersey has issued two years of OPEB information to the Authority. Additional years' information will be displayed as it becomes available.

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OTHER SUPPLEMENTARY INFORMATION

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY

COMBINING SCHEDULE OF NET POSITION
JUNE 30, 2018

	Raritan Basin System	Manasquan Reservoir System	Elimination Entries	Combined Total
Assets				
Current assets:				
Unrestricted assets:				
Cash and cash equivalents	\$ 34,706,885	\$ 13,470,743	\$ -	\$ 48,177,628
Unbilled sales	1,501,023	-	-	1,501,023
Accounts receivable, less allowance for doubtful accounts of \$1,000 at June 30, 2018	47,598,882	1,870,799	(174,068)	49,295,613
Interest receivable	160,691	7,087	-	167,778
Prepaid expenses and other current assets	765,481	212,299	-	977,780
Total unrestricted assets	<u>84,732,962</u>	<u>15,560,928</u>	<u>(174,068)</u>	<u>100,119,822</u>
Restricted assets:				
Cash equivalents	7,708,070	2,523,253	-	10,231,323
Investments	-	5,378,034	-	5,378,034
Total restricted assets	<u>7,708,070</u>	<u>7,901,287</u>	<u>-</u>	<u>15,609,357</u>
Total current assets	<u>92,441,032</u>	<u>23,462,215</u>	<u>(174,068)</u>	<u>115,729,179</u>
Non-current assets:				
Investments	9,875,183	839,914	-	10,715,097
Capital assets net of accumulated depreciation of \$145,750,384 at June 30, 2018	90,438,403	53,998,878	-	144,437,281
Total non-current assets	<u>100,313,586</u>	<u>54,838,792</u>	<u>-</u>	<u>155,152,378</u>
Total assets	<u>192,754,618</u>	<u>78,301,007</u>	<u>(174,068)</u>	<u>270,881,557</u>
Deferred outflows of resources				
Pension related	5,285,251	1,620,519	-	6,905,770
OPEB related	4,359	1,377	-	5,736
2018 construction loan DEP fee	490,580	-	-	490,580
Total deferred outflows of resources	<u>5,780,190</u>	<u>1,621,896</u>	<u>-</u>	<u>7,402,086</u>
Total assets and deferred outflows of resources	<u>\$198,534,808</u>	<u>\$ 79,922,903</u>	<u>\$ (174,068)</u>	<u>\$ 278,283,643</u>
Liabilities				
Current liabilities:				
Current portion of bonds, notes and loans payable	\$ 903,680	\$ 3,027,572	\$ -	\$ 3,931,252
Accounts payable	7,173,712	305,389	(174,068)	7,305,033
Accrued liabilities	1,931,184	847,982	-	2,779,166
Unearned revenue	-	2,174,896	-	2,174,896
Total current liabilities	<u>10,008,576</u>	<u>6,355,839</u>	<u>(174,068)</u>	<u>16,190,347</u>
Non-current liabilities:				
Non-current portion of bonds, notes and loans payable	57,729,886	48,465,628	-	106,195,514
Net pension liability	17,632,457	5,406,319	-	23,038,776
Total OPEB liability	25,436,929	8,032,715	-	33,469,644
Total non-current liabilities	<u>100,799,272</u>	<u>61,904,662</u>	<u>-</u>	<u>162,703,934</u>
Total liabilities	<u>110,807,848</u>	<u>68,260,501</u>	<u>(174,068)</u>	<u>178,894,281</u>
Deferred inflows of resources				
Cost recovery	12,442,789	(13,010,085)	-	(567,296)
Pension related	4,091,409	1,254,474	-	5,345,883
OPEB related	4,247,709	1,341,382	-	5,589,091
Gain on refunding	-	598,427	-	598,427
Total deferred inflow of resources	<u>20,781,907</u>	<u>(9,815,802)</u>	<u>-</u>	<u>10,966,105</u>
Net position				
Net investment in capital assets	31,804,837	27,470,435	-	59,275,272
Restricted for cash, investments and unearned revenue	7,708,070	5,726,391	-	13,434,461
Unrestricted	27,432,146	(11,718,622)	-	15,713,524
Total net position	<u>66,945,053</u>	<u>21,478,204</u>	<u>-</u>	<u>88,423,257</u>
Total liabilities, deferred inflows of resources, and net position	<u>\$198,534,808</u>	<u>\$ 79,922,903</u>	<u>\$ (174,068)</u>	<u>\$ 278,283,643</u>

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY

COMBINING SCHEDULE OF REVENUE, EXPENSES AND CHANGES IN NET POSITION
YEAR ENDED JUNE 30, 2018

	Raritan Basin System	Manasquan Reservoir System	Manasquan Water Treatment Plant	Combined Total
Operating revenues:				
Water sales	\$ 22,415,908	\$ 7,614,960	\$ -	\$ 30,030,868
Reimbursement of operating expenses			2,642,400	2,642,400
Total operating revenues	<u>22,415,908</u>	<u>7,614,960</u>	<u>2,642,400</u>	<u>32,673,268</u>
Operating expenses:				
Payroll	6,029,166	892,150	960,877	7,882,193
Operations and maintenance (direct)	4,030,267	869,264	652,350	5,551,881
Operations and maintenance (general and administrative)	-	84,508	60,698	145,206
Fringe benefits	5,446,061	648,243	725,267	6,819,571
Headquarters overhead	(763,000)	652,000	111,000	-
Depreciation	<u>2,773,622</u>	<u>1,863,787</u>	<u>-</u>	<u>4,637,409</u>
Total operating expenses	<u>17,516,116</u>	<u>5,009,952</u>	<u>2,510,192</u>	<u>25,036,260</u>
Income from operations	<u>4,899,792</u>	<u>2,605,008</u>	<u>132,208</u>	<u>7,637,008</u>
Non-operating revenues:				
State of New Jersey - Grant Programs	31,422	-	-	31,422
Investment income	370,122	107,026	12,615	489,763
Rental income	49,565	-	-	49,565
Other income	<u>24,699</u>	<u>(35,531)</u>	<u>-</u>	<u>(10,832)</u>
Total non-operating revenues	<u>475,808</u>	<u>71,495</u>	<u>12,615</u>	<u>559,918</u>
Non-operating expenses:				
Interest component of debt service to the State of New Jersey	154,724	289,294	-	444,018
Bond discount/insurance premium expense	-	-	-	-
Recovery of deferred inflows of resources	<u>(835,209)</u>	<u>1,264,146</u>	<u>144,823</u>	<u>573,760</u>
Total non-operating expenses	<u>(680,485)</u>	<u>1,553,440</u>	<u>144,823</u>	<u>1,017,778</u>
Changes in net position	6,056,085	1,123,063	-	7,179,148
Net position, beginning of year, as restated	<u>60,888,968</u>	<u>20,355,141</u>	<u>-</u>	<u>81,244,109</u>
Net position, end of year	<u>\$ 66,945,053</u>	<u>\$ 21,478,204</u>	<u>\$ -</u>	<u>\$ 88,423,257</u>

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY

SCHEDULE OF CHANGES IN CASH AND INVESTMENTS - RARITAN BASIN SYSTEM
YEAR ENDED JUNE 30, 2018

	Revenue Fund - PNC	Operating Account - PNC	Payroll Account - PNC	Revenue Account - TD	Operating Account - TD	Payroll Account - TD	Operating Fund	Reserve for O&M	Self-Insurance Reserve	Depreciation Reserve	Pumping Reserve	Capital Improvements Investments II	Source Water Protection Fund	Subtotal
Cash and investments - July 1, 2017	\$1,176,243	\$3,378,352	\$30,000	\$ -	\$ -	\$ -	\$1,052,319	\$3,578,527	\$953,505	\$4,255,118	\$1,231,480	\$6,382,382	\$3,903,948	\$25,941,874
Cash receipts:														
Water sales operations and maintenance	10,730,301			2,221,743										12,952,044
Water sales debt service	4,378,187			943,860										5,322,047
Water sales capital fund	1,853,748			366,440										2,220,188
Water sales source water protection fund	1,348,179			266,502										1,614,681
Water sales overdrafts	658													658
Rental income	39,659			2,740										42,399
Manasquan reservoir support	33,716			1,172			16,750							51,638
Headquarters overhead							760,000							760,000
Disposition of property	19,901													19,901
Recycling revenue	439													439
Sale of investment securities								481,314		50,000				531,314
Nonrefundable bid deposits														-
Insurance reimbursement	29,197													29,197
Miscellaneous expense reimbursement	215,661	32,085		92,035	2,727,514		1,546,908							4,614,203
Transfers:														
Contributions from operating fund	(1)	9,493,153	2,784,547		2,505,119	741,592	(28,195,094)			471,905	150,000		527,820	(11,520,959)
Contributions to operating fund				(306,650)	287		4,103,827			(182,167)			(351,577)	3,263,720
Transfers for operations	(20,246,838)			(1,729,370)			21,955,455	20,753						-
Transfers for investments														-
Distribution from reserves to operations		18,100												18,100
Investment income				3	282	121	5,272	87,080	23,479	112,914	9,012	312,760	27,903	578,826
Per resolution, Section 603:														
Investment income, transfer from	435,768						(5,272)	(87,080)	(23,479)	(94,975)		(312,500)		(87,538)
Investment income, transfer to	(14,818)						22,169							7,351
Unrealized gain/(loss) on fair value							(39,462)	(16,676)		(30,108)		(221,921)		(308,167)
Total cash receipts	(1,176,243)	9,543,338	2,784,547	1,858,475	5,233,202	741,713	187,846	484,774	(16,676)	327,569	159,012	(221,661)	204,146	20,110,042
Total available cash and investments	\$ -	\$12,921,690	\$2,814,547	\$1,858,475	\$5,233,202	\$741,713	\$1,240,165	\$4,063,301	\$936,829	\$4,582,687	\$1,390,492	\$6,160,721	\$4,108,094	\$46,051,916

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY

SCHEDULE OF CHANGES IN CASH AND INVESTMENTS - RARITAN BASIN SYSTEM (CONTINUED)
YEAR ENDED JUNE 30, 2018

	Subtotal	Parity SWP Bond Fund	Subordinated SWP Bond Fund	Major Rehabilitation	Capital Improvement Fund	D&R Mitigation Fund	D&R Canal Dredging	Capital Equipment Reserve	Rate Stabilization Fund	Employment Benefit Funds	Totals
Total cash and investments	\$25,941,874	\$301,514	\$557,007	\$1,381,648	\$11,902,828	\$20,203	\$1,948,958	\$451,204	\$86,049	\$1,554,751	\$44,146,036
Cash receipts:											
Water sales operations and maintenance	12,952,044										12,952,044
Water sales debt service	5,322,047										5,322,047
Water sales capital fund	2,220,188										2,220,188
Water sales source water protection fund	1,614,681										1,614,681
Water sales overdrafts	658										658
Rental income	42,399										42,399
Manasquan reservoir support	51,638										51,638
Headquarters overhead	760,000										760,000
Disposition of property	19,901										19,901
Recycling revenue	439										439
Sale of investment securities	531,314										531,314
Nonrefundable bid deposits	-										-
Insurance reimbursement	29,197										29,197
Miscellaneous expense reimbursement	4,614,203				269,490						4,883,693
Transfers:											
Contributions from operating fund	(11,520,959)	361,884	707,700		3,743,348		5,657,502	150,000		900,525	-
Contributions to operating fund	3,263,720				(2,553,633)					(710,087)	-
Transfers for operations	-										-
Transfers for investments	-										-
Distribution from reserves to operations	18,100									(18,100)	-
Investment income	578,826	940	1,814	9,574	84,395	133	32,872	3,452	342	10,944	723,292
Per resolution, Section 603:											
Investment income, transfer from	(87,538)										(87,538)
Investment income, transfer to	7,351										7,351
Unrealized gain/(loss) on fair value	(308,167)										(308,167)
Total cash receipts	20,110,042	362,824	709,514	9,574	1,543,600	133	5,690,374	153,452	342	183,282	28,763,137
Total available cash and investments	\$46,051,916	\$664,338	\$1,266,521	\$1,391,222	\$13,446,428	\$20,336	\$7,639,332	\$604,656	\$86,391	\$1,738,033	\$72,909,173

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY

SCHEDULE OF CHANGES IN CASH AND INVESTMENTS - RARITAN BASIN SYSTEM (CONTINUED)
YEAR ENDED JUNE 30, 2018

	Revenue Fund - PNC	Operating Account - PNC	Payroll Account - PNC	Revenue Account - TD	Operating Account - TD	Payroll Account - TD	Operating Fund	Reserve for O&M	Self-Insurance Reserve	Depreciation Reserve	Pumping Reserve	Capital Improvements Investments II	Source Water Protection Fund	Subtotal
Total available cash and investments	\$ -	\$12,921,690	\$2,814,547	\$1,858,475	\$5,233,202	\$741,713	\$1,240,165	\$4,063,301	\$936,829	\$4,582,687	\$1,390,492	\$6,160,721	\$4,108,094	\$46,051,916
Cash disbursements:														
Payroll			2,814,547			591,592								3,406,139
Fringe benefits		18,276			3,861		724,950							747,087
Employee deferred compensation and credit union		1,452,213					52,071							1,504,284
Operations and maintenance		11,451,439			1,810,891									13,262,330
Prepaid insurance														-
Miscellaneous disbursements														-
Watershed Management Fund														-
Capital improvements:														-
Capital assets														-
New five year construction project														-
Purchase of investments securities								519,685	1,368	82,935				603,988
Principal on 1981 bonds														-
Interest on 1981 bonds														-
Principal on 1998 bonds														-
Interest on 1998 revenue bonds														-
Principal on NJEIT bonds														-
Interest on NJEIT revenue bonds														-
Total cash disbursements	-	12,921,928	2,814,547	-	1,814,752	591,592	777,021	519,685	1,368	82,935	-	-	-	19,523,828
Cash and investments - June 30, 2018	\$ -	(\$238)	\$ -	\$1,858,475	\$3,418,450	\$150,121	\$463,144	\$3,543,616	\$935,461	\$4,499,752	\$1,390,492	\$6,160,721	\$4,108,094	\$26,528,088
Summary of cash and investments:														
Cash	\$ -	(\$238)	\$ -	\$1,858,475	\$3,418,450	\$150,121								\$5,426,808
Short-term investments							\$463,144	\$2,209,606	\$296,674	\$2,683,216	\$1,390,492	\$74,871	\$4,108,094	11,226,097
Long-term investments								1,334,010	638,787	1,816,536		6,085,850		9,875,183
Restricted Investments (current)														-
Restricted Investments (long-term)														-
Total cash and investments	\$ -	(\$238)	\$ -	\$1,858,475	\$3,418,450	\$150,121	\$463,144	\$3,543,616	\$935,461	\$4,499,752	\$1,390,492	\$6,160,721	\$4,108,094	\$26,528,088

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY

SCHEDULE OF CHANGES IN CASH AND INVESTMENTS - RARITAN BASIN SYSTEM (CONTINUED)
YEAR ENDED JUNE 30, 2018

	Subtotal	Parity SWP Bond Fund	Subordinated SWP Bond Fund	Major Rehabilitation	Capital Improvement Fund	D&R Mitigation Fund	D&R Canal Dredging	Capital Equipment Reserve	Rate Stabilization Fund	Employment Benefit Funds	Totals
Total available cash and investments	\$46,051,916	\$664,338	\$1,266,521	\$1,391,222	\$13,446,428	\$20,336	\$7,639,332	\$604,656	\$86,391	\$1,738,033	\$72,909,173
Cash disbursements:											
Payroll	3,406,139										3,406,139
Fringe benefits	747,087										747,087
Employee deferred compensation and credit union	1,504,284										1,504,284
Operations and maintenance	13,262,330										13,262,330
Prepaid insurance	-										-
Miscellaneous disbursements	-									46,143	46,143
Watershed Management Fund	-										-
Capital improvements:											
Capital assets	-										-
New five year construction project	-										-
Purchase of investments securities	603,988										603,988
Principal on 1981 bonds	-										-
Interest on 1981 bonds	-										-
Principal on 1998 bonds	-										-
Interest on 1998 revenue bonds	-										-
Principal on NJEIT bonds	-	323,596	575,523								899,119
Interest on NJEIT revenue bonds	-	31,894	118,051								149,945
Total cash disbursements	19,523,828	355,490	693,574	-	-	-	-	-	-	46,143	20,619,035
Cash and investments - June 30, 2018	\$26,528,088	\$308,848	\$572,947	\$1,391,222	\$13,446,428	\$20,336	\$7,639,332	\$604,656	\$86,391	\$1,691,890	\$52,290,138
Summary of cash and investments:											
Cash	\$5,426,808									\$46,670	\$5,473,478
Short-term investments	11,226,097	\$308,848	\$572,947	\$1,391,222	\$13,446,428	\$20,336	\$7,639,332	\$604,656	\$86,391	1,645,220	36,941,477
Long-term investments	9,875,183										9,875,183
Restricted Investments (current)	-										-
Restricted Investments (long-term)	-										-
Total cash and investments	\$26,528,088	\$308,848	\$572,947	\$1,391,222	\$13,446,428	\$20,336	\$7,639,332	\$604,656	\$86,391	\$1,691,890	\$52,290,138

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY

SCHEDULE OF CHANGES IN CASH AND INVESTMENTS - MANASQUAN WATER SUPPLY SYSTEM
YEAR ENDED JUNE 30, 2018

	Revenue Fund - PNC	Operating Fund			Revenue Fund - TD	Operating Fund			Reserve for O&M	Self-Insurance Reserve	Renewal and Replacement Account	Water Reuse & Recycling	Source Water Protection	Depreciation Reserve	Pumping Reserve	Sediment Reserve	Subtotal
		Operating Account - PNC	Payroll Account - PNC			Operating Account - TD	Payroll Account - TD	Operating Fund									
Cash and investments - July 1, 2017	\$126,244	\$484,443	\$20,000	\$ -	\$ -	\$ -	\$ -	\$4,177,005	\$1,616,408	\$221,967	\$3,706,911	\$30,192	\$1,533,274	\$562,519	\$155,430	\$196,298	\$12,830,691
Cash receipts:																	
Water sales operations and maintenance	3,028,735				34,128												3,062,863
Water sales debt service	4,273,038				44,982												4,318,020
Source water protection	96,451				1,182												97,633
Water sales debt service NJEIT	174,721				1,965												176,686
Water sales overdrafts	41,783																41,783
NJ-American pumping costs	164,503				44,865												209,368
Headquarters overhead																	-
Reimbursement of WTP capital expenses																	-
Disposition of assets																	-
Reimbursement from/(to) Raritan Basin	6,918				2,473			(16,750)									(7,359)
Sale of investments securities																	-
Nonrefundable bid deposits																	-
Miscellaneous reimbursement	7,996				23,912	299,247											331,155
Transfers:																	
Contributions from operating fund	454,600	2,529,219	912,627	13,780	897,877	210,134	(9,284,147)				207,500		57,581	27,919		30,000	(3,942,910)
Contributions to operating fund		65,000	(65,000)	(99,725)	583		1,563,288			(42)	(55,765)		(27,707)	(18,185)	(218)	(458)	1,361,771
Transfers for operations	(8,402,908)	2,599					8,400,792										483
Distribution from reserves to operations		5,569		2,994				(2,994)									5,569
Investment income				4	90	32	35,963	26,768	10,158	26,871	115	10,648	15,320	2,028	1,152	129,149	
Per resolution, Section 603:																	
Investment income, transfer from	56,902						(22,183)	(23,774)	(10,116)					(13,500)	(1,810)	(695)	(15,176)
Investment income, transfer to	(28,983)						28,983										-
Unrealized gain/(loss) on fair value								(11,425)	(2,900)					(6,222)	1,263		(19,284)
Total cash receipts	(126,244)	2,602,387	847,627	70,560	1,197,797	210,166	705,946	(11,425)	(2,900)	178,606	115	40,522	5,332	1,263	29,999	5,749,751	
Total cash and investments	\$ -	\$3,086,830	\$867,627	\$70,560	\$1,197,797	\$210,166	\$4,882,951	\$1,604,983	\$219,067	\$3,885,517	\$30,307	\$1,573,796	\$567,851	\$156,693	\$226,297	\$18,580,442	

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY

SCHEDULE OF CHANGES IN CASH AND INVESTMENTS - MANASQUAN WATER SUPPLY SYSTEM (CONTINUED)
YEAR ENDED JUNE 30, 2018

	Water Treatment Plant/Transmission System								NJ/EIT Debt Service	2016 Debt Service Account	2016 Debt Service Reserve	Rebate Fund	General Reserve Fund	Employment Benefit Funds	Totals
	Subtotal	Operating Account - PNC	Operating Account -TD	Operating Fund	Residuals Reserve	Carbon Filter Reserve	Self- Insurance Reserve	Capital Improvement Reserve							
Cash and investments - July 1, 2017	\$12,830,691	\$128,322	\$ -	\$1,284,697	\$9,491	\$98,466	\$253,295	\$354,730	\$146,156	\$3,193,946	\$1,746,553	\$242,830	\$41,197	\$463,693	\$20,794,067
Cash receipts:															
Water sales operations and maintenance	3,062,863														3,062,863
Water sales debt service	4,318,020														4,318,020
Source water protection	97,633														97,633
Water sales debt service NJ/EIT	176,686														176,686
Water sales overdrafts	41,783														41,783
NJ-American pumping costs	209,368														209,368
Headquarters overhead	-			2,422,200											2,422,200
Reimbursement of WTP capital expenses	-														-
Disposition of assets	-														-
Reimbursement from/to Raritan Basin	(7,359)														(7,359)
Sale of investments securities	-														-
Nonrefundable bid deposits	-														-
Miscellaneous reimbursement	331,155		178,055	555,962				29,784							1,094,956
Transfers:															
Contributions from operating fund	(3,942,910)	1,100,000	203,642	(1,509,384)				200,000	177,222	3,501,538				269,892	-
Contributions to operating fund	1,361,771			(787,578)				(574,142)					(51)		-
Transfers for operations	483			(483)											-
Distribution from reserves to operations	5,569													(5,569)	-
Investment income	129,149		76	9,202	62	429	1,530	1,315	414			1,459	207	3,139	146,982
Per resolution, Section 603:															
Investment income, transfer from	(15,176)				(34)	(195)	(813)						(156)		(16,374)
Investment income, transfer to				1,043											1,043
Unrealized gain/(loss) on fair value	(19,284)														(19,284)
Total cash receipts	5,749,751	1,100,000	381,773	690,962	28	234	717	(343,043)	177,636	3,501,538	-	1,459	-	267,462	11,528,517
Total cash and investments	\$18,580,442	\$1,228,322	\$381,773	\$1,975,659	\$9,519	\$98,700	\$254,012	\$11,687	\$323,792	\$6,695,484	\$1,746,553	\$244,289	\$41,197	\$731,155	\$32,322,584

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY

SCHEDULE OF CHANGES IN CASH AND INVESTMENTS - MANASQUAN WATER SUPPLY SYSTEM (CONTINUED)
YEAR ENDED JUNE 30, 2018

	Revenue Fund - PNC	Operating Account - PNC	Payroll Account - PNC	Revenue Fund - TD	Operating Fund Operating Account - TD	Payroll Account - TD	Operating Fund	Reserve for O&M	Self- Insurance Reserve	Renewal and Replacement Account	Water Reuse & Recycling	Source Water Protection	Depreciation Reserve	Pumping Reserve	Sediment Reserve	Subtotal
Total available cash and investments	\$ -	\$3,086,830	\$867,627	\$70,560	\$1,197,797	\$210,166	\$4,882,951	\$1,604,983	\$219,067	\$3,885,517	\$30,307	\$1,573,796	\$567,851	\$156,693	\$226,297	\$18,580,442
Cash disbursements:																
Payroll			867,627			170,133										1,037,760
Fringe benefits		1,593,311			317,512		(1,521,924)									388,899
Employee deferred compensation and credit union							225,991									225,991
Operations and maintenance		1,493,519			215,156		806,254									2,514,929
NJ-American pumping costs																-
Prepaid insurance																-
Headquarters overhead							649,000									649,000
Capital assets reservoir																-
Capital improvement program (reservoir)																-
Purchase of investments securities								4,422					1,368	2,047		7,837
Principal on bonds																-
Interest on bonds																-
Total cash disbursements	-	3,086,830	867,627	-	532,668	170,133	159,321	-	4,422	-	-	-	1,368	2,047	-	4,824,416
Cash and investments - June 30, 2018	\$ -	\$ -	\$ -	\$70,560	\$665,129	\$40,033	\$4,723,630	\$1,604,983	\$214,645	\$3,885,517	\$30,307	\$1,573,796	\$566,483	\$154,646	\$226,297	\$13,756,026
Summary of cash and investments:																
Cash (Manasquan)	\$ -	\$ -	\$ -	\$70,560	\$665,129	\$40,033										\$775,722
Cash (Water Treatment Plant/TS)																-
Short-term investments							\$4,723,630	\$1,244,939	\$37,693	\$3,885,517	\$30,307	\$1,573,796	\$293,574	\$124,652	\$226,297	12,140,405
Short-term investments (Water Treatment Plant/TS)																-
Long-term investments								360,044	176,952				272,909	29,994		839,899
Restricted investments (current)																-
Restricted investments (long-term)																-
Total cash and investments	\$ -	\$ -	\$ -	\$70,560	\$665,129	\$40,033	\$4,723,630	\$1,604,983	\$214,645	\$3,885,517	\$30,307	\$1,573,796	\$566,483	\$154,646	\$226,297	\$13,756,026

NEW JERSEY WATER SUPPLY AUTHORITY
A COMPONENT UNIT OF THE STATE OF NEW JERSEY

SCHEDULE OF CHANGES IN CASH AND INVESTMENTS - MANASQUAN WATER SUPPLY SYSTEM (CONTINUED)
YEAR ENDED JUNE 30, 2018

	Water Treatment Plant/Transmission System								NJ/EIT Debt Service	2006 Debt Service Account	2006 Debt Service Reserve	Rebate Fund	General Reserve Fund	Employment Benefit Funds	Totals
	Subtotal	Operating Account - PNC	Operating Account -TD	Operating Fund	Residuals Reserve	Carbon Filter Reserve	Self- Insurance Reserve	Capital Improvement Reserve							
Total available cash and investments	\$18,580,442	\$1,228,322	\$381,773	\$1,975,659	\$9,519	\$98,700	\$254,012	\$11,687	\$323,792	\$6,695,484	\$1,746,553	\$244,289	\$41,197	\$731,155	\$32,322,584
Cash disbursements:															
Payroll	1,037,760														1,037,760
Fringe benefits	388,899													217,721	606,620
Employee deferred compensation and credit union	225,991														225,991
Operations and maintenance	2,514,929	1,228,322	97,097												3,840,348
NJ-American pumping costs	-														-
Prepaid insurance	-														-
Headquarters overhead	649,000			111,000											760,000
Capital assets reservoir	-														-
Capital improvement program (reservoir)	-														-
Purchase of investments securities	7,837														7,837
Principal on bonds	-								147,572	2,805,000					2,952,572
Interest on bonds	-								29,924	649,588					679,512
Total cash disbursements	4,824,416	1,228,322	97,097	111,000	-	-	-	-	177,496	3,454,588	-	-	-	217,721	10,110,640
Cash and investments - June 30, 2018	\$13,756,026	\$-	\$284,676	\$1,864,659	\$9,519	\$98,700	\$254,012	\$11,687	\$146,296	\$3,240,896	\$1,746,553	\$244,289	\$41,197	\$513,434	\$22,211,944
Summary of cash and investments:															
Cash (Manasquan)	\$775,722														\$775,722
Cash (Water Treatment Plant/TS)	-	-	\$284,676												284,676
Short-term investments	12,140,405												\$41,197	\$513,434	12,695,036
Short-term investments (Water Treatment Plant/TS)	-			\$1,864,659	\$9,519	\$98,700	\$254,012	\$11,687							2,238,577
Long-term investments	839,899														839,899
Restricted investments (current)	-								\$146,296	\$3,240,896	\$1,746,553	\$244,289			5,378,034
Restricted investments (long-term)	-														-
Total cash and investments	\$13,756,026	\$-	\$284,676	\$1,864,659	\$9,519	\$98,700	\$254,012	\$11,687	\$146,296	\$3,240,896	\$1,746,553	\$244,289	\$41,197	\$513,434	\$22,211,944

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INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS

To the Commissioners of New Jersey Water Supply Authority

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the business-type activities of the New Jersey Water Supply Authority (the "Authority"), as of and for the year ended June 30, 2018, and the related notes to financial statements, which collectively comprise the Authority's basic financial statements, and have issued our report thereon dated April 29, 2019.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Authority's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of the Authority's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. *A material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the Authority's financial statements will not be prevented, or detected and corrected on a timely basis. *A significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit, we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS (CONTINUED)

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Authority's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Authority's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Mercadieu, P.C.
Certified Public Accountants

April 29, 2019

Statistical Section

FINANCIAL TREND DATA

These schedules contain trend information on the Authority's financial performance over time.

Summary of Financial Information.....	2009 - 2018
Summary of Raritan Basin System Water Use Contracts	2009 - 2018
Summary of Manasquan Water Supply System Water Use Contracts	2009 - 2018

DEBT CAPACITY DATA

The schedules present information on the Authority's current levels of outstanding debt and the ability to issue debt in the future.

Raritan Basin System Revenue Bond Coverage	2009 - 2018
Manasquan System Revenue Bond Coverage	2009 - 2018

REVENUE CAPACITY DATA

These schedules contain information on the Authority's most significant revenue source.

Raritan Basin System Water Charges	2009 - 2018
Manasquan Water Supply System Water Charges	2009 - 2018

OPERATING INFORMATION

These schedules contain operational and infrastructure data in relation to the services the Authority provides.

Spruce Run Rain Gauge	2009 - 2018
West Windsor Rain Gauge	2009 - 2018
Spruce Run Reservoir Storage	2009 - 2018
Round Valley Reservoir Storage	2009 - 2018
Manasquan System Rainfall	2009 - 2018
Manasquan Reservoir Storage Data.....	2009 - 2018

DEBT, ECONOMIC AND DEMOGRAPHIC INFORMATION

Bonds, Notes and Loans Payable	2009 - 2018
Ten Largest State of New Jersey Employers	2007 - 2016
State of New Jersey Population and Employment Trends	2007 - 2016

New Jersey Water Supply Authority
Summary of Financial Information 2009 – 2018

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
REVENUE AND EXPENSES				
Water sales	\$22,975,438	\$23,031,803	\$24,095,286	\$23,513,508
Reimbursement of operating exp	<u>\$2,512,417</u>	<u>\$2,589,276</u>	<u>\$2,501,135</u>	<u>\$2,434,806</u>
Total operating revenues	25,487,855	25,621,079	26,596,421	25,948,314
Operating expense	<u>20,862,953</u>	<u>19,802,840</u>	<u>20,649,747</u>	<u>23,918,001</u>
Income from operations	4,624,902	5,818,239	5,946,674	2,030,313
Non-operating revenues	795,191	681,411	632,306	2,884,459
Non-operating expenses	<u>4,568,128</u>	<u>4,796,487</u>	<u>4,525,435</u>	<u>4,698,000</u>
Change in net position	851,965	1,703,163	2,053,545	216,772
GASB 75 adjustment				
Net position, beginning of year	<u>109,423,668</u>	<u>110,275,633</u>	<u>111,978,796</u>	<u>114,032,341</u>
Net position, end of year	110,275,633	111,978,796	114,032,341	114,249,113
ASSETS				
Current assets, unrestricted	39,944,371	33,994,171	36,101,110	43,454,301
Current assets, restricted				
Non-current assets	<u>174,633,772</u>	<u>177,515,802</u>	<u>174,004,657</u>	<u>166,188,362</u>
Total assets	214,578,143	211,509,973	210,105,767	209,642,663
Deferred outflows of resources				
LIABILITIES				
Current liabilities	8,818,939	9,381,563	9,510,372	9,817,272
Non-current liabilities	<u>95,483,571</u>	<u>90,149,614</u>	<u>86,563,054</u>	<u>85,576,278</u>
Total liabilities	104,302,510	99,531,177	96,073,426	95,393,550
Deferred Inflows of Resources				
NET ASSETS				
Net investment in capital assets	47,277,890	75,184,140	77,691,938	78,090,867
Restricted for repayment debt principal and interest	12,447,252	12,006,417	12,011,721	11,924,238
Unrestricted	<u>50,550,491</u>	<u>24,788,239</u>	<u>24,328,682</u>	<u>24,234,008</u>
Total net position	\$110,275,633	\$111,978,796	\$114,032,341	\$114,249,113

* Certain balances have been reclassified or restated to conform to current year presentation.

New Jersey Water Supply Authority
Summary of Financial Information 2009 – 2018

<u>2013*</u>	<u>2014*</u>	<u>2015</u>	<u>2016</u>	<u>2017*</u>	<u>2018</u>
\$23,430,025	\$23,240,511	\$24,168,432	\$25,199,424	\$25,394,799	\$30,030,868
<u>\$2,495,982</u>	<u>\$2,600,238</u>	<u>\$2,642,400</u>	<u>\$2,642,400</u>	<u>\$2,642,400</u>	<u>\$2,642,400</u>
25,926,007	25,840,749	26,810,832	27,841,824	28,037,199	32,673,268
<u>21,792,193</u>	<u>20,750,987</u>	<u>21,449,303</u>	<u>21,413,585</u>	<u>24,686,037</u>	<u>25,036,260</u>
4,133,814	5,089,762	5,361,529	6,428,239	3,351,162	7,637,008
7,283,979	603,011	531,655	1,186,165	2,906	559,918
<u>4,592,986</u>	<u>4,680,739</u>	<u>2,140,777</u>	<u>2,101,399</u>	<u>(2,025,379)</u>	<u>1,017,778</u>
6,824,807	1,012,034	3,752,407	5,513,005	5,379,447	7,179,148
				(37,744,085)	
<u>113,845,395</u>	<u>120,670,202</u>	<u>104,343,335</u>	<u>108,095,742</u>	<u>113,608,747</u>	<u>81,244,109</u>
120,670,202	121,682,236	108,095,742	113,608,747	81,244,109	88,423,257
45,087,108	41,600,989	42,450,358	46,612,558	49,025,001	100,119,822
14,671,723	12,336,186	12,339,659	7,032,591	9,427,648	15,609,357
<u>149,151,534</u>	<u>153,571,758</u>	<u>153,061,564</u>	<u>151,909,258</u>	<u>150,570,753</u>	<u>155,152,378</u>
208,910,365	207,508,933	207,851,581	205,554,407	209,023,402	270,881,557
		1,280,619	3,646,920	9,612,405	7,402,086
11,411,225	10,041,207	9,039,888	6,027,320	8,585,118	16,190,347
<u>79,269,979</u>	<u>75,345,060</u>	<u>89,372,731</u>	<u>86,489,391</u>	<u>128,466,486</u>	<u>162,703,934</u>
90,681,204	85,386,267	98,412,619	92,516,711	137,051,604	178,894,281
(2,441,041)	440,430	2,623,839	3,075,869	340,094	10,966,105
83,560,654	87,589,285	91,638,454	98,890,303	61,887,512	59,275,272
12,126,909	9,084,491	9,229,092	3,876,937	7,262,065	13,434,461
<u>24,982,639</u>	<u>25,008,460</u>	<u>7,228,196</u>	<u>10,841,507</u>	<u>12,094,532</u>	<u>15,713,524</u>
\$120,670,202	\$121,682,236	\$108,095,742	\$113,608,747	\$81,244,109	\$88,423,257

**New Jersey Water Supply Authority
Raritan Basin System
Summary of Water Use Contracts
Daily Contract in Million Gallons Per Day – MGD**

<u>WATER USER</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
UNITED WATER LAMBERTVILLE, INC	0.490	0.490	0.490	0.490	0.490
MERCER COUNTY PARK - GOLF	0.132	0.132	0.132	0.132	0.132
TRENTON COUNTRY CLUB	0.126	0.126	0.126	0.126	0.126
PRINCETON UNIVERSITY	0.150	0.150	0.150	0.150	0.150
NORTH BRUNSWICK TOWNSHIP	8.000	8.000	8.000	8.000	8.000
SELODY SOD FARMS, INC.	0.025				
NEW JERSEY AMERICAN WATER	126.600	126.600	126.600	126.600	126.600
EAST BRUNSWICK TOWNSHIP	8.000	8.000	8.000	8.000	8.000
NEW BRUNSWICK, CITY OF	10.500	10.500	10.500	10.500	10.500
MIDDLESEX WATER COMPANY	27.000	27.000	27.000	27.000	27.000
ROYCE BROOK GOLF CLUB	0.165	0.165	0.165	0.165	0.165
DUKE FARMS	0.058	0.075	0.075	0.075	0.075
BOROUGH OF GLEN GARDNER	0.008	0.008	0.008	0.008	0.008
RIDGE AT BACK BROOK	0.111	0.111	0.111	0.111	0.111
ROXBURY WATER COMPANY	0.074	0.074	0.074	0.074	0.074
HUNTERDON COUNTY (HERON GLEN GOLF)	0.261	0.261	0.066	0.079	0.079
RARITAN VALLEY COUNTRY CLUB	0.012	0.012	0.012	0.012	0.012
EAST WINDSOR MUA	0.011	0.011	0.011	0.011	0.011
SOMERSET CTY (NESCHANIC VALLEY GOLF)	0.116	0.116	0.142	0.142	0.142
TRUMP NATIONAL GOLF CLUB	0.080	0.080	0.080	0.080	0.170
MORRIS COUNTY MUA	0.079	0.079	0.079	0.079	0.079
APPLIED WATER MGMT (MT. OLIVE TWP)	0.010	0.010	0.010	0.010	0.010
WASHINGTON TOWNSHIP MUA	0.025	0.025	0.025	0.025	0.025
ROXITICUS GOLF CLUB	0.046	0.046	0.046	0.046	0.046
HAMILTON GOLF CLUB	0.138	0.138	0.138	0.138	0.138
SPRINGDALE GOLF CLUB	0.098	0.098	0.098	0.098	0.098
NJ DEPT OF CORRECTIONS		0.025	0.025	0.025	0.025
STONEBRIDGE COMMUNITY ASSOC					0.081
VILLAGE GRANDE @ BEAR CREEK					
EASTERN CONCRETE MATERIALS					
HUNTERDON MEDICAL CENTER					
PRINCETON UNIVERSITY OPERATIONS					
RENAISSANCE AT MONROE CONDOMINIUM ASSOCIATION					
SYSTEM TOTAL	182.315	182.332	182.163	182.176	182.347

**New Jersey Water Supply Authority
Raritan Basin System
Summary of Water Use Contracts
Daily Contract in Million Gallons Per Day – MGD**

<u>WATER USER</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
UNITED WATER LAMBERTVILLE, INC	0.490	0.490	0.490	0.490	0.490
MERCER COUNTY PARK COMMISSION	0.067	0.067	0.067	0.067	0.067
TRENTON COUNTRY CLUB	0.126	0.126	0.126	0.126	0.126
PRINCETON UNIVERSITY	0.150	0.150	0.150	0.150	0.150
NORTH BRUNSWICK TOWNSHIP	8.000	8.000	8.000	8.000	8.000
SELODY SOD FARMS, INC.					
NEW JERSEY AMERICAN WATER	126.600	126.600	126.600	126.600	126.600
EAST BRUNSWICK TOWNSHIP	8.000	8.000	8.000	8.000	8.000
NEW BRUNSWICK, CITY OF	10.500	10.500	10.500	10.500	10.500
MIDDLESEX WATER COMPANY	27.000	27.000	27.000	27.000	27.000
ROYCE BROOK GOLF CLUB	0.165	0.165	0.165	0.165	0.165
DUKE FARMS	0.000	0.000	0.000	0.000	0.000
BOROUGH OF GLEN GARDNER	0.008	0.008	0.008	0.008	0.008
RIDGE AT BACK BROOK	0.111	0.111	0.111	0.111	0.111
ROXBURY WATER COMPANY	0.074	0.041	0.041	0.041	0.041
HUNTERDON COUNTY (HERON GLEN GOLF)	0.079	0.079	0.079	0.079	0.079
RARITAN VALLEY COUNTRY CLUB	0.012	0.012	0.012	0.012	0.012
EAST WINDSOR MUA	0.011	0.011	0.011	0.011	0.011
SOMERSET CTY (NESCHANIC VALLEY GOLF)	0.142	0.142	0.142	0.142	0.142
TRUMP NATIONAL GOLF CLUB	0.170	0.170	0.170	0.170	0.170
MORRIS COUNTY MUA	0.079	0.079	0.079	0.079	0.079
APPLIED WATER MGMT (MT. OLIVE TWP)	0.010	0.010	0.010	0.010	0.010
WASHINGTON TOWNSHIP MUA	0.025	0.025	0.035	0.035	0.035
ROXITICUS GOLF CLUB	0.046	0.046	0.046	0.046	0.046
HAMILTON FARM GOLF CLUB	0.138	0.138	0.138	0.138	0.138
SPRINGDALE GOLF CLUB	0.098	0.098	0.098	0.098	0.098
NJ DEPT OF CORRECTIONS	0.025	0.025	0.025	0.025	0.025
STONEBRIDGE COMMUNITY ASSOC	0.081	0.081	0.081	0.081	0.081
VILLAGE GRANDE@ BEAR CREEK	0.074	0.074	0.074	0.074	0.074
EASTERN CONCRETE MATERIALS		0.023	0.023	0.023	0.023
HUNTERDON MEDICAL CENTER			0.031	0.031	0.031
PRINCETON UNIVERSITY OPERATIONS			0.027	0.027	0.027
RENAISSANCE AT MONROE CONDOMINIUM ASSOCIATION				0.014	0.014
SYSTEM TOTAL	182.281	182.271	182.339	182.353	182.353

**New Jersey Water Supply Authority
Manasquan Water Supply System
Summary of Water Use Contracts
Daily Contract in Million Gallons Per Day – MGD**

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
WALL TOWNSHIP	2.275	2.275	2.275	2.275	2.275
BOROUGH OF AVON	0.142	0.142	0.142	0.142	0.142
SHORELANDS WATER COMPANY	1.928	1.928	1.928	1.928	1.928
NEW JERSEY AMERICAN WATER	12.5	12.5	12.5	12.5	12.5
BOROUGH OF RED BANK	0.778	0.778	0.778	0.778	0.778
BOROUGH OF SEA GIRT	0.075	0.075	0.075	0.075	0.075
BOROUGH OF SPRING LAKE	0.31	0.31	0.31	0.31	0.31
BOROUGH OF SPRING LAKE HEIGHTS	0.425	0.425	0.425	0.425	0.425
BOROUGH OF BELMAR	0.65	0.65	0.65	0.65	0.65
BOROUGH OF BRIELLE	0.45	0.45	0.45	0.45	0.45
BOROUGH OF KEYPORT	0.458	0.458	0.458	0.458	0.458
BOROUGH OF MATAWAN	0.469	0.469	0.469	0.469	0.469
BOROUGH OF LAKE COMO	0.100	0.100	0.100	0.100	0.100
	<u>20.560</u>	<u>20.560</u>	<u>20.560</u>	<u>20.560</u>	<u>20.560</u>
	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
WALL TOWNSHIP	2.275	2.275	2.00	2.00	2.00
BOROUGH OF AVON	0.142	0.142	0.126	0.126	0.126
SHORELANDS WATER COMPANY	1.928	1.928	2.007	2.007	2.007
NEW JERSEY AMERICAN WATER	12.5	12.5	12.5	12.5	12.5
BOROUGH OF RED BANK	0.778	0.778	0.548	0.548	0.548
BOROUGH OF SEA GIRT	0.075	0.075	0.04	0.04	0.04
BOROUGH OF SPRING LAKE	0.31	0.31	0.31	0.31	0.31
BOROUGH OF SPRING LAKE HEIGHTS	0.425	0.425	0.386	0.386	0.386
BOROUGH OF BELMAR	0.65	0.65	0.288	0.288	0.288
BOROUGH OF BRIELLE	0.45	0.45	0.45	0.45	0.45
BOROUGH OF KEYPORT	0.458	0.458	0.356	0.356	0.356
BOROUGH OF MATAWAN	0.469	0.469	0.332	0.332	0.332
BOROUGH OF LAKE COMO	0.100	0.100	0.100	0.100	0.100
	<u>20.560</u>	<u>20.560</u>	<u>19.443</u>	<u>19.443</u>	<u>19.443</u>

NOTE: The Manasquan System started operations July 1, 1990.

**New Jersey Water Supply Authority
Raritan Basin System
Series 1988, D&R System Revenue Bond Coverage*¹
Series 1998, D&R System Revenue Refunding Bond Coverage**

Fiscal Year	Gross Revenue	Operating Expenses	Net Revenue Available for Debt Service	Debt Service Payments	Coverage
2018 ²					
2017 ²					
2016 ²					
2015 ²					
2014	\$17,584,676	\$12,099,450	\$5,485,226	\$2,669,875	2.05
2013	\$17,504,982	\$11,677,600	\$5,827,382	\$2,670,997	2.18
2012	\$17,799,191	\$11,935,100	\$5,864,091	\$2,680,266	2.19
2011	\$18,055,011	\$11,765,800	\$6,289,211	\$2,688,219	2.34
2010	\$17,968,946	\$11,678,300	\$6,290,646	\$2,698,931	2.33
2009	\$17,796,183	\$11,642,975	\$6,153,208	\$2,702,738	2.28

Note 1. Section 713 of the Delaware & Raritan Canal - Spruce Run/Round Valley Reservoirs System Bond Resolution, adopted November 17, 1988, requires that the Net Revenues in each fiscal year be at least 120% of the Debt Service on the 1988 bonds for the twelve-month period in such fiscal year.

Note 2. The last principal payment of \$2,600,000 was made on November 1, 2013

**Manasquan Water Supply System
Series 2005, Manasquan System Revenue Bond Coverage*¹**

Fiscal Year	Gross Revenue	Operating Expenses	Net Revenue Available for Debt Service	Debt Service Payments	Coverage
2018	\$7,686,455	\$2,995,816	\$4,690,639	\$3,454,588	1.358
2017	\$8,075,400	\$3,171,399	\$4,904,001	\$718,532	6.825
2016	\$8,519,609	\$3,032,555	\$5,487,054	\$3,969,827	1.382
2015	\$8,715,369	\$3,096,047	\$5,619,322	\$4,250,454	1.322
2014	\$8,456,993	\$2,981,200	\$5,475,793	\$4,082,274	1.340
2013	\$8,174,391	\$2,862,600	\$5,311,791	\$4,080,204	1.300
2012	\$8,210,668	\$2,866,100	\$5,344,568	\$4,071,454	1.310
2011	\$7,976,636	\$2,956,600	\$5,020,036	\$3,809,328	1.320
2010	\$7,785,670	\$2,823,200	\$4,962,470	\$3,816,713	1.300
2009	\$7,452,307	\$2,700,800	\$4,751,507	\$3,807,244	1.250

Note 1. Section 712 of the Manasquan Reservoir System Bond Resolution, adopted June 6, 2005 as supplemented by the Second Supplemental Bond Resolution, adopted April 4, 2016, requires that the Net Revenues in each fiscal year be at least 120% of the Debt Service on the 2005 and 2016 Bonds for the twelve-month period in such fiscal year.

* Numbers to calculate bond coverage were extracted from the corresponding budget for the applicable fiscal year.

**New Jersey Water Supply Authority
Delaware and Raritan Canal – Spruce Run/Round Valley Reservoirs System
Water Charges Per Million Gallons of Raw Water Daily**

<u>EFFECTIVE DATE</u>	<u>7/1/2009</u>	<u>7/1/2010</u>	<u>7/1/2011</u>	<u>7/1/2012</u>	<u>7/1/2013</u>
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RATE PER MGD	\$231.00	\$231.00	\$231.00	\$231.00	\$231.00
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<u>EFFECTIVE DATE</u>	<u>7/1/2014</u>	<u>7/1/2015</u>	<u>7/1/2016</u>	<u>7/1/2017</u>	<u>7/1/2018</u>
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RATE PER MGD	\$246.00	\$253.00	\$253.00	\$336.00	\$336.00
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**New Jersey Water Supply Authority
Manasquan Water Supply System
Water Charges Per Million Gallons of Raw Water Daily**

<u>EFFECTIVE DATE</u>	<u>7/01/2009</u>	<u>7/01/2010</u>	<u>7/01/2011</u>	<u>7/01/2012</u>	<u>7/01/2013</u>
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RATE PER MGD	\$980.05	\$980.48	\$1,015.90	\$1,015.90	\$1,015.90
(Delayed Contracts)	\$1,175.03	\$1,167.98	\$1,168.71	\$1,168.49	\$1,168.49

<u>EFFECTIVE DATE</u>	<u>7/01/2014</u>	<u>7/01/2015</u>	<u>7/01/2016</u>	<u>7/01/2017</u>	<u>7/01/2018</u>
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RATE PER MGD	\$1,015.90	\$1,057.40	\$1,104.58	\$1,043.35	\$1,043.35
(Delayed Contracts)	\$1,168.49	\$1,190.86	\$1,238.04	\$1,137.76	\$1,137.76

**New Jersey Water Supply Authority
Raritan Basin System
Spruce Run Rain Gauge (inches)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
2018	2.99	6.64	4.78	5.95	5.66	3.38	9.47	9.83	9.52	4.11	12.77	1.27	76.37
2017	3.32	1.87	4.91	2.66	5.15	3.08	7.88	4.87	2.47	5.76	1.52	1.44	44.93
2016	2.03	4.60	1.11	1.66	4.07	3.03	7.00	2.98	1.74	0.53	3.02	3.25	35.02
2015	2.38	0.86	3.91	2.03	2.38	5.98	2.02	0.78	2.76	3.37	1.66	4.23	32.36
2014	2.56	2.04	3.12	7.35	2.66	4.25	3.96	1.96	1.57	3.20	3.48	3.38	39.53
2013	2.67	1.65	2.08	2.16	6.27	10.40	5.85	3.79	3.94	0.79	2.77	3.66	46.03
2012	2.99	0.94	0.84	2.86	3.67	3.88	1.78	2.80	4.34	2.68	0.73	4.58	32.09
2011	0.87	2.93	6.97	6.48	4.38	2.62	4.19	14.21	13.49	1.63	4.90	4.09	66.76
2010	2.30	1.90	7.40	3.10	3.60	3.50	8.20	1.30	3.30	4.30	1.94	2.52	43.36
2009	1.93	0.52	1.43	2.70	4.73	6.58	8.69	7.62	2.73	4.66	0.91	5.85	48.35
TOTAL	24.04	23.95	36.55	36.95	42.57	46.70	59.04	50.14	45.86	31.03	33.70	34.27	464.80
AVERAGE	2.40	2.40	3.66	3.70	4.26	4.67	5.90	5.01	4.59	3.10	3.37	3.43	46.48
MAXIMUM	3.32	6.64	7.40	7.35	6.27	10.40	9.47	14.21	13.49	5.76	12.77	5.85	76.37
MINIMUM	0.87	0.52	0.84	1.66	2.38	2.62	1.78	0.78	1.57	0.53	0.73	1.27	32.09

**New Jersey Water Supply Authority
Raritan Basin System
West Windsor Rain Gauge (inches)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
2018	2.89	7.05	4.80	4.74	5.98	3.99	6.03	4.57	8.39	2.16	8.88	0.97	60.45
2017	4.35	1.38	3.74	3.86	6.59	5.16	5.41	7.90	2.69	4.94	1.68	1.60	49.30
2016	2.21	5.30	2.29	1.49	3.83	1.82	9.42	1.11	2.10	2.18	3.78	3.30	38.83
2015	3.18	2.46	5.53	2.54	1.38	6.04	2.79	1.72	3.27	5.27	1.98	5.28	41.44
2014	2.59	3.45	4.59	7.36	3.05	3.58	7.61	2.80	1.05	4.42	5.00	5.35	50.85
2013	3.15	2.59	3.06	2.40	3.48	10.78	5.70	4.87	2.37	0.87	3.83	3.88	46.98
2012	3.51	1.73	1.58	2.94	5.58	3.82	4.94	4.93	2.36	5.30	1.42	4.99	43.10
2011	1.06	2.88	5.93	6.87	5.14	3.42	4.56	17.31	9.11	1.00	3.49	4.22	64.99
2010	2.70	2.90	10.30	3.20	3.00	2.20	2.70	2.60	2.90	4.80	2.31	2.97	42.58
2009	2.57	0.50	1.25	3.17	6.58	8.09	7.46	8.90	2.10	5.76	1.60	6.21	54.19
TOTAL	28.21	30.24	43.07	38.57	44.61	48.90	56.62	56.71	36.34	36.70	33.97	38.77	492.71
AVERAGE	2.82	3.02	4.31	3.86	4.46	4.89	5.66	5.67	3.63	3.67	3.40	3.88	49.27
MAXIMUM	4.35	7.05	10.30	7.36	6.59	10.78	9.42	17.31	9.11	5.76	8.88	6.21	64.99
MINIMUM	1.06	0.50	1.25	1.49	1.38	1.82	2.70	1.11	1.05	0.87	1.42	0.97	38.83

**New Jersey Water Supply Authority
Raritan Basin System
Spruce Run Rain Reservoir Storage
Billion Gallons**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2018	5.6	6.0	7.9	9.9	11.1	11.0	11.0	10.9	10.9	10.5	10.3	11.1
2017	4.1	4.9	5.3	6.6	8.1	9.3	9.8	10.4	10.4	8.1	6.2	6.1
2016	5.3	6.0	8.2	8.9	9.3	9.8	7.8	7.0	6.2	4.9	3.7	3.7
2015	5.8	6.4	6.3	8.8	9.8	10.1	10.7	9.7	7.1	5.4	4.9	5.3
2014	8.4	9.1	9.2	10.0	11.4	10.5	10.5	10.5	8.2	5.0	4.5	4.7
2013	7.8	8.5	9.2	9.8	10.6	11.0	10.9	10.7	10.6	9.8	8.3	7.5
2012	9.9	10.2	10.1	10.5	11.0	11.0	10.9	9.2	8.0	6.4	6.3	6.4
2011	8.2	8.3	9.9	10.8	11.0	11.0	11.0	10.0	11.0	11.2	9.9	10.8
2010	10.7	10.5	10.7	11.2	11.0	11.0	10.5	9.3	7.9	6.1	7.1	7.4
2009	9.5	10.1	10.0	10.6	10.7	11.1	11.1	11.1	10.7	10.4	10.8	10.7
AVERAGE	7.5	8.0	8.7	9.7	10.4	10.6	10.4	9.9	9.1	7.8	7.2	7.4
MAXIMUM	10.7	10.5	10.7	11.2	11.4	11.1	11.1	11.1	11.0	11.2	10.8	11.1
MINIMUM	4.1	4.9	5.3	6.6	8.1	9.3	7.8	7.0	6.2	4.9	3.7	3.7

MAXIMUM CAPACITY 11.0 BG

**New Jersey Water Supply Authority
Raritan Basin System
Round Valley Reservoir Storage
Billion Gallons**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2018	42.1	41.3	41.7	42.0	44.7	47.0	47.0	47.0	47.0	47.2	47.2	47.7
2017	36.2	36.9	37.4	38.7	40.4	42.6	43.0	43.1	42.8	42.6	42.7	42.5
2016	44.3	44.5	44.9	45.0	45.0	45.7	45.6	44.3	43.4	39.4	37.0	35.9
2015	48.5	48.7	48.7	49.1	49.2	49.0	49.1	49.0	47.4	44.6	44.1	44.3
2014	52.6	52.7	53.1	53.3	53.9	53.7	51.7	50.1	49.9	49.6	48.6	48.4
2013	51.6	51.7	51.7	51.8	51.8	52.1	52.7	53.1	53.2	53.0	52.6	52.5
2012	52.6	52.7	52.7	52.7	52.8	53.1	52.9	51.5	51.6	51.5	51.7	51.3
2011	48.1	48.2	48.4	48.9	51.2	52.0	52.0	51.0	51.6	52.1	52.1	52.3
2010	54.7	54.8	55.0	55.1	54.8	55.1	54.6	53.4	50.5	48.4	48.2	48.2
2009	51.3	51.3	51.3	51.5	52.8	53.8	54.1	54.4	54.6	54.5	54.5	54.4
AVERAGE	48.20	48.28	48.49	48.81	49.66	50.42	50.28	49.69	49.19	48.29	47.86	47.75
MAXIMUM	54.7	54.8	55.0	55.1	54.8	55.1	54.6	54.4	54.6	54.5	54.5	54.4
MINIMUM	36.2	36.9	37.4	38.7	40.4	42.6	43.0	43.1	42.8	39.4	37.0	35.9

MAXIMUM CAPACITY 55.0 BG

**New Jersey Water Supply Authority
Manasquan Water System Rainfall (inches)**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
2018	3.31	7.63	7.20	4.01	10.34	2.89	6.16	7.02	8.00	6.37	9.30	6.12
2017	5.01	1.22	7.68	3.96	8.07	2.31	4.13	4.17	2.49	5.98	2.52	1.36
2016	2.15	3.81	1.94	2.15	3.42	1.54	7.59	0.58	4.49	3.58	2.93	3.63
2015	5.20	1.87	4.29	2.29	1.14	5.44	3.01	2.35	2.11	4.82	2.42	4.49
2014	2.31	3.16	3.13	6.95	2.92	3.46	6.42	5.79	1.77	5.07	5.33	5.81
2013	2.66	3.65	3.08	2.17	4.24	9.29	4.31	3.55	1.92	1.06	2.61	7.71
2012	2.48	1.45	1.48	2.87	4.30	5.03	3.21	5.75	5.79	5.01	1.87	4.51
2011	4.26	2.39	5.00	5.13	3.38	2.71	3.71	17.87	5.62	4.51	3.33	4.75
2010	2.52	3.85	10.47	2.51	3.58	1.17	5.88	0.97	3.99	4.23	1.98	10.47
2009	4.00	0.47	2.13	6.04	3.48	6.83	5.42	3.67	5.89	4.83	2.51	6.91
TOTAL	33.90	29.50	46.40	38.08	44.87	40.67	49.84	51.72	42.07	45.46	34.80	55.76
AVERAGE	3.39	2.95	4.64	3.81	4.49	4.07	4.98	5.17	4.21	4.55	3.48	5.58
MAXIMUM	5.20	7.63	10.47	6.95	10.34	9.29	7.59	17.87	8.00	6.37	9.30	10.47
MINIMUM	2.15	0.47	1.48	2.15	1.14	1.17	3.01	0.58	1.77	1.06	1.87	1.36

NOTE: The Manasquan System started operations July 1, 1990

**New Jersey Water Supply Authority
Manasquan Water Reservoir Storage Data
Billion Gallons**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
2018	4.17	4.64	4.66	4.64	4.62	4.59	4.43	4.54	4.58	4.58	4.55	4.53
2017	4.37	4.61	4.56	4.62	4.60	4.54	4.34	4.14	4.00	3.76	4.00	4.05
2016	4.44	4.60	4.58	4.60	4.58	4.38	4.02	3.71	3.19	3.02	3.01	3.52
2015	4.58	4.54	4.52	4.59	4.60	4.51	4.34	3.91	3.35	3.12	3.20	3.52
2014	4.59	4.62	4.61	4.62	4.62	4.55	4.35	4.15	3.64	3.52	3.86	4.46
2013	4.57	4.61	4.58	4.52	4.59	4.35	4.21	3.88	3.69	3.47	3.42	4.33
2012	4.59	4.51	4.56	4.56	4.56	4.39	4.08	4.85	3.83	3.66	3.92	4.49
2011	4.26	4.37	4.48	4.56	4.56	4.49	4.32	4.15	3.98	3.95	4.39	4.13
2010	4.60	4.58	4.64	4.60	4.58	4.32	3.92	3.52	3.03	3.18	3.23	3.48
2009	4.60	4.63	4.61	4.63	4.62	4.59	4.51	4.42	4.26	4.44	4.47	4.65
AVERAGE	4.48	4.57	4.58	4.59	4.59	4.47	4.25	4.13	3.75	3.67	3.81	4.12
MAXIMUM	4.60	4.64	4.66	4.64	4.62	4.59	4.51	4.85	4.58	4.58	4.55	4.65
MINIMUM	4.17	4.37	4.48	4.52	4.56	4.32	3.92	3.52	3.03	3.02	3.01	3.48

MAXIMUM CAPACITY 4.7 BG

New Jersey Water Supply Authority

Bonds, Notes and Loans Payable

Fiscal Year Ending	Revenue Bonds	Deferred Notes to the State of New Jersey	Loans to the State of New Jersey and NJEIT	Total Bonds, Notes and Loans Payable	Outstanding Debt to Total Personal Income Ratio ¹	Outstanding Debt Per Capita Ratio ²
2018	\$15,748,257	\$33,566,892	\$60,811,617	\$110,126,766	0.060%	\$44.16
2017	\$18,802,335	\$33,566,892	\$12,318,018	\$64,687,245	0.037%	\$25.94
2016	\$19,281,414	\$33,566,892	\$13,382,948	\$66,231,254	0.040%	\$26.74
2015	\$27,135,913	\$33,647,103	\$14,379,107	\$75,162,123	0.047%	\$30.38
2014	\$30,058,222	\$33,649,796	\$15,420,970	\$79,128,988	0.051%	\$32.03
2013	\$35,456,893	\$33,652,337	\$16,393,574	\$85,502,804	0.058%	\$34.72
2012	\$40,607,618	\$33,654,736	\$17,198,649	\$91,461,003	0.063%	\$37.30
2011	\$45,524,920	\$33,657,001	\$12,822,647	\$92,004,568	0.065%	\$37.69
2010	\$50,234,457	\$33,659,135	\$11,442,033	\$95,335,625	0.071%	\$39.21
2009	\$54,751,978	\$33,661,151	\$12,053,299	\$100,466,428	0.077%	\$41.39

Note 1. Total personal income for the service area of Hunterdon, Middlesex, Somerset, Union and Monmouth Counties using New Jersey Department of Labor and Workforce Development Total Personal Income for all New Jersey Counties: 1969 to 2015 and Bureau of Economic Analysis, U.S. Department of Commerce Personal Income Growth 2016, 2017; estimates for 2018 based on first 3 quarters

Note 2. Population estimates for the service area of Hunterdon, Middlesex, Somerset, Union and Monmouth Counties using New Jersey Department of Labor and Workforce Development Estimates of County Population April 1, 2010 to July 1, 2017
Source: US Bureau of the Census, 2017 Population Estimates, June 21, 2018

**State of New Jersey Ten Largest Employers
2016 as Compared To 2007**

2016* RANK	EMPLOYER	NEW JERSEY EMPLOYEES	PERCENTAGE OF TOTAL NEW JERSEY EMPLOYMENT
1	New Jersey State Government	64,379	1.5%
2	Wakefern Food Corporation (ShopRite)	40,000	0.9
3	Wal-Mart Stores, Inc.	20,383	0.5
4	United Parcel Service (UPS)	19,243	0.4
5	Verizon Communications	14,600	0.3
6	Johnson & Johnson	14,500	0.3
7	The Home Depot	13,806	0.3
8	United Airlines	12,000	0.3
9	Public Service Electric and Gas Company	10,800	0.2
10	Bank of America	10,000	0.2
		219,711	4.9%

2007 RANK	EMPLOYER	NEW JERSEY EMPLOYEES	PERCENTAGE OF TOTAL NEW JERSEY EMPLOYMENT
1	New Jersey State Government	79,191	1.9%
2	Wakefern Food Corporation (ShopRite)	31,671	0.7
3	The Great Atlantic and Pacific Tea Company	21,277	0.5
4	Verizon Communications	17,996	0.4
5	Harrah's Entertainment, Inc.	16,167	0.4
6	United Parcel Service (UPS)	16,120	0.4
7	Wal-Mart Stores, Inc.	14,717	0.3
8	Johnson & Johnson	14,500	0.3
9	Continental Airlines	13,752	0.3
10	Home Depot	12,000	0.3
		237,391	5.5%

Notes:

Aggregate New Jersey resident employment for Calendar Years 2016 and 2007 totaled 4.334 million and 4.252 million, respectively.

New Jersey State Government data excludes State authorities, colleges and universities.

New Jersey Business' Top 100 Employers data derived from annual questionnaires submitted by private sector respondents, excluding government, higher education institutions, and non-profit hospitals.

Sources:

Pytell, J. (2017, August). 45th annual top 100 employers. New Jersey Business. 63(8), 32-41.

Saliba, G.N. (2008, May). 36th annual top 100 employers. New Jersey Business, 54(5), 42-53.

Data reprinted with permission from the New Jersey Business and Industry Association.

New Jersey Department of the Treasury, Office of Management and Budget.

New Jersey Department of the Treasury, Office of Revenue & Economic Analysis.

* Most recent available data.

**State of New Jersey
Population and Employment Trends
(Expressed in Thousands)**

YEAR	NEW JERSEY POPULATION	CIVILIAN LABOR FORCE ¹	RESIDENT EMPLOYMENT ¹	RESIDENT UNEMPLOYMENT ¹	NEW JERSEY UNEMPLOYMENT RATE	UNITED STATES UNEMPLOYMENT RATE ²
2007	8,678	4,442	4,252	190	4.3	4.6
2008	8,711	4,504	4,264	241	5.4	5.8
2009	8,756	4,551	4,139	412	9.1	9.3
2010	8,804	4,555	4,122	434	9.5	9.6
2011	8,841	4,565	4,139	427	9.3	8.9
2012	8,873	4,585	4,159	427	9.2	8.1
2013	8,899	4,529	4,158	371	8.1	7.4
2014	8,925	4,514	4,210	304	6.7	6.2
2015	8,935	4,544	4,289	255	5.6	5.3
2016	8,945	4,557	4,334	223	4.9	4.9

Notes:

¹ Civilian Labor Force, Resident Employment, and Resident Unemployment data for 2007 through 2015 has been revised.

² United States Unemployment Rate data for 2007 through 2015 has been revised.

Sources:

United States Census Bureau, Population Division.

New Jersey Department of the Treasury, Office of Revenue & Economic Analysis.

**State of New Jersey
Valuations of Taxable Real Property, Personal and Per Capita Income
(Expressed in Millions Except as Indicated)**

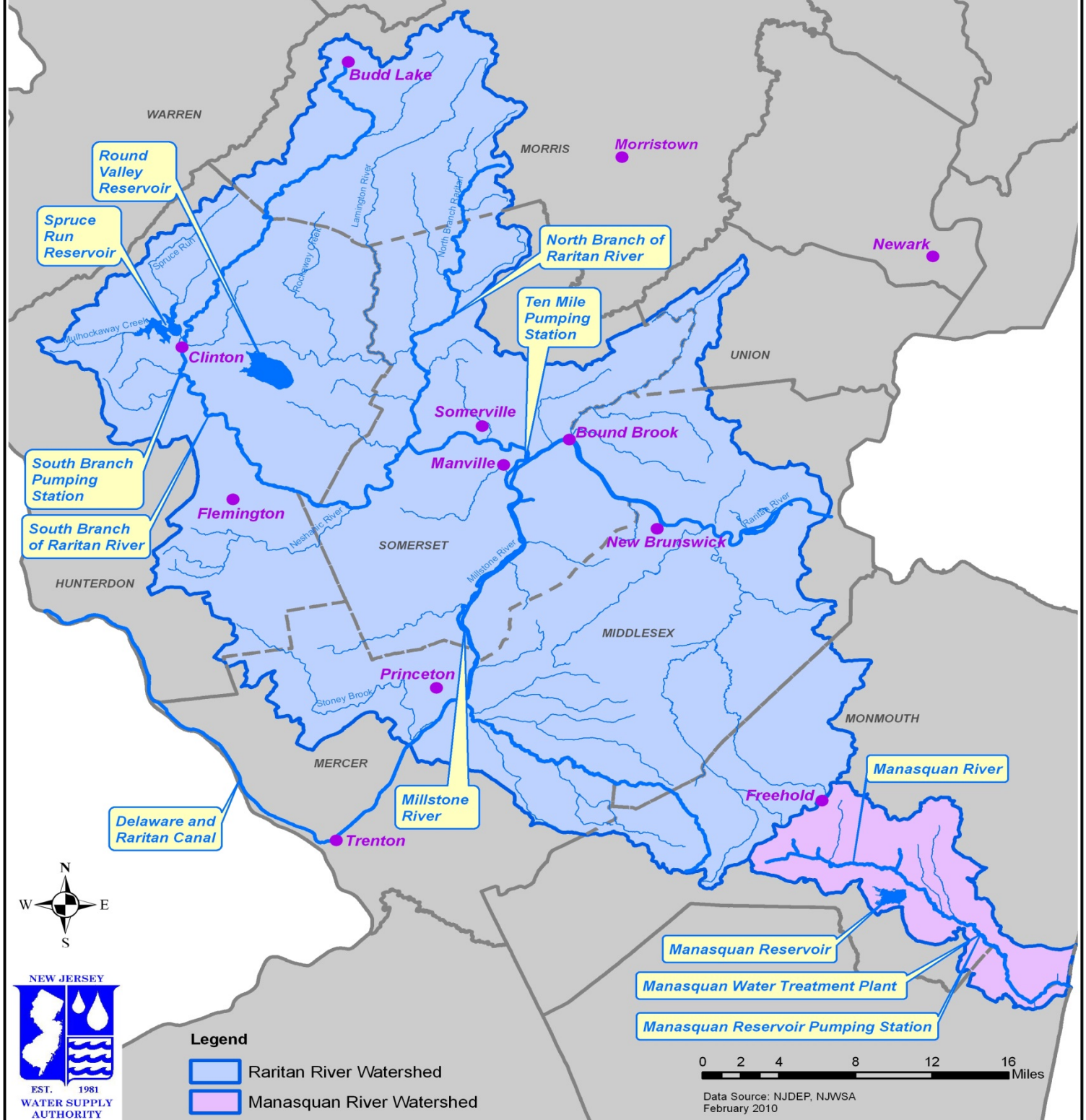
YEAR	NEW JERSEY POPULATION (Thousands)	ASSESSED VALUATION OF PROPERTY	TRUE VALUATION OF PROPERTY	PERSONAL INCOME	PER CAPITA INCOME (Thousands)
2007	8,678	744,899	1,235,286	438,839	50.5
2008	8,711	834,782	1,326,297	455,850	52.3
2009	8,756	893,342	1,355,004	442,746	50.5
2010	8,804	959,282	1,331,604	451,895	51.3
2011	8,841	983,963	1,278,578	473,743	53.6
2012	8,873	988,356	1,235,474	490,611	55.3
2013	8,899	990,697	1,183,032	494,040	55.5
2014	8,925	971,600	1,158,322	516,020	57.8
2015	8,935	983,032	1,164,399	537,026	60.1
2016	8,945	981,731	1,183,048	554,268	62.0

Sources:

United States Census Bureau, Population Division.

New Jersey Department of the Treasury, Office of Revenue & Economic Analysis.

New Jersey Water Supply Authority Water Supply Systems



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