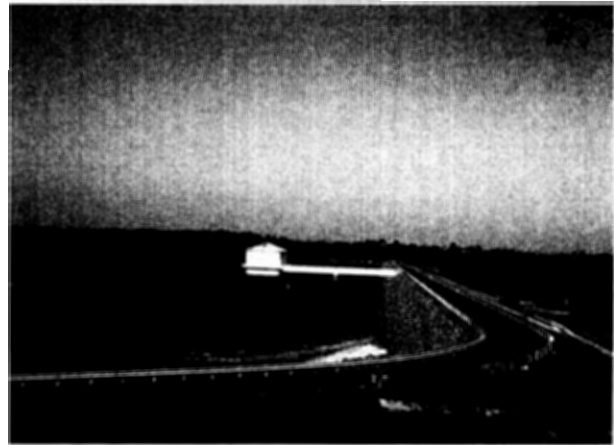




**NEW JERSEY
WATER SUPPLY
AUTHORITY**

**2002
ANNUAL
REPORT**



**AND THE
COMPREHENSIVE ANNUAL
FINANCIAL REPORT
FOR THE YEAR ENDED JUNE 30, 2002**

2002 Annual Report

Governor
James E. McGreevey



Authority Members

Bradley M. Campbell
Chair

Susan Blew
Secretary

Louis C. Mai
Treasurer
Chair, Finance Committee
Chair, Personnel Committee

Donald L. Correll
Chair, Insurance Committee

Shing-Fu Hsueh

Steven J. Picco

Staff

Edward Buss, P.E.
Acting Executive Director

Helene P. Chudzik, Esq.
Deputy Attorney General

2003 Monthly Meetings

The 2003 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 Route 31, Clinton, New Jersey, unless otherwise indicated, beginning at 2:00 p.m. on the following Mondays:

January 6, 2003

February 3, 2003

March 3, 2003

April 7, 2003

May 5, 2003

June 2, 2003 (Canal Office)

July 7, 2003 (Canal Office)

August 4, 2003 (Manasquan Office)

September 8, 2003

October 6, 2003

November 3, 2003

December 1, 2003

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.

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 over 1,300,000 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 over 250,000 people in the Monmouth County area, on July 1, 1990. Under agreement with the Monmouth County Improvement 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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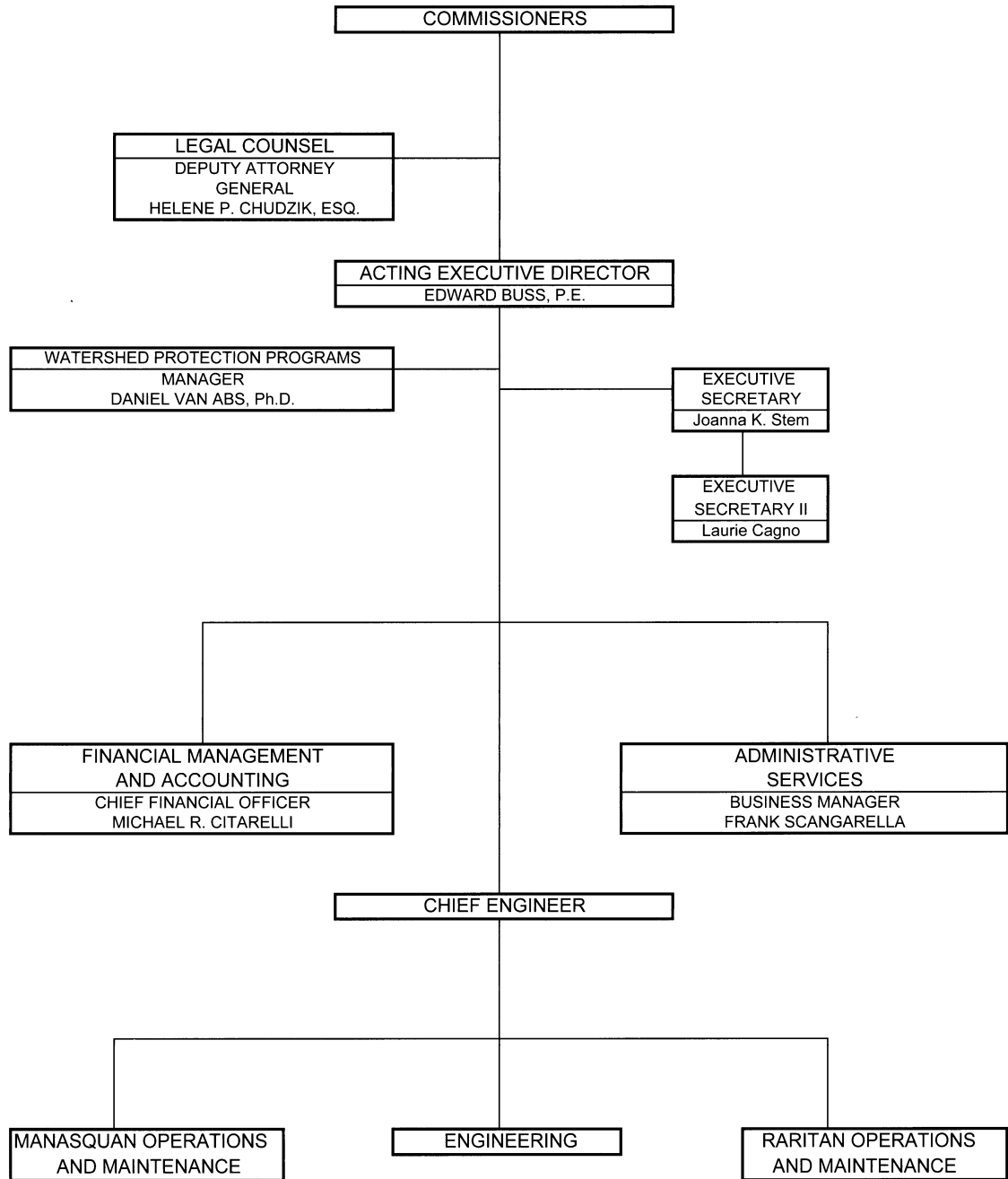
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NEW JERSEY WATER SUPPLY AUTHORITY TABLE OF ORGANIZATION



Letter to Governor and Legislature



NEW JERSEY WATER SUPPLY AUTHORITY

Post Office Box 5196 • Clinton, NJ 08809 • (908) 638-6121
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February 2003

To the Honorable James E. McGreevey, Governor and Members of the New Jersey Legislature

I am pleased to submit the 21st 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. This "New Jersey Water Supply Authority Act" under NJSA 58:1 B-20 calls for the Authority to publish an Annual Report of its books on or before the last day of February for the preceding calendar year.

Operations at all facilities were uninterrupted during the year. Following record low precipitation in the months of October 2001 through February 2002, a statewide drought emergency was declared on March 4, 2002. The drought emergency condition remained through the rest of the year with easing and tightening of water use restrictions as precipitation fluctuated.

The importance of the Raritan System in meeting the water needs of northern and central New Jersey was demonstrated again in 2002. Approximately two (2) billion gallons were transferred from the Raritan System to the northeast through the Virginia Street interconnection in Newark.

The Authority's capital improvement programs continue successfully at the Raritan Basin System, Manasquan Reservoir System, and the Water Treatment Plant/Transmission System. The goal of these programs are to make sure that the water supply facilities owned and operated by the Authority are as ready to serve as possible.

A small increase in the rate schedule is projected for the Raritan Basin System for Fiscal Year 2004. No change in the rate schedule is projected for the Manasquan Water Supply System for Fiscal Year 2004.

The Authority's annual financial reports have been awarded the prestigious "Certificate of Achievement for Excellence in Financial Reporting" by the Government Finance Officers Association of the United States and Canada for each of the past ten years. Our 2002 financial report reveals the Authority's continued sound financial condition.

Sincerely,



Bradley M. Campbell
Chair

Raritan Basin System

Facilities

Delaware and Raritan Canal

The Delaware and Raritan Canal (Canal) was originally constructed in 1834 and operated as a barge canal until 1932. The Canal was taken over by the State of New Jersey from the Pennsylvania Railroad Company in 1934. During the 1950's the Canal was rehabilitated to serve as a public water supply transmission system. In 1974 the Canal was designated as a State Park and was also placed on the State and Federal Registry of Historic Sites.

Originally, the navigable Delaware and Raritan Canal consisted of 43 miles of main Canal between the Delaware River at Bordentown and the Raritan River at New Brunswick and 22 miles of feeder Canal between Bulls Island in Hunterdon County and the City of Trenton. The present Canal Water Supply Transmission Facility is 60 miles long with its Delaware River intake at Bulls Island in Hunterdon County and its outlet at the Raritan River in the City of New Brunswick. The Canal right-of-way varies in width between 60 feet and 200 feet and includes a waterway varying between 40 and 80 feet wide. Flow from the Delaware River to the Raritan River is entirely by gravity and is regulated by control gates installed in the original lock structures.

In addition to the 100 million gallons per day (mgd) non-drought diversion entitlement from the Delaware River, natural streams and storm drains are directly tributary to the Canal. Three Authority water supply operators, with 24-hour responsibility to take emergency action on their own initiative, constantly monitor water levels and weather conditions and

adjust operating gates and open flood gates to protect the Canal during times of heavy rainfall.

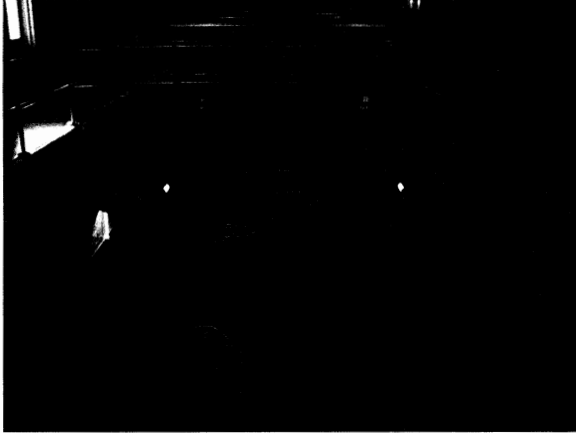


The 10 Mile Lock in Franklin Township, Somerset County is used to regulate water flows in the D&R Canal.

Spruce Run and Round Valley Reservoirs

The Spruce Run and Round Valley Reservoirs located in Hunterdon County were constructed by the State of New Jersey as initial steps in the long-range water conservation and development program authorized by the 1958 Water Supply Law and its companion Water Bond Act.

The 55 billion gallon Round Valley Reservoir, which became operational in 1965, was formed by construction of two dams and a dike, closing off gaps in a natural horseshoe shaped valley. The earthen dams and dike, faced with dumped stone riprap and sod, are of extra width and have an offset clay core in order to permit an increase in height for future additional storage capacity. With no appreciable local drainage area (five square miles), Round



A total of ten (10) 2000 HP pumps located at the South Branch Pumping Station are used to pump water to Round Valley Reservoir in Hunterdon County.

Valley Reservoir must be filled by pumping from the South Branch of the Raritan River. Minimum flows must be maintained in natural streams below the Reservoir. To accomplish this, a total of one million gallons is released daily from both the North and South Dams. A 3.6 mile, nine foot diameter release pipeline from the North Dam to the South Branch of the Rockaway Creek, near Whitehouse Station in Readington Township discharges water to the South Branch of the Rockaway Creek under a low pressure mode of operation.

The 350 mgd South Branch Pumping Station at Hamden, which pumps surplus water from the South Branch of the Raritan River, maintains the storage in the Round Valley Reservoir via a 3.2 mile, nine foot diameter force main, which enters the Reservoir at the South Dam. In 1990, modifications were completed on this force main to also permit this pipeline to release up to 120 mgd from the Round Valley Reservoir into the South Branch of the Raritan River.

The 11 billion gallon on-stream Spruce Run Reservoir, which was placed into operation in 1963, includes a 6,000 foot long earthen dam and two earthen dikes. A

concrete spillway having a safe discharge capacity of 15.5 billion gallons per day provides protection for the earthen dams during periods of heavy rainfall.

The Reservoirs, by augmenting stream flow during periods of low natural runoff, make available 160 mgd for sale at Bound Brook based on the 1960's drought. Additionally, a minimum statutory flow of 90 mgd must be maintained in the Raritan River at the Bound Brook stream gauge. For these purposes, water is released from the Spruce Run Reservoir to the South Branch of the Raritan River, from the Round Valley Reservoir to the South Branch of the Rockaway Creek and from the Round Valley Reservoir through the alternate release facilities to the South Branch of the Raritan River, for routing to the Raritan River. Operation by Authority staff involves maintenance of continuous hydrographs on the basis of data transmitted from six stream gauging stations. Predictions of natural flow at these control points, including anticipated storm runoff, must be made sufficiently in advance to allow for time of travel so that the releases meet both minimum stream flow regulations and customer demands.

The 1958 Water Supply Law allows recreational use of the water supply facilities. The cost of operating and administering the recreational facilities is provided by the New Jersey Department of Environmental Protection's (NJDEP's) Division of Parks and Forestry and Division of Fish, Game and Wildlife.

Raritan River to Delaware and Raritan Canal Pumping Station

This 60 million gallon per day pumping station, located where the Raritan and Millstone Rivers meet adjacent to the Canal

near South Bound Brook, was constructed after the drought of 1980-1981 to permit the transfer of water from the Raritan River, as sustained by releases from the Raritan Basin Reservoirs, to the adjacent Delaware and Raritan Canal. This facility is a major component of the integrated management program for the water resources of the Raritan Basin and the water diverted from the Delaware River. Water in the Raritan River can be transferred to the Delaware and Raritan Canal as needed or in the event of an upstream emergency or construction affecting the normal delivery of the Canal water supply. Based upon the Canal carrying capacity of 100 mgd, it is also possible to divert excess Canal flows, up to 30 mgd, through gates into the Raritan River for water supply or stream flow maintenance resulting in the maximum conservation of stored waters in the Spruce Run and Round Valley Reservoirs. Full development of the maximum possible yields, resulting from the integrated management of the water from the two basins, at least cost, is vital to meeting the water supply needs of the central New Jersey communities dependent upon these two sources of supply.



The 10 Mile Pumping Station near South Bound Brook provides the ability to meet customer needs during periods which affect normal water flow in the canal.

Operations, Maintenance, and Engineering

Spruce Run/Round Valley Reservoirs Complex

Reservoir Operations

Precipitation at the Spruce Run Rain Gauge between the months of October 2001 and February 2002 was only 38 percent of the average for this five-month period. With regional variations, the below average precipitation was a statewide issue.

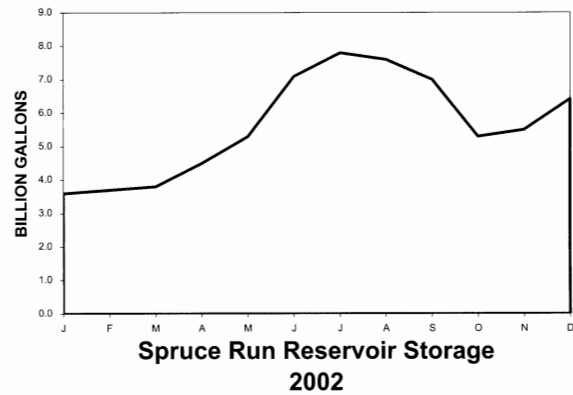
Due to the lack of precipitation and dropping reservoir levels, Governor McGreevey declared a statewide drought emergency on March 4, 2002. Water use restrictions were imposed on a regional basis. The restrictions were modified during the spring and summer months, but as of October 2002 the drought emergency declaration remained in effect.



The South Tower assists in controlling water levels at Round Valley Reservoir in Hunterdon County.

Water from the Raritan Basin was transferred into northeastern New Jersey via an interconnection with Elizabethtown Water Company (EWC) and the City of Newark. During the four month period between February and May 2002, 1.7 billion

gallons were transferred through this interconnection. An additional 190 million gallons was transferred into the northeast through EWC's interconnection with New Jersey American's Commonwealth System.



Storage in Spruce Run Reservoir did not recover completely from the drawdown in 2001. The maximum storage level in Spruce Run Reservoir during 2002 was recorded on July 4 at elevation 264.46, 7.8 billion gallons, 71 percent of capacity. This was the lowest storage level going into the summer drawdown period since Spruce Run Reservoir was constructed in the 1960's. On October 3, 2002, storage in the reservoir was 5.3 billion gallons, 48 percent of capacity.

Storage in Round Valley Reservoir on October 3, 2002, was 44.6 billion gallons, 81 percent of capacity. A significant pumping program will be required in 2003 to return storage in Round Valley Reservoir to capacity.

As directed by legislation enacted in 2001, 2002 marked the first year of operation of the Spruce Run and Round Valley Reservoirs under a "modified operating plan". Under the "modified operating plan" releases from the Spruce Run Reservoir are restricted to maintain recreational use of the reservoir. Releases that are needed above

the restricted level are made from Round Valley Reservoir between July 1 and August 31.

Reservoir Maintenance

Throughout the year personnel from the South Branch Pumping Station assisted with numerous inspections and tests made on the Round Valley Release Pipeline and Force Main. This work included charging and draining these pipelines for various engineering tests and inspections. Reservoir maintenance crews performed regular maintenance work essential for continued proper management of the reservoir facilities including maintaining the grass cover on the embankments, the removal of vegetative growth and debris accumulation on the upstream faces of the embankments.

Dam Inspections

In accordance with State Dam Safety Regulations, the Authority's engineering staff conducted the 2002 annual dam inspection on September 10, 2002. The dams were found to be in good condition and functioning well. All embankments at the Spruce Run and Round Valley Reservoirs were characterized as "safe" and only minor routine repairs were recommended.

The Authority also continued its program of quarterly inspections of the dams, dikes, and appurtenances in accordance with the Authority's Internal Management Program.

Delaware and Raritan Canal Water Supply Operations

Throughout the year Delaware and Raritan Canal operations proceeded without

interruption. However, the drought emergency in the Delaware River Basin severely impacted Canal diversions. The yearly average flow measured at the Port Mercer Gauging Station was 76 mgd as of October 1, 2002. During the period from December 1, 2001, to May 24, 2002, the Canal was operated at the statutory minimum diversion of 65 mgd due to drought conditions in the Delaware River Basin. As mandated in the 1954 Supreme Court Decree, the Office of the Delaware River Master is tasked with administering diversions and releases in the Basin. When storage in the upstate New York reservoirs declined to the drought trigger point, a Basin-wide emergency was declared and the Canal diversion was reduced to 65 mgd.

An average of 5 mgd was diverted to the Millstone River from the Delaware and Raritan Canal at the Ten Mile Waste Gates. This interconnection is a vital component of the integrated water management system in that it allows direct diversions from the Canal to the Raritan River. As a result, Spruce Run and Round Valley Reservoirs releases are reduced due to the augmented volume of the Raritan River.

The NJDOT Lambertville drainage project on Delaware Avenue was completed as of April 16, 2002. The temporary cofferdam and four diversion pipes in the Canal were removed, returning the Canal to normal operations.

Maintenance Dredging Program

The Authority's Annual Maintenance Dredging Program continued by removing sediment deposits from the Canal and appurtenant structures. Utilizing a long arm excavator, speed loader and crane, the Waterways & Embankment Unit removed over 3,300 cubic yards of material from the

Inlet at Bull's Island, the Prallsville Lock, Little Shabakunk Culvert and the Duck Pond Run outfall. The 60-foot long arm excavator has proven to be an excellent addition to the dredge equipment fleet, significantly reducing time and labor output in operations which previously required the pontoon excavator, boat, barge, crane and roll-off trucks.



A long arm excavator was used to remove over 3,000 cubic yards of sediment from the canal in locations such as at the Duck Pond Run outfall.

Towpath Restoration & Repair

Canal staff completed the program to restore the towpath between Alexander Road and Quaker Road in Princeton. Maintenance crews cleared brush and dead trees from the final section between the Princeton Country Club and Quaker Road Bridge. The Waterways & Embankment Unit installed I-5 clay/sand mix to finish the section as well as quarry screenings to the haul route in the vicinity of Port Mercer Dike. Completion of the project now allows access to the area for more frequent maintenance activity such as dredging and Water Supply Operator patrols.

Repairs were made to the towpath in the section between Province Line Road and Route I-95 in Lawrenceville. This area had

become severely rutted in recent years due to chronic leakage from the flood guard embankment.

Spillway Repairs

Canal personnel made repairs to the South Bound Brook Spillway, installing riprap on the outlet side of the structure. Over the years and especially in the wake of Hurricane Floyd, Raritan River scour undermined the concrete apron on the outlet of the spillway. This project stabilized the embankment bordering the structure.

The Rocky Hill Spillway was also repaired during the past year with crews installing blend and I-5 to the crest of the structure. Severe rutting appeared after storm events leading to water loss during the drought. Quick action by staff corrected the problem. At the Five Mile Spillway the same problem of rutting was repaired by Canal personnel. Two layers of material, 2-inch stone and blend were applied and compacted making the spillway passable and eliminating water loss.

Island Farm Weir Maintenance

The annual maintenance of the structure involved removal of heavy debris from the interior of the fish ladder and by-pass channel and sediment dredging with the crane at the gate openings of the fish ladder. In addition, Authority personnel assisted the Division of Fish & Wildlife in performing maintenance and repairs to the observation platform with the installation of a new plexi-glass view port and background screen. Previously erected canoe portage signs and warning buoys were repositioned to the proper locations.

SUMMARY OF WATER USE CONTRACTS
Raritan Basin System
(Million Gallons Per Day - mgd)

<u>User</u>	<u>Type of Contract</u>	<u>Supply</u>
United Water Lambertville, Inc.	U	0.200 (1)
Mercer County Park Commission	U&SB	0.100 (1)
Trenton Country Club	U&SB	0.250 (1)
<hr/>		
Total Delaware Basin Users		<hr/> 0.550 mgd <hr/>
Mercer County Park Commission	U&SB	0.135
Princeton University (Forrestal)	U	0.500
North Brunswick Township	U	8.000
Selody Sod Farms, Inc.	U&SB	0.100
Elizabethtown Water Company	U	104.000
East Brunswick Township	U	8.000 (2)
City of New Brunswick	U	10.500
Middlesex Water Company	U	20.000
Flemington Film Products	SU	0.012 (3)
<hr/>		
Total Raritan Basin Users		<hr/> 151.247 mgd <hr/>
System Total:		<hr/> 151.797 mgd <hr/>

(1) These users withdraw their supply from and return water to the Delaware River Basin and are excluded from payment of the debt service rate component for the 1969 Water Conservation Bonds.

(2) Water treated and supplied through Middlesex Water Company.

(3) Non-depletive use.

SUMMARY OF FIRE STANDBY AND SPECIAL USER CONTRACTS

<u>User</u>	<u>Type of Contract</u>	<u>Withdrawal Capacity (gpm)</u>	<u>Source</u>
Union Carbide Corporation	FSB	4,500	D & R Canal
Hillsborough Golf Association	SU	375	Neshanic River

U = Uninterruptible Service
SB = Standby Service
FSB = Fire Standby Use
SU = Special Use

Capital Improvement Program

The Authority's current Capital Improvement Program entails the investment of approximately \$1,500,000 per year. In evaluating the options for financing this program, the Authority looked at (1) the continuation of the practice of incurring long-term debt through the issuance of Revenue Bonds and (2) the feasibility of current financing through the assessment of annual charges as part of the water use rate structure. It was determined that financing of such a small annual Capital Improvement Program based upon the issuance of long-term debt would not be fiscally prudent.

The Authority's present financing for reinvestment in plant and capital is consistent with the booked depreciation of plant and equipment for the Raritan System facilities (without the depreciation of the dams) which amounts to about \$1,900,000 per year.

The following is a description of projects undertaken in 2002, which were funded from the Capital Improvement Program.

Asbestos Abatement at the SBPS

The South Branch Pumping Station was constructed in 1963-1964 as part of the Spruce Run/Round Valley Reservoirs Complex. The boiler replacement project in 1998 raised concerns about the potential for asbestos to be present in the paint and other pipe insulation throughout the building. A consultant was retained to perform a complete asbestos survey of the facility, to make recommendations for abatement, prepare construction plans and specifications, and to provide project management and daily inspection during the building asbestos abatement.

The asbestos survey confirmed the presence of approximately 40,000 square feet of cementitious stucco on walls, ceilings, and beams, approximately 2,600 linear feet of pipe insulation, approximately 350 square feet of floor tile, and approximately 11,700 square feet of black asphaltic pipe insulation, all of which were determined to be asbestos containing materials.

Work on the asbestos abatement at the South Branch Pumping Station started in July 2002 and was completed in November 2002.

Structural Improvement at the South Branch Pumping Station and the Spruce Run Administration Building Entrance

In recent years, numerous leaks throughout South Branch Pumping Station have developed. An investigation was made of the roof, all existing masonry, exterior brick masonry, steel lintels over the building openings, precast concrete coping stones, vertical precast concrete columns, expansion joints in the concrete transformer pad, and the concrete transformer pad itself. It was determined that some of the aforementioned items are in need of repair and/or rehabilitation to help provide a watertight and more aesthetic system for the building. During the evaluation of the facility and through the use of an infrared roof analysis, it was also determined that it would be economically feasible to repair the roof at the pumping station at this time as well.

The masonry at the entrance to the Spruce Run Administration Building was included as part of this investigation as well. During

that investigation it was determined that portions of the masonry, specifically the precast columns, need to be replaced.

Plans and specifications are currently being drawn up to make these repairs to the South Branch Pumping Station and the entrance to the Spruce Run Administration Building. Construction is planned for spring 2003.

Rehabilitation of the Delaware and Raritan Canal Embankment near the Five Mile Lock

The Five Mile Spillway, the Five Mile Waste Gate, the embankment under the Route I-287 crossing near Easton Avenue, and the Inflow/Outflow Spillway, all in Franklin Township, Somerset County, are in various stages of deterioration.

Rehabilitation of these structures was prioritized after several major storm events including Hurricane Floyd on September 15 and 16, 1999, further deteriorated some of these structures. This project includes varying degrees of rehabilitation and complete rebuilding as follows.

Five Mile Wastegate

The inlet and outlet headwalls of the Five Mile Wastegate will be rebuilt with a new cast iron gate to be installed at the inlet. The existing reinforced concrete pipe connecting the headwalls was determined to be in good condition and will remain in place. The headwalls will each be constructed of reinforced concrete and covered with a historic stone veneer.

Five Mile Spillway

The Five Mile Spillway will be completely rebuilt. Timber sheet piling will be installed on the canal side of the spillway that will provide a water cutoff and will reproduce the spillway as it was originally constructed.

A reinforced concrete slab covered with four to six inch thick stones will be installed on the spillway crest and held in place with grout and stainless steel anchors. The river side of the spillway will be constructed with grouted in place historic stones placed to reproduce the dry-laid stones used during the original construction. A reinforced concrete cutoff wall will be constructed at the toe of the river side slope.

Route I-287 Embankment

The embankment beneath the Route I-287 crossing in the vicinity of Easton Avenue has experienced severe erosion in the past to the point where the embankment was breached once in the 1970's. This erosion is the result of several factors including the road runoff that drops 20 feet from the bridge scuppers, unusual currents resulting from the river bend and the concrete bridge abutments, and from the lack of vegetation that would aid in erosion resistance. The crest of the embankment under Route I-287 will be rebuilt with a reinforced concrete slab overlain with four to six inch thick stones attached to the concrete with stainless steel anchors.

Inflow/Outflow Spillway

The Inflow/Outflow Spillway is deteriorated and will be completely rebuilt. The proposed construction is similar in nature to that of the Route I-287 embankment with a reinforced concrete pad overlain with four to six inch stones.

The Authority has awarded a contract for the complete rehabilitation project encompassing the Five Mile Waste Gate, the Five Mile Spillway, the Route I-287 Embankment, and the Inflow/Outflow Spillway. Construction began in October 2002.

Drilling and Grouting of the Fieldville Dam Culverts

Water was found to be leaking from two of the seven culverts that formerly connected the Raritan River with the Delaware and Raritan Canal in the vicinity of Five Mile Lock. The use of those culverts was discontinued when the Fieldville Dam was razed, and the culverts were apparently partially filled during the transformation of the Five Mile Lock for water supply purposes. However, there was continued leakage through some of these culverts, which could create sinkholes or voids in the embankment and eventually lead to complete failure.

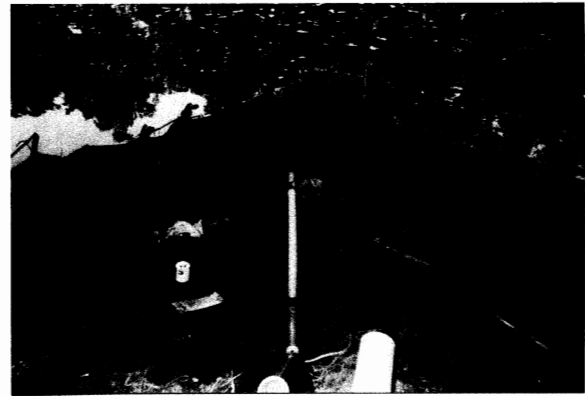
This project was designed to reduce the leakage from the culverts by installing a grout curtain perpendicular to the paths of the culverts. Construction on this project began in mid January 2002 and was completed in four weeks.

During construction, the culverts were found to be nearly empty. Through compaction grouting, the voids were filled, and the leakage was curtailed.

Instrumentation of the D&R Canal

Presently a Water Supply Operator locally operates the majority of the locks and waste gates along the Canal. Most of the existing gates are not motorized, and have a hand crank and/or a keyed shaft to receive a portable motor carried by the Water Supply Operator. The operator observes the water elevation of the Canal and adjacent waterways, and manually opens or closes the gates based on visual inspection, past experience, and an intimate knowledge of how the various structures interrelate with each other and to the Canal and the rivers.

The intent of this project is to develop an incremental plan for automation of the Canal



Level sensor wells were installed at the South Bound Brook Lock in continuation of the D&R Canal instrumentation project.

operations. The first step of the plan is the installation of instrumentation to monitor water levels along the length of the Canal and transmit this information to a central monitoring station at the Canal Office. The second step will be to install motorized gates on select structures to be operated by push button controls. This will be followed by installation of facilities to operate the structures by remote control from the Canal Office. The ultimate goal is to develop a system of automated operation that responds to changing water levels in the Canal.

Work on the installation of the level measuring and communications devices is continuing.

Underwater Inspection and Rehabilitation of the Flow Control Structures along the Delaware and Raritan Canal

Nine flow control structures located along the nearly 60-mile length of the Canal were known to be in various states of disrepair. The structures included Raven Rock, Prallsville, Lambertville, Kingston, Griggstown, Ten-Mile, South Bound Brook, and Five-Mile flow control structures and Ten-Mile Waste Gate. Consultants

evaluated the condition of each of the structures to assess the requirements for providing motor operators to replace the existing manual operators. Their evaluation included underwater investigations and above water inspections at all of the structures.

Based on these investigations, most of the cast iron sluice gates require replacement, and concrete repairs, mostly surficial in nature, are required at all of the sites. The Authority budget will not allow for rehabilitation of all of the structures on the Canal to be accomplished in one project. Accordingly, plans are currently being made and the sites are being prioritized to phase the work to fit the Authority's budget.

Rehabilitation of the Simonson Brook Culvert

The Simonson Brook Culvert is located approximately 150 feet north of the Griggstown Causeway in Franklin Township, Somerset County and conveys the water of Simonson Brook under the Canal towards the Millstone River.

The culvert construction includes three



Rehabilitation of the Simonson's Brook Culvert was started in the fall of 2002 at Griggstown in Somerset County.

arches approximately 135 feet long. The inlet and outlet ends have historic headwalls and wingwalls. As part of the investigation, the Authority contracted for the removal of sediment and debris from the three barrels. One of the three barrels was totally blocked with sediment and debris. The other two were partially blocked. The barrels were found to be in good condition and not in need of major rehabilitation.

As part of the rehabilitation, the top course of the upstream headwall will be rebuilt, and the masonry will be repointed. Repointing will also be required inside the culvert barrels. The majority of the work is on the downstream end of the culvert where the top course of the headwall and both wingwalls will be rebuilt in their entirety.

Rehabilitation of the headwalls and wingwalls began in fall 2002.

Rehabilitation of Two Culverts at Prallsville

Two culverts under the Canal are located at the Prallsville Mill complex in Stockton Borough, Hunterdon County. These small culverts, each about eight feet wide and four feet high, were constructed when the Canal was built in the 1830's to discharge flows from mill tailraces.

The northern (up-Canal) culvert extends about 250 feet from the gristmill tailrace near the Wickecheoke Creek to the Delaware River. The inlet headwall was restored during work on the Prallsville Mill complex, and is in good condition. The outlet headwall at the Delaware River is entirely missing. The stonework within the barrel is in generally good condition.

The southern (down-Canal) culvert extends about 120 feet from the oil mill/sawmill tailrace, where it discharges to the Delaware River. The inlet headwall, in a large pit,

appears in good condition, but other walls of the pit are greatly deteriorated. The barrel appears in good condition. The outlet headwall appears in fair condition, with missing grout in the upper courses of stone.

Rehabilitation of these two culverts includes reconstruction of the outlet headwalls and resetting missing stones in the barrels of both culverts. Also included in this project is construction of a new concrete wall with historic stone facing to replace a failed stone wall in the pit adjacent to the inlet headwall of the southern culvert, and reconstruction of a concrete wall at the right bank of the Canal over the northern culvert to stabilize the embankment against flows from the Wickecheoke Creek.

NJDEP permits and approval of the D & R Canal Commission have been obtained. Plans and specifications are being finalized for spring 2003 construction.

Round Valley Force Main

As a result of the testing and investigation in 2000 and 2001 of the structural condition of the Force Main, one section of pipe (Pipe 42), located within the South Branch Pumping Station property, was excavated and further examined externally and internally. To enable pumping in spring 2002, Pipe 42 was backfilled by Authority personnel using select material and careful compaction methods. No adverse effects were observed in a careful inspection of the interior of Pipe 42 following the one month pumping program.

To proceed with the Authority's plan for establishing a long-range program to continually assess and monitor the structural condition of the Force Main, proposals were solicited from engineering consultants. Extensive evaluation and discussion of the different technologies presented led to the

choice of the method of testing used previously. As the first step in developing a long-range monitoring program, non-destructive testing of the interior of the Force Main was carried out in July 2002. A draft report, giving the results of this testing and comparison to previous results, is being reviewed by Authority staff and its consultant.

Remediation Program at the Administration Building Fuel Facilities

When the Authority replaced the old gasoline tanks at the Administration Building with new fuel tanks in 1992, the old tanks were found to have leaked and contaminated the surrounding soil and groundwater. Although the contaminated soil was removed from the site at that time, remediation of the contaminated groundwater has continued since then, as directed and monitored by the NJDEP. By 1996, 14 groundwater monitoring wells had been installed in the vicinity of the fuel tanks, and in February 1997 the NJDEP approved a Remedial Action Plan devised by the Authority's consultant. Since that time, the wells have been sampled, the samples analyzed, and a Remedial Action Progress Report prepared every six months by the consultant and submitted to NJDEP.

In April 2001, during a regular sampling, diesel fuel was found in the monitoring well closest to the fuel tanks. Immediate steps were taken to remove as much diesel fuel as possible from the well, and the incident was reported to NJDEP as required.

Investigation and testing of the entire fuel system demonstrated that there was no leakage in the system. There has been no recurrence of diesel fuel in this well, and no

indication then or since of diesel fuel in any of the other wells.

In response to this incident, NJDEP required sampling on a quarterly basis and analysis of each sample for additional parameters. This program of quarterly sampling, analysis and reporting has continued in 2002.

No Name Dam No. 31

No Name Dam No. 31 is near the South Branch Pumping Station in Clinton Township. The embankment, constructed in the early 1960's across a creek to provide for the access driveway to the Pumping Station, is on Authority property. An outlet control structure upstream of the culvert through the embankment was added at the request of the then upstream property owner to allow impoundment of water. Ownership and jurisdiction for No Name Dam No. 31 is now shared by Clinton Township, the current owners of the control structure, and the Authority.

With the addition of the control structure, the embankment was classified as a dam in accordance with the Safe Dam Act and is thereby regulated in accordance with the State Dam Safety Standards. According to a Phase I inspection report issued by the Army Corps of Engineers in August 1979, the control structure does not comply with these standards.

In September 2001 the Authority and NJDEP signed an agreement whereby the Authority will take the lead in upgrading the dam to comply with the Dam Safety Standards, and the NJDEP will provide funding for the effort. The Authority has selected a consultant to determine the appropriate criteria for conformance with the Dam Safety Standards, to develop alternative methods for satisfying the criteria, to provide a detailed design of the chosen alternative and to provide construction management.

The Authority's consultant has worked closely with NJDEP to establish acceptable criteria for meeting the standards. A draft report of the consultant's analysis is being reviewed by NJDEP. When this analysis has final approval, alternative procedures for upgrading the dam will be considered, leading to a detailed design of the chosen alternative. Construction is anticipated for summer 2003.

NEW JERSEY WATER SUPPLY AUTHORITY
CAPITAL IMPROVEMENT PROGRAM

Project	Estimated Project Cost	Prior Years	FY 2003	FY 2004	FY 2005	FY 2006 & beyond
Island Farm Weir	350,000	264,960	85,040			
Pipeline Evaluation - Release Pipeline	93,397	43,397	50,000			
Pipeline Evaluation - Force Main	1,000,000	534,509	465,491			
Admin Bldg Fuel Facility Remediation	450,000	304,972	60,000	30,000	30,000	25,028
Structural Imp. @ SBPS & SRA	1,300,000	19,880	1,000,000	280,120		
Workhouse Spillway Rehab (D&R)	900,000	94,669	200,000	405,331	200,000	
Security System Upgrade	1,350,000		200,000	600,000	550,000	
Maintenance Dredging	14,044	14,044				
Rehab of Lock Gates (D&R)	1,500,000	51,927		80,000	568,073	800,000
Instrumentation of D&R Canal	675,000	400,594	274,406			
Rehab of SR Spillway	300,000		300,000			
Rehab of Culvert @ 324+30 (D&R)	275,000	2,772	90,000	182,227		
Rehab of Culvert @ 2021+89 (D&R)	331,000	10,395				320,605
Rehab of Culvert @ 2249+79 (D&R)	165,000					165,000
Rehab of Simonson Brook Culvert (D&R)	325,000	46,136	278,864			
Route 1 Conduit Automated Rakes	85,000			85,000		
Evaluation of Ten Mile Pumping Station	50,000				50,000	
Evaluation of South Branch Pumping Station	200,000			200,000		
Embankment Improvements - Canal	330,000		80,000	50,000	50,000	150,000
Rehab Embankment at Five Mile	1,700,000	184,055	1,315,945	200,000		
Culvert Cleaning & Inspection	200,000			200,000		
Rehab Culverts at Prallsville Lock	1,100,000	202,244	400,000	497,756		
Rehab Swan Creek Culvert	375,000					375,000
Cutoff Wall in Shipetaukin Creek Guard Bank	1,150,000					1,150,000
TOTAL	\$14,218,440	\$2,174,554	\$4,799,746	\$2,810,434	\$1,448,073	\$2,985,633

The estimated project costs listed includes engineering, cultural, construction and miscellaneous expenses.

FOOTNOTES:

D&R - Delaware & Raritan Canal

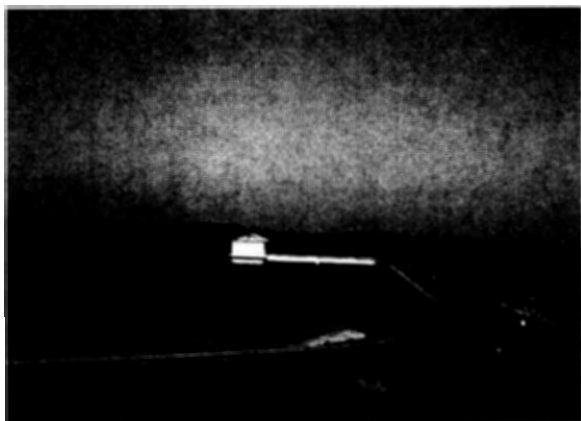
SRA - Spruce Run Administration

SBPS - South Branch Pumping Station

MANASQUAN WATER SUPPLY SYSTEM

Facilities

The Manasquan Water Supply System consists of a 770-acre reservoir located on Timber Swamp Brook, a tributary of the Manasquan River, in Howell Township, Monmouth County, that can store over four billion gallons of water when full. Water to fill the reservoir is drawn during periods of high flows in the Manasquan River at an intake pumping facility located in Wall Township. To create the reservoir, approximately 800,000 cubic yards of earthen materials excavated from within the reservoir site were used to construct the main dam, dike, Georgia Tavern Road embankment, and the wetland dikes at the reservoir. A critical portion of the main dam



The main dam of the Manasquan Reservoir creates a 770 acre reservoir in Howell Township, Monmouth County.

and dike construction involved the installation of a soil-bentonite clay cut-off wall to control water seepage through the dam embankment. Groundwater levels around the reservoir are controlled by a perimeter drain system constructed along the north and south shores of the reservoir varying in depth up to 15 feet.

As part of the reservoir construction, the Authority was responsible for the creation of

six emergent wetland areas at several locations along the reservoir periphery, at the intake site, and at three other off-site locations within Monmouth County. These sites were excavated and/or filled, depending on the topography, to create shallow ponds with a water depth of one to three feet. A five year wetland monitoring program was required under our U.S Army Corps of Engineers permit for the Manasquan Reservoir System mitigation plan. The monitoring program in its last year concluded with a meeting and site visit by U.S. Army Corp of Engineers representatives. The wetland monitoring program assessed the survival rate of planted species, growth of indigenous plants, and use of the areas as wildlife habitat to determine the success of the manmade freshwater wetland areas in replacing natural areas lost in the construction process.

The Intake Facilities consists of an Intake Pump Station on the Manasquan River; a Flow Meter/Valve Chamber, the point of delivery to the majority of the water customers; a Reservoir Pump Station housing five pumping units; and the Maintenance/Administrative Office area for the System. The Intake Facility is designed with a peak pumping capacity of 150 million gallons of water per day while maintaining no less than an eight (8) million gallon per day minimum downstream passing flow in the Manasquan River. A stream gauging station on the river monitors flows downstream of the Intake Pump Station.

The river water is pumped from the intake structure and pump station to a settling basin where the sediments settle out. The water from the settling basin can be pumped through a 5.25 mile long, 66-inch diameter

pipeline to storage in the Manasquan Reservoir, or it may be pumped via the New Jersey-American Water Company's facilities to storage at their Glendola Reservoir or allow to flow by gravity from the settling basin to the Monmouth County Improvement Authority Treatment Plant which is also located at the intake site.

The 66-inch diameter prestressed concrete cylinder pipeline to the Manasquan Reservoir is buried a minimum of five feet along a route which minimized disturbance to archaeological sites and private property. At the reservoir location where the 66-inch pipeline is enclosed in a 120-inch diameter prestressed concrete cylinder pipe, the pipe changes to a structural steel pipe as it passes through the dam embankment to the Inlet/Outlet Tower. This tower rises 84 feet above the reservoir floor and performs the functions of either releasing reservoir water or accepting pumped water from the Reservoir Pump Station located at the Intake Facilities.

The Water Supply System, which commenced operation on July 1, 1990, provides the region with a safe, dependable and renewable water supply which reduces the region's dependence on depleted groundwater supplies. This system can supply a safe yield of 30 million gallons of water per day (mgd) even during a recurrence of the worst drought to strike the region. Of the Manasquan System's safe yield of 30 mgd, raw water contracts currently total 19.032 mgd.

The New Jersey-American Water Company receives 12.8 mgd for treatment at its Jumping Brook treatment facility. This water is delivered to New Jersey-American customers in northeastern Monmouth County and to other water supply systems along the Raritan Bayshore region as part of three-party agreements for receipt of raw

water.

Raw water in the amount of 3.535 mgd is contracted for delivery to the treatment facility owned by the Monmouth County Improvement Authority (MCIA) located at the Manasquan Intake site. The MCIA has contracts to deliver treated water to the Boroughs of Brielle, Sea Girt, Spring Lake, Spring Lakes Heights, and Wall Township. The New Jersey Water Supply Authority, under a separate contract with the MCIA, designed, constructed and operates this state-of-the-art treatment facility.

New Jersey-American Water Company now operates the treatment facility in Howell Township, which withdraws 2.697 mgd of water directly from the 66-inch diameter reservoir pipeline. This facility treats and delivers water to customers within the water systems formerly operated by Howell Township and Adelpia Water Company.

The remaining 10.968 mgd of the safe yield of the Manasquan Water Supply System is available for use in meeting the future water needs of Monmouth and northern Ocean Counties.

The reservoir also provides environmental and recreational benefits to the area. Under agreement with the Authority, the Monmouth County Park System is managing the recreational use of the reservoir. County park rangers and staff provide maintenance of the areas outside the restricted access zones and security patrols of the entire site. The County encourages and sponsors programs for use of the five-mile long perimeter trail walk. Operation of the boat launch ramps by the County provides access for recreational boaters and fishermen.

The County's Visitor Center was completed in June 1994, and its operation has maximized the recreational uses available at

the reservoir site. The attractive building with its various amenities promotes greater utilization of the reservoir area by the public. The Visitor's Center houses a photo display, donated by the Authority, depicting the actual operational schematic of the Manasquan Reservoir Water Supply System.

The County officially opened the Manasquan Reservoir Environmental Center in the spring. The much anticipated project will greatly expand the environmental education opportunities at the reservoir site. The Environmental Center is located off of Georgia Tavern Road and its building provides a spectacular view of the Manasquan Reservoir.

The reservoir also provides an excellent opportunity for recreational fishing. The gravel spawning beds and log shelters in the northwest corner of the reservoir has proven attractive to fish. Fishing has been successful from bank areas as well as from watercraft. The NJDEP's Division of Fish, Game and Wildlife have stocked the reservoir with fish of various species since the spring of 1990. Indigenous species of fish are also making a strong showing in numbers and size. These fish apparently migrated to the reservoir from the small streams and ponds which lie in the compact watershed or were incorporated into the impoundment.



To expand educational opportunities, Monmouth County opened the Manasquan Reservoir Environmental Center in the spring.

Operations and Maintenance

The Manasquan Water Supply System operated most of the year at rainfall totals below or near normal. The water supply situation remained below normal throughout much of the summer. The Manasquan Reservoir storage volume is a good indication of the changed water supply conditions whereby the storage volume remained below historic average volumes throughout summer and fall. The Manasquan Reservoir was at full capacity in the spring 2002.

The Manasquan staff and the Authority's Engineering personnel monitored the dam and appurtenances throughout the year both visually and by means of the data continuously recorded by instrumentation buried within the dam and dike structures. The performance of the dam and dike has been confirmed to be well within design predictions.

An annual dam inspection was conducted by the Authority's Manasquan and Engineering staff, along with the NJDEP-Dam Safety Section, and again resulted in a safe rating. Any deficiencies noted in the report were of a minor nature.

In 1993 the State of New Jersey granted a waiver of a requirement to install a siren warning system downstream of the Manasquan Dam. Following receipt of this waiver the Authority adopted an Internal Management Plan (IMP) to augment the existing Manasquan Dam-Emergency Action Plan (EAP) and Dam Safety and Maintenance Manual. As part of this IMP, the Authority's Engineering and Safety personnel assist in various activities required by all plans in order to assure the facilities are safe and operating within design parameters. These activities include quarterly inspections of the dam, dike and

appurtenant structures, review of the monthly dam instrumentation and observation well data, and semi-annual drills of the EAP. The EAP has been updated as per the request of the NJDEP-Dam Safety Section, and submitted with the latest plan changes on September 30, 2002.

Monitoring of the water quality in the reservoir continued throughout the year in order to obtain information on seasonal variations of reservoir water. During the warmer months, the data collected by the Manasquan staff was used by the Authority's algae control contractor to schedule applications of copper sulfate to the reservoir. Timely information on the reservoir water quality permits the contractor to schedule the applications to provide maximum benefit and the best margin of safety for higher aquatic life forms. The growth of algae, a natural occurrence in surface water impoundments, can cause water treatment difficulties resulting in unpleasant taste and odor if permitted to go unchecked.

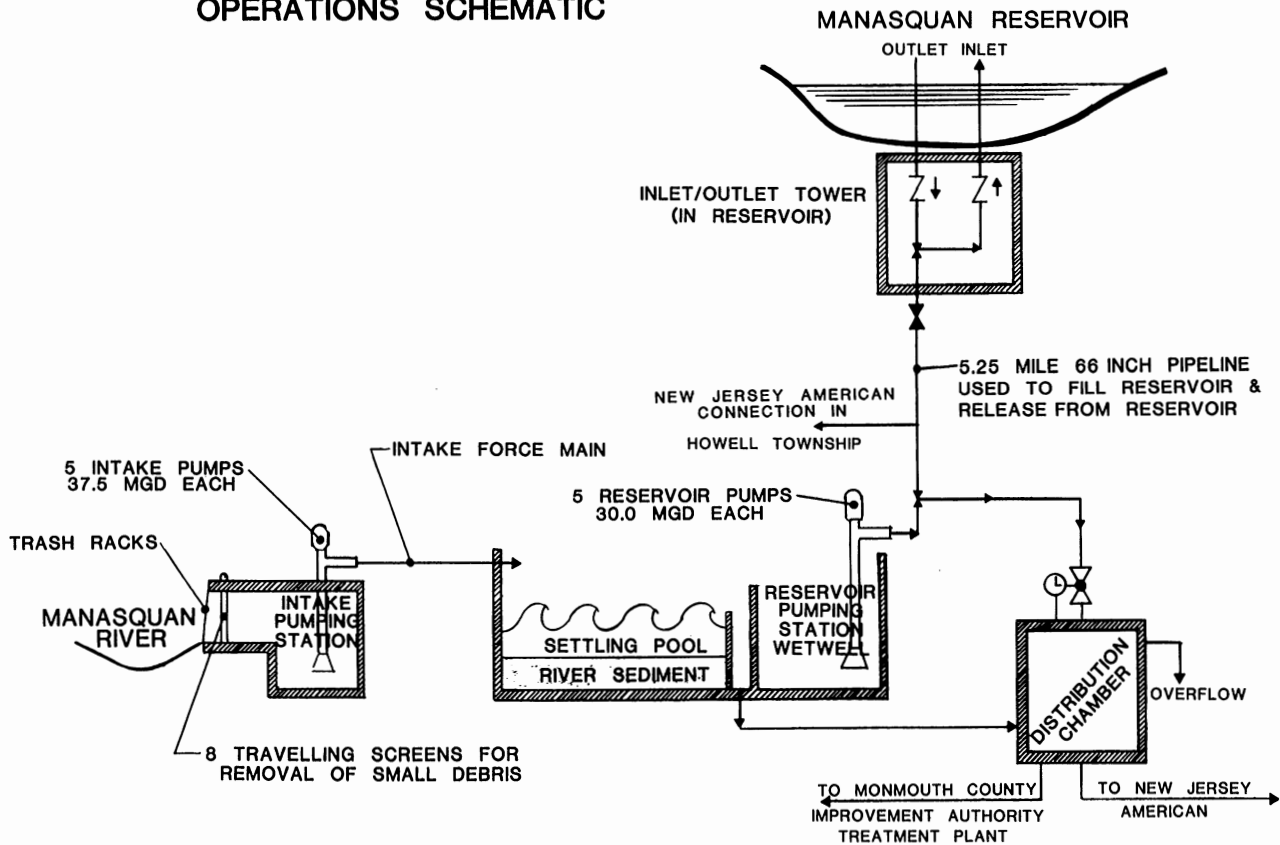
The maintenance of the grassed areas on the dam and dike, at the intake site, wetlands, and along the pipeline easements is managed by the Buildings and Grounds Maintenance Unit. The unit also handled the maintenance of drainage structures at the reservoir and the wetland areas. Lower water levels at the reservoir enabled the unit to remove the wood debris that accumulated along the rip rap stone along parts of the dam, dike and saddle area.

Maintenance of mechanical devices is the responsibility of the Facilities Maintenance Unit. The preventative maintenance function is directed by a computer based maintenance program. All preventive maintenance activities have been identified

and fed into the computer record. The program maintains a schedule of events and issues work orders which detail the tasks to be performed and the work force, supplies, parts and special tools required to perform the task. New tasks that arise and corrective actions taken by the unit are logged into the program to create a maintenance history of all individual devices. This computer program is also integrated into the payroll function of the unit. The unit's time is recorded by a work order number which allows the analysis of the unit's time allocation between the various budget expense centers.

The Facilities Maintenance Unit is responsible for the coordination of the activities of numerous vendor and service organizations. The unit participates with these organizations in tasks such as the maintenance and testing of the 2,300 volt variable frequency drives on the intake and reservoir pumps, the removal of residuals from the intake pump station, and the high voltage electrical testing and maintenance program.

MANASQUAN RESERVOIR SYSTEM OPERATIONS SCHEMATIC



Capital Improvement Program

A Capital Improvement Program funded by the Renewal and Replacement Reserve was first recommended in September 1996 when excess debt service funding became available for this purpose. The program consists of a rehabilitation reserve for extraordinary operations and maintenance costs in case of a catastrophic failure of one of the main system components shown in the plan. The other projects represent improvement projects identified to upgrade or enhance the reservoir system facilities.

The annual funding is scheduled at \$120,000 for reservoir system improvements. Progress is being made on each specific project with the schedule currently in place for this program. Fiscal Year 2002 project activities included the completion of scope of services to design emergency power generation for one power panel within the Manasquan Reservoir Water Supply System. The emergency power source would provide back-up power to the administration building and the flow meter/valve chamber. The Fiscal Year also represented the completion of an irrigation project for the Manasquan Reservoir dike embankment. Several other projects are currently underway such as upgrading the site security system and the development of plans and specifications for installing new motorized gates, fencing, and a new ventilation for the double bay garage area.

SUMMARY OF WATER USE CONTRACTS
Manasquan Water Supply System
(Million Gallons Per Day - mgd)

<u>User</u>	<u>Type of Contract</u>	<u>Supply</u>	
Wall Township	U	2.300	(1)
Borough of Avon	U	0.142	(2)
Shorelands Water Company	U	1.900	(2)
New Jersey-American Water Company	U	11.000	
Borough of Red Bank	U	0.778	(2)
Borough of Sea Girt	U	0.075	(1)
Borough of Spring Lake	U	0.310	(1)
Borough of Spring Lake Heights	U	0.450	(1)
Borough of Belmar	U	0.650	(2)
Borough of Brielle	U	0.400	(1)
Borough of Keyport	U	0.458	(3)
Borough of Matawan	U	0.469	(2)
Borough of South Belmar	U	0.100	(2)
<hr/>			
System Total:		<hr/>	19.032 mgd

(1) Water treated and distributed through Monmouth County Improvement Authority facilities.

(2) Water supplied through New Jersey-American Water Company, Eastern Division.

(3) Water supplied through Shorelands Water Company.

U = Uninterruptible Service

Water Treatment Plant and Transmission System

As part of the overall distribution of water from the Manasquan project, the Monmouth County Improvement Authority entered into a contract with the Authority to construct and operate a four (4) million gallon per day water treatment plant and transmission system for the benefit of the communities of Wall Township, Brielle, Sea Girt, Spring Lake, and Spring Lake Heights. Throughout the plants years of operation, it has produced an average of just over three (3) million gallons of water per day, but in the most recent years the treated water delivery has continued to approach the contract amounts for each customer community.



*The Monmouth County Improvement Authority
Water Treatment Plant in Howell Township.*

The technology employed in the design of the treatment plant has proven able to effectively treat raw water drawn from the river and the reservoir as well as a blend of the two water sources. In the treatment process, the plant employs preoxidation and predisinfection with ozone, coagulation with aluminum sulfate, flocculation, clarification/filtration package units, granular activated carbon adsorption (GAC) contact, disinfection, pH adjustment and the addition of a corrosion control agent. The

quality of the plant effluent continues to surpass the design predictions.

The plant staff has put their operating experience to use by streamlining the treatment process and utilizing proper chemical dosing with given river and reservoir water qualities. The proper use of treatment chemicals, a major budget item, has resulted in savings to the customers and lower treatment plant residuals. The treated water quality readily meets standards set by current State and Federal regulations.

The Manasquan plant provides between 15 and 85 percent of the drinking water consumed in the customer communities. The treatment plant was designed to function as a constant flow facility meeting the base demand of the customer communities; however, the demand imposed upon the plant is greatest during the day and is at a minimum during the late night and early morning hours. The plant staff has developed operational plans that meet this demand pattern.

The Authority continues to utilize its NJPDES permit for the distribution and land application of water treatment residuals produced by the Manasquan plant. The NJPDES permit recently underwent a renewal process and was reissued without any changes to the draft permit offered for public comment. The renewed permit was effective on November 1, 2001 and is valid for a period of five years. Laboratory analysis has indicated that the treatment plant residuals are not harmful and that beneficial use can be made of the material.

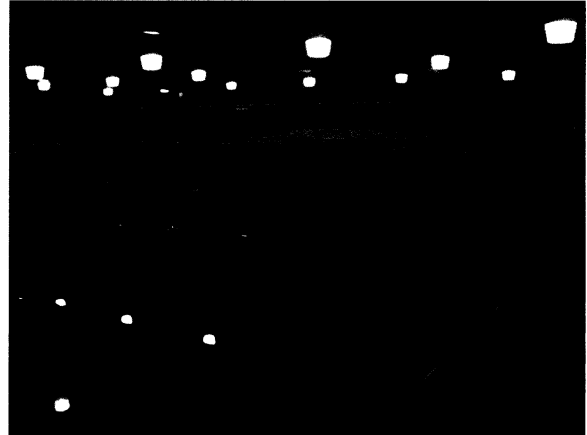
The NJPDES permit offers different options to the Authority for re-use of the residuals. The residuals may be employed as a soil enhancer through direct land application or blended with sediment from

the Intake Pump Station to create "topsoil" for use throughout the Manasquan Reservoir System.

A long-term plan has been developed to return portions of the project site to agricultural uses by incorporating the residuals into the soil to improve the soil consistency and mineral content. A small grain crop has been planted on a 7.3 acre parcel of land during last spring's planting season, after direct land application of residuals. A local farming business was used to plant the crop. Our own work crew will harvest the small grain crop for either reseeding the field or straw bales. The field has yet to yield production of straw bales because of the damage caused by a resident goose population. Since the permit has been in place, the Buildings and Grounds Unit has utilized the blended material for fill on a wide variety of projects that managed to keep the amount of residuals stored on-site within the permit requirements.

A five-year capital program has been designed to upgrade the water treatment plant and transmission system facilities in anticipation of amended New Jersey Department of Environmental Protection regulations and requirements and to provide for general facility improvements. The projects include chemical feed system replacements, engineering of an upgrade for the adsorption clarifier/filter units, meter vault improvements, recycle water system analysis, upgrade of the sodium hypochlorite storage/feed system, ozone system improvements, diurnal study of the treatment plant flows, and other modifications for estimated project costs in the amount of \$60,000 on an annual basis.

A professional engineering services contract was issued to Metcalf & Eddy, Inc. in July 1998 for engineering an upgrade to the adsorption clarifier/filter units and reviewing filter to waste and recycle water



The high rate clarification and filtration units in the Water Treatment Plant are scheduled for upgrade.

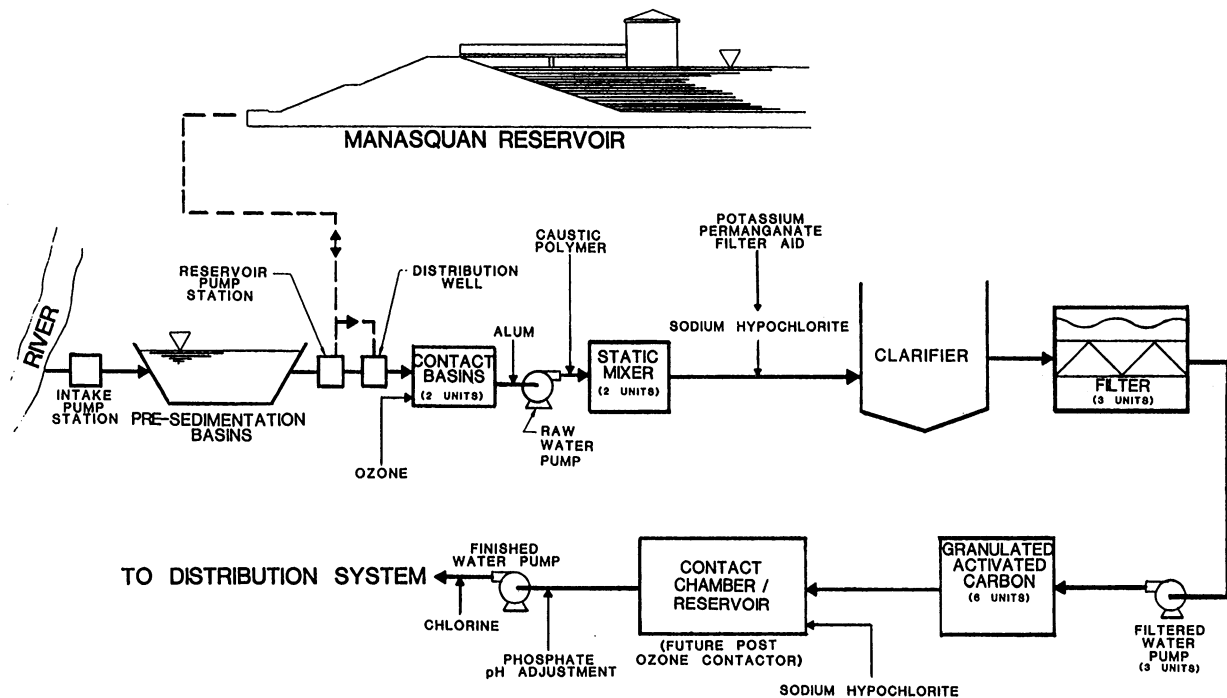
issues for the water treatment plant. The project identified and assessed the current operations, investigated options to enhance filtered water quality, and looked at ways to reduce and manage plant water use in the most economical way.

Metcalf & Eddy, Inc. completed the final design drawings and specifications for an upgrade to the clarifier/filter units. The units will undergo extensive work within the filter area. The filters will be totally reconstructed utilizing a different filter media and a new underdrain system. The new filters will be cleaned with a combination of air and filtered water backwash.

The project is being initiated to assure compliance with the Interim Enhanced Surface Water Treatment Rule. This rule took effect January 1, 2002. The water treatment plant was unable to remain in compliance with the new rule in August 2002 resulting in a treatment technique violation. The authority secured funding for the Clarifier/Filter Upgrade through the New Jersey Infrastructure Trust Fund. The Authority has received bids for the project and is currently in the process of developing a contract with the successful low bidder. If the financial assistance process proceeds as scheduled and contracts are completed,

construction will begin in January 2003.

The Authority worked with Killam Associates-Consulting Engineers on the upgrade to the sodium hypochlorite storage/feed system. The consultants identified a temporary feed system, final replacement equipment and the redesign of the sodium hypochlorite room. Authority personnel constructed the redesign of the sodium hypochlorite feed system and revisions to the room that houses this chemical feed system. This project was completed early in this calendar year.



MANASQUAN WATER TREATMENT PLANT

FLOW SCHEMATIC

Watershed Protection Programs Unit

The New Jersey Water Supply Authority formed its Watershed Protection Programs Unit in Fiscal Year (FY) 1999 to implement a *watershed management process* for the Raritan River Basin under contract to the New Jersey Department of Environmental Protection (NJDEP). The unit also represents the Authority at watershed management projects for the Manasquan River (including the Manasquan Reservoir) and the Upper Delaware and Central Delaware Watershed Management Areas, which provide water to the Delaware & Raritan Canal. Finally, the unit works with municipalities near the Spruce Run and Round Valley Reservoirs and the Delaware & Raritan Canal on preventive and remedial efforts to protect these water supplies. Primary functions of the unit are development and implementation of projects that improve protection of water supply for the Authority and its customers, planning for watershed protection, and involvement with State regulatory issues regarding watershed protection. The watershed unit is located in the lock tender's house at the 10 Mile Lock, Delaware & Raritan Canal, in Franklin Township, Somerset County. Unit staff gives presentations on a wide variety of watershed topics to government, non-profit and academic audiences, as well as to conferences and workshops.

Watershed Management for the Raritan River Basin

Ground and surface waters of the Raritan River Basin, in Central New Jersey, provide potable water for over 1.2 million people, along with recreational opportunities, habitat for aquatic life, aesthetic benefits and many other advantages. Protecting these water

resources, and improving them where necessary, will be vital for the continued health of over 100 New Jersey communities.

The Raritan River Basin is actually a collection of many watersheds, areas of land that collect runoff from precipitation and directs it to streams, rivers, lakes and reservoirs. These waters all drain to a common point, the Raritan Bay, between Perth Amboy and Sayreville. Major waterways in the Basin include the North Branch and South Branch of the Raritan River, the Millstone River, the Green Brook, the Lawrence Brook and the South River, along with their many feeder streams, over 2,000 miles in all. The Delaware & Raritan Canal, which brings water from the Delaware River to the eastern part of the Basin, augments Raritan Basin water supplies. In addition, ground water underlies the entire Basin. This ground water system receives water from land surfaces and gradually releases the water to surface waters and to wells. All in all, the Basin covers approximately 1,100 square miles in Hunterdon, Mercer, Middlesex, Monmouth, Morris, Somerset, and Union counties.

The New Jersey Department of Environmental Protection selected the New Jersey Water Supply Authority to implement a *watershed management process* for the Raritan River Basin. NJDEP is providing approximately \$1.1 million to the Authority in FY 1999 through 2003 to develop a characterization (current status and trends) and assessment (comparison of the current status to the desired condition) for the entire Basin, and to work with a wide variety of public and private interests from around the Basin to develop a Raritan River Basin Watershed Management Plan that is both



Protecting the Raritan Basin System water resources will guarantee nearly 1.2 million people a source of potable water.

effective and accepted by the public, local governments, private interests and the NJDEP. This plan will address the key issues of three Watershed Management Areas, North and South Branch Raritan, Lower Raritan and Millstone.

The characterization and assessment process reached a critical point during FY 2001, completing draft or final versions of seven technical reports. They are:

- Setting of the Raritan River Basin
- Water Budget of the Raritan River Basin
- Water Supply Availability in the Raritan River Basin
- Surface Water Quality and Pollutant Loadings in the Raritan River Basin
- Ground Water in the Raritan River Basin
- Landscape of the Raritan River Basin
- Surface Water and Riparian Areas of the Raritan River Basin

During FY 2002, the Authority and its project team worked on finalizing the draft technical reports using updated data from NJDEP and other sources, and new methods developed by the project team. In addition, the Authority published a summary of the technical reports, titled "Portrait of a

Watershed: The Raritan River Basin."

Project stakeholders focused on development of the Raritan Basin Watershed Management Plan. Completed during FY 2002 were:

- the identification of key issues drawn from the technical reports and a ranking of their priority for action
- goals, objectives and strategies that will address the key issues for each Watershed Management Area
- key research needs to improve watershed management in the Basin
- a general structure for the watershed management plan document, and criteria for determining whether the final plan is of high quality
- a public opinion survey of 801 residents in the Raritan River Basin, assessing their knowledge of and support for water resources protection, and their view of whether past efforts have been successful
- selection of eight subwatershed planning projects to test an innovative approach to solving local issues in small watershed

The planning process involves over 125 active participants who serve on the Raritan Basin Council, Technical Advisory Committee, Basin Education and Outreach Committee, and three Committees for the North and South Branch Raritan, Lower Raritan and Millstone Watershed Management Areas. The latter three committees also have subcommittees and work groups. In total, the stakeholders have invested an enormous amount of effort in this process, with over 200 meetings held in FY 2002 alone.

The Authority also began work on implementation projects to safeguard water supplies of the Delaware/Raritan System. As part of that effort, the Authority received

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Letter of Transmittal - Chief Financial Officer



NEW JERSEY WATER SUPPLY AUTHORITY

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August 30, 2002

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, 2002 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.

The Annual Report is presented in three sections: Introductory, Financial, and Statistical. The Introductory Section contains a reproduction of the Authority's Government Finance Officers Association Certificate of Achievement, a list of principal officials, the organizational chart, a letter to the Governor, and operational and

maintenance information on the Raritan Basin System, the Manasquan Water Supply System and the Manasquan Water Treatment Plant and Transmission System, and the Watershed Protection Programs Unit. The Financial Section contains the Independent Auditor's Report, Management's Discussion and Analysis, and the Financial Statements for Fiscal Year 2002, and comparative data for Fiscal Year 2001, as well as notes and supplemental information to the Financial Statements. The Statistical Section contains historical, financial, and operational data on a multi-year basis.

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 Monmouth County Improvement Authority (MCIA), 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.

The Authority is governed by a seven member Board of Commissioners. The Board of Commissioners consists of the Commissioner of the Department of Environmental Protection of the State of New Jersey, who serves as Chair and six public members appointed for three year terms by the Governor with the advice and consent of the Senate. The Commissioner may designate, in writing, an officer or employee of the Department as a representative to act on behalf of the Commissioner. The members must include one expert in the field of Water Resource Management and Distribution, and one expert in Public Finance. The remaining members must represent the Agricultural Community, Industrial Water Users, Residential Water Users, and Private Watershed Associations. The Board annually designates a Vice Chairman, a Treasurer, and a Secretary. The members of the Authority serve without compensation.

The Executive Director is responsible for the management of the daily operations of the three systems and prepares proposals for presentation to the Board of Commissioners at monthly business meetings. The Executive Director is responsible for implementing such proposals after presentation to, and approval by the Board. The Authority's Executive Director heads a full-time staff of professional, technical, and

operational personnel totaling 128 employees, consisting of 102 employees of the Raritan Basin System and 26 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. A copy of the minutes of every meeting of the Authority must be delivered to the Governor. Actions taken at the meeting will not be effective until ten business days after the copy of the minutes has been delivered. If in this ten day period the Governor returns the copy of the minutes with a veto of any action taken by the Authority at that meeting, the action will be ineffective. 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. This internal control structure includes policies, procedures, approved organizational structures, and approved budgets for capital and operating expenditures.

The Authority adopts an annual budget for its operations and establishes water rates accordingly. The budget of the Authority does not establish legal spending limitations, but is used for the purpose of establishing rates. Although the Authority is only required to give at least six months advance notice of proposed rate adjustments to contractual customers, the Authority usually begins the rate adjustment procedure nine months in advance of the effective date through informal meetings with the water users. The initial informal meeting with the water users usually takes place in October of the year preceding the proposed effective date of the following July 1.

Financial Position

The total assets of the Authority as of June 30, 2002 were \$217,619,951, a decrease of one percent over the previous year's total of \$220,459,865. The Capital Assets, net of accumulated depreciation decreased \$4,635,638, three percent, from \$159,724,105 to \$155,088,467. Capital Assets net of accumulated depreciation of the Raritan Basin System decreased \$3,113,452, four percent, from \$84,470,851 to \$81,357,399. The decrease within this System is largely due to the effect of the accumulated depreciation expense net of any additions or deletions. The Authority anticipates spending \$1.5 to \$2 million a year during the period 2003-2008 for capital improvement projects and will finance this Five Year Capital Improvement Program utilizing an internally generated Capital Fund Component. The Authority

established a new Capital Fund Component of \$10 per million gallons (mg) effective July 1, 1994 with subsequent changes in this component over the last eight years, and is proposing a Capital Fund Component of \$11.52 per mg, effective July 1, 2003. The Authority deems that the use of these internally generated funds for capital improvements is the most cost effective method of financing. This method of financing annual capital improvements will also place the Authority in the strongest possible financial position to meet the needs of the Raritan Basin System in the 21st century. As of June 30, 2002, a total of \$11,135,304 has been expended on projects within this Capital Improvement Program.

Capital Assets net of accumulated depreciation of the Manasquan Water Supply System decreased \$1,522,186, two percent, from \$75,253,254 to \$73,731,068. The decrease is due to depreciation of the assets in service. The Capital Assets net of accumulated depreciation associated with the Manasquan Water Treatment Plant and Transmission System is not reported within the Authority's Comprehensive Annual Financial Report and is the responsibility of the MCIA. The MCIA contracts with the Authority to operate the water treatment plant and related transmission facilities.

The total of cash and cash equivalents for the Authority increased \$1,458,568, or thirteen percent, from \$38,232,228 to \$39,690,796. The increase in cash is mainly attributable to an increase in the Capital Improvement Fund and decreased operational costs within the Raritan System.

Current liabilities decreased \$448,439, or six percent, from \$7,503,563 to \$7,055,124. The decrease is primarily due to the decrease in the current portion of bonds and notes payable from \$4,565,330 in Fiscal Year 2001 to \$4,055,588 in Fiscal Year

2002. Total Net Assets of the Authority increased \$1,587,000, or two percent, from \$92,790,592 to \$94,377,592.

The Consolidated Revenues increased by \$2,067,732 or eleven percent, from \$19,588,040 to \$21,655,772 due to an increase in overdraft revenues in both Systems. Total Operating Expenses increased \$927,277, or six percent, from \$15,523,478 to \$16,450,755. Nonoperating revenues decreased \$1,199,943, from \$2,563,619 to \$1,363,676 due to a reduction in Investment Income because of current market conditions. Nonoperating expenses increased \$202,329 from \$4,779,364 to \$4,981,693 due to an increase in the reduction in costs to be recovered from future revenues. Contained in the following paragraphs is an explanation of changes in revenue and expense for each system.

The Raritan Basin System Revenues increased \$748,563, or six percent, from \$13,456,473 to \$14,205,036. The increase in revenues is due to an increase in overdraft revenue collected. Total Operating Expenses increased \$645,560, or six percent, from \$10,586,110 to \$11,501,670. Payroll and Fringe Benefits increased \$316,242, or six percent, from \$5,046,482 to \$5,362,724 due to contractual salary increases and fringe benefit renewal increases. Operations and Maintenance expenses increased \$422,997, or twenty-three percent, from \$1,850,086 to \$2,273,083, mostly due to increases in electricity for pumping and insurance costs.

The Manasquan Water Supply System Revenues increased \$1,177,956, or twenty-six percent, from \$4,529,929 to \$5,707,885. The increase in revenues is due to the increase in the receipt of overdraft revenues. Total Operating Expenses increased \$159,489, or five percent, from \$3,367,145 to \$3,526,634. Payroll and Fringe Benefits

increased \$78,551, or eleven percent, from \$700,911 to \$779,462. The increase is due to the sharing of expenses between the Manasquan Reservoir System and Manasquan Water Treatment Plant expenses. Operations and Maintenance expenses increased \$23,009, or two percent, from \$1,040,031 to \$1,063,040, mostly due to increases in electricity for pumping and insurance expense.

Operating Revenue for the Manasquan Water Treatment Plant and Transmission System decreased \$79,901, or six percent, from \$1,339,167 to \$1,419,068 and total Operating Expenses decreased \$122,228, or nine percent, from \$1,300,223 to \$1,422,451. The budget is prepared on the basis of delivering the contracted amount of 3.42 million gallons per day (mgd) to the five participating municipalities. The actual Operations and Maintenance Expenses will vary with the actual draw from the treatment plant. The Water Treatment Plant Payroll and Fringe Benefits increased \$11,225, or two percent, from \$653,180 to \$664,405, and is subject to the same increases or decreases as the Manasquan Reservoir System depending upon the allocation of employee responsibilities between the two systems. Operations and Maintenance expenses increased \$111,003, or seventeen percent, from \$647,043 to \$758,046, due to increases in electricity for pumping and service and maintenance contracts.

At the April 2002 Authority meeting, the Authority adopted a Raritan Basin System rate to become effective July 1, 2002 of \$205.00 per mg covering Operations and Maintenance, Debt Service, Capital Fund, and the Source Water Component, for the Fiscal Year ending June 30, 2003. This rate represents no change from the previous Fiscal Year rate of \$205.00 per mg. The proposed rate for the fiscal year ending June

30, 2004, effective July 1, 2003, is \$210.00 per mg covering Operations and Maintenance, Debt Service, Capital Fund, and the Source Water Component. The proposed Fiscal Year 2004 rate represents an increase from the previous fiscal year of \$205.00 per mg or 2 percent.

A revised rate of \$794.97 per mg, effective July 1, 2002, was adopted for the Manasquan Water Supply System at the April 2002 Authority meeting. In accordance with the Manasquan Reservoir Water Supply System Bond Resolution, Section 713, the Manasquan Water Supply System was required to establish a debt service coverage charge starting at five percent of gross debt service with the first interest payment date, 10 percent with the third interest payment date, 15 percent with the fifth interest payment date, and 20 percent with the seventh interest payment date and thereafter. The proposed Fiscal Year 2004 rate for the Manasquan Water Supply System is \$794.97 per mg, effective July 1, 2003. There will be no further changes in the water rate due to increases in debt coverage requirements, which reached a maximum coverage level of 20 percent as of February 1, 1994. The proposed rate of \$794.97 per mg, effective July 1, 2003, represents no change from the previous fiscal year of \$794.97 per mg.

The Authority entered into an agreement on September 1, 1987 with the MCIA to design, construct, operate and maintain the Manasquan Water Treatment Plant and Transmission System. The MCIA raises all of the revenues necessary to cover operations and maintenance expenses and debt service. The MCIA transfers to the New Jersey Water Supply Authority the annual budget requirements on a monthly basis. The Authority is responsible for presenting a calendar year operating budget

to the MCIA at least 210 days prior to the beginning of each calendar year. The Authority is responsible for submitting a statement of actual operations and maintenance expenses for the prior fiscal (calendar) year to the MCIA 120 days after the end of each calendar year. The budget for calendar year 2002 is \$1,399,604, which represents a three percent decrease or \$38,932, over calendar year 2001's budget of \$1,438,536.

Cash Management

The Raritan Basin System had a total of \$29,188,449 in cash and investments as of June 30, 2002. These funds generated interest income of \$977,959.

The Manasquan Water Supply System had a total of \$9,932,226 in cash and investments as of June 30, 2002. These funds generated interest income of \$391,324.

The Manasquan Water Treatment Plant and Transmission System had a total of \$306,269 in cash and investments, which consisted of operating funds held by the Authority, as of June 30, 2002. These funds generated interest income of \$8,511.

Funds of \$6,400,427 of the Raritan Basin System, and \$4,638,908 of the Manasquan Reservoir System are held by the Trustees in accordance with bond resolutions and are invested in securities of the U.S. Government and its agencies and are collateralized at 102 percent of the carrying amount. Funds of \$16,282,423 of the Raritan Basin System, \$4,346,803 of the Manasquan Reservoir System, and \$265,700 of the Manasquan Water Treatment Plant and Transmission System were invested in the State of New Jersey Cash Management Fund. State laws permit the Division of Investment to invest in a variety of

securities, such as obligations of the U.S. Government and its agencies, commercial paper, certificates of deposit, repurchase agreements, banker's acceptances, and loan participation notes. All such investments must fall within the guidelines set forth by the regulations of the State's Investment Council. The Investment Council does not impose any limits on the amounts of funds, which may be deposited or withdrawn. To gain a higher rate of return than what is earned in the State of New Jersey Cash Management Fund, the Authority had elected to invest \$3,173,871 of funds from the Raritan Basin System and \$832,574 of funds from the Manasquan Reservoir System in (non-callable) Federal Home Loan Bank Securities at a 7.25 percent return, due May 15, 2003. Capital Improvement Funds of \$3,086,535 of the Raritan Basin System are invested in (non-callable) Federal Home Loan Bank Securities at a 6.7 percent return, due August 12, 2003. Funds of \$245,192 of the Raritan Basin System, \$113,941 of the Manasquan Reservoir System, and \$40,570 of the Manasquan Water Treatment Plant and Transmission System were held at PNC Bank representing the Revenue, Operating and Payroll accounts as of June 30, 2002.

Debt Service

The Raritan Basin System has the obligation to repay the following debt.

The Authority made the last payment on the 1969 Bonds on June 25, 2002. The bonds did bear interest at 5.4 percent and payments were made semi-annually in the amount of \$385,000, including interest through June 25, 2002.

On December 12, 1985, the Authority obtained a loan of \$19,600,000 from a 1981 State of New Jersey Water Supply Bond

Appropriation of \$20,550,000 for the purpose of financing the Dredging Program for the Delaware and Raritan Canal. The 1981 Bond Fund obligation has a remaining principal and interest balance of \$7,895,000 and \$1,165,523, respectively, as of June 30, 2002. During June 1997, the Authority, through an agreement with the State of New Jersey, reduced the interest rate on this loan from 7.30 percent to 5.58 percent effective for the payments due on and after November 1, 1998, for an overall savings of \$1,137,686. Debt Service payments are made semi-annually and range from \$501,108 to \$1,846,108 through November 1, 2006.

On December 7, 1988, the Authority issued \$32,405,000 of 25 year Water System Revenue Bonds, Series 1988, to finance a Five Year Capital Improvement Program for projects relating to the Delaware and Raritan Canal and the Spruce Run/Round Valley Reservoirs System. The Series 1988 Bonds are obligations of the Authority payable from revenues and pledged property. Payments on the Series 1988 Bonds are secured solely by pledged properties of the Authority.

In accordance with the Delaware and Raritan Water System Revenue Bonds, Series 1988, Bond Resolution, Section 713, the Raritan Basin System's schedule of rates shall be maintained at such a level so as to produce net revenues equal to at least 1.20 times the amount required to be paid in the Debt Service Account. For Fiscal Year 2002, the coverage is adequate at 2.32. The Authority decided to take advantage of favorable market rates on the call date of November 1, 1998, and issue \$28,290,000 in 15 year Water System Revenue Refunding Bonds, Series 1998 to refund on a current basis \$28,465,000 in Water System Revenue Bonds, Series 1988. The refinancing of the

1988 Bonds with the 1998 Bonds produced net present value savings to the Authority of \$4,207,589 which is 14.7 percent of the principal amount of the 1988 Bonds being refunded. The true interest cost of the 1998 Bonds is 4.8748 percent as compared to the original true interest cost of the 1988 Bonds which was 7.9926 percent. The Prior Bonds were subject to the private activity bond refunding limitation because a substantial portion of the System's water is sold to privately-owned water companies. The 1998 Bonds are private activity bonds and interest earned on the 1998 Bonds will be tax-exempt, but will be subject to the alternative minimum tax. The 1998 Bonds may not be refunded prior to their first call date on November 1, 2008. The payment of principal and interest on the 1998 bonds are insured by MBIA. The 1998 Bonds are rated AAA/aaa by Standard & Poor's Corporation and Moody's Investors Service. Standard & Poor's gave an underlying rating of A+ to the 1998 Bonds.

The Series 1998 Revenue Refunding Bonds have a Bond yield of 4.78 percent, the remaining principal and interest balance is \$24,080,000, and \$8,359,503, respectively, at June 30, 2002. Semi-annual payments range from \$69,875 to \$2,669,875 through November 1, 2013.

The Manasquan Water Supply System has the obligation to repay the \$63,600,000 of State Loan Notes, and the \$7,416,000 of Completion Loan Notes, which were sold to construct the Manasquan Reservoir Facilities. During June 1997, the Authority, through an agreement with the State of New Jersey, reduced the interest rate on the State Loan Notes from 7.15 percent to 5.93 percent, effective for the payments due on and after August 1998, for an overall savings of \$8,013,134. The Completion Loan Notes bear interest at 6.24 percent,

converted from 7.16 percent Interim Advance Notes effective February 1, 1992. The current portion of the debt is defined as the ratio of the present water purchased under contract divided by the total system yield of 30 mgd. At present the Manasquan Reservoir System has 17.097 mgd sold under contract. The Authority has the obligation only to repay the current portion of the loans as defined in the terms of the State Loan Agreement. The State Loan Notes and the Completion Loan have a principal and interest balance of \$118,802,009, at June 30, 2002, which represents both the current and deferred portion. At June 30, 2002 the principal amount classified as the Current Notes with the Initial Water Purchasers was \$35,263,351 and are payable through semi-annual payments, including interest, which range from \$89,327 to \$3,102,025 through August 1, 2020 and the principal amount classified with the Current Notes with the Delayed Water Purchaser was \$3,215,552 and are payable through annual installments which range from \$6,520 to \$226,421 and the principal amount classified as the Deferred Notes was \$41,488,355. Per the terms of the Agreement dated September 12, 1989, the Completion Loan Notes are to be accounted for in accordance with the terms of the State Loan Agreement. Accordingly, \$3,734,277 in Completion Loan Notes of the Initial Water Users have been classified as Current Loan Notes and are payable through annual installments which range from \$10,117 to \$336,710 and \$339.063 in Completion Loan Notes of the Delayed Water Purchaser have been classified as Current Notes and are payable through annual installments which range from \$746 to \$25,237 and the principal amount classified as the Deferred Notes was \$4,374,732.

Risk Management

The Authority carries property insurance for all of its facilities covering direct physical loss or damage and loss of revenue resulting therefrom, with deductibles as it deems appropriate. The Authority also carries General and Umbrella Liability Insurance and Automotive coverage, with self-insured retainers as it deems appropriate. Public Officials Liability coverage with enhanced Employment Liability coverage is also maintained with deductibles. Workers' Compensation coverage is also maintained as required by State law.

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. Ernst & Young LLP, Certified Public Accountants, was retained to perform an audit of the 2002 Fiscal Year in accordance with generally accepted auditing standards 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"). MD&A is considered to be required supplemental data and precedes the financial statements. Ernst & Young LLP reports directly to the Audit Committee of the

Board of Commissioners. Ernst & Young LLP also performed, as part of the annual audit, a review of the internal control structure.

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 Source Water Component.

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, 2001. This was the tenth consecutive year that the government 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. We believe that our current Comprehensive Annual Financial Report continues to meet the Certificate of Achievement Program's requirements and are submitting it to the GFOA to determine its eligibility for another certificate.

Acknowledgements

The preparation of this report on a timely basis could not be accomplished without the efficient and dedicated services of the Financial and Administrative 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 accounting staff deserves special recognition for their dedication, perseverance and attention to detail that results 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. I would like to express my appreciation to all employees of the New Jersey Water Supply Authority who contributed to this report's preparation. The report also could not have been prepared without the full support and encouragement of the Chair and Members of the Board, and the Executive Director.

Economic Outlook

The continuing economic viability of the Authority is ensured by the water contracts we maintain 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 2002, the Authority supplied water to 14 contractual customers of the Raritan Basin System, which provided water to approximately 1,300,000 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 85 percent of total Raritan Basin System operating

revenues. Three customers accounted for approximately 81 percent of total Manasquan System operating revenues. The total sales base for the Raritan Basin System is 151.914 million gallons per day, and the total sales base for the Manasquan Reservoir System is 17.097 million gallons per day. To better serve our water customers, the Authority now maintains a Web Site, www.njwsa.org, where we post a daily operations report and other important information. Payments for uninterrupted 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 uninterrupted service. NJ-American became a delayed water purchaser on 7/01/01 for 1 mgd within the Manasquan Reservoir System. And we are expecting our major water customers in both Systems to continue to increase their contractual water allocations in the future.



Michael R. Citarelli
Chief Financial Officer

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Financial Section

Report of Independent Auditors

General Purpose Financial Statements
Management's Discussion and Analysis
Statements of Net Assets
Statements of Revenues, Expenses and
Changes in Net Assets
Statements of Cash Flows
Notes to Financial Statements

Combining Statements and Schedules

Report of Independent Auditors

To the Commissioners of the
New Jersey Water Supply Authority

We have audited the accompanying statements of net assets of the New Jersey Water Supply Authority (the "Authority"), a component unit of the State of New Jersey, at June 30, 2002 and 2001, and the related statements of revenues, expenses and changes in net assets and cash flows for the years then ended. These financial statements are the responsibility of the Authority's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States 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 of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the New Jersey Water Supply Authority at June 30, 2002 and 2001, and the changes in its financial position and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States.

The Management's Discussion and Analysis on pages 3 through 6 is not a required part of the basic financial statements but is supplementary information required by the Governmental Accounting Standards Board. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the required supplementary information. However, we did not audit the information and express no opinion on it.

In accordance with *Government Auditing Standards*, we have also issued a report dated July 26, 2002 on our consideration of the New Jersey Water Supply Authority's internal control over financial reporting and our tests of its compliance with certain provisions of laws, regulations, contracts, and grants. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be read in conjunction with this report in considering the results of our audit.

Our audits were conducted for the purpose of forming an opinion on the financial statements taken as a whole. The supplemental information listed in the table of contents is presented for the purpose of additional analysis and is not a required part of the financial statements. Such information has been subjected to the auditing procedures applied in our audit of the 2002 financial statements and, in our opinion, is fairly stated in all material respects in relation to the 2002 financial statements taken as a whole.

Ernst + Young LLP

July 26, 2002



MANAGEMENT'S DISCUSSION AND ANALYSIS

Year ended June 30, 2002

This section of the New Jersey Water Supply Authority's ("Authority") Annual Financial Report presents our discussion and analysis of the Authority's financial performance during the fiscal year ended on June 30, 2002. Please read it in conjunction with the Authority's financial statements and accompanying notes.

FINANCIAL HIGHLIGHTS

- The Authority's total net assets increased \$1.6 million (or 1.7%)
- Cash and cash equivalents increased \$1.0 million (or 4.8%)
- Total liabilities decreased \$4.4 million (or 3.5%)
- Operating revenues increased to \$21.6 million (or 10.6%) while operating expenses increased by 6.0% to \$16.5 million.
- Nonoperating revenue decreased \$1.2 million (or 46.8%) while investment income decreased by 42.6% to \$1.4 million.

OVERVIEW OF THE FINANCIAL STATEMENTS

The annual financial report consists of two parts: Management's Discussion and Analysis (this section) and the basic financial statements. The Authority is a self-supporting entity and follows enterprise fund accounting. The enterprise fund concept is similar to how 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 be 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 control has been developed and implemented by management. This internal control includes policies, procedures, approved organizational structures and approved budgets for capital and operating expenditures.



MANAGEMENT'S DISCUSSION AND ANALYSIS

Year ended June 30, 2002

FINANCIAL ANALYSIS OF THE AUTHORITY

Changes in assets, liabilities and net assets between June 30, 2002 and 2001 are summarized in the following table:

	2002	2001	Percent Increase (Decrease)
Current assets	\$24,614,689	\$23,199,121	6.10%
Capital assets	155,088,467	159,724,105	(2.90)
Other noncurrent assets	37,916,795	37,536,639	1.01
Total assets	217,619,951	220,459,865	(1.29)
Long-term debt	116,187,235	120,165,710	(3.31)
Other liabilities	7,055,124	7,503,563	5.98
Total liabilities	123,242,359	127,669,273	(3.47)
Net assets invested in capital assets, net of related debt	34,845,644	34,993,065	(0.42)
Unrestricted	59,531,948	57,797,527	3.00
Total net assets	\$94,377,592	\$92,790,592	1.71

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 Monmouth County Improvement Authority, and is operated and maintained by the Authority under the terms of an operating agreement. Each of these systems must provide sufficient revenues each year to cover its own operating expenses and debt service. At the April 2002 Authority meeting, the Authority adopted a Raritan Basin System rate to become effective July 1, 2002 of \$205.00 per million gallons. This rate represents no change from the previous fiscal year rate. A revised rate of \$794.97 per million gallons, effective July 1, 2002, was adopted for the Manasquan Water Supply System at the April 2002 Authority meeting. The rate represents a .37 percent decrease over the July 1, 2001 rate of \$797.92 per million gallons. The Water Treatment Plant and Transmission System budget for fiscal year 2003 (July 1, 2002 – June 30, 2003) is \$1,599,372 which represents a 3.71 percent increase from the previous budget of \$1,542,174.



MANAGEMENT'S DISCUSSION AND ANALYSIS

Year ended June 30, 2002

The following table summarizes the changes in revenues, expenses and net assets between fiscal years 2002 and 2001:

	2002	2001	Percent Increase (Decrease)
Operating revenues:			
Water sales	\$19,912,921	\$17,986,402	10.71%
Reimbursement of operating expenses	1,419,068	1,339,167	(5.97)
Watershed protection program	323,783	262,471	23.36
Total operating revenues	21,655,772	19,588,040	10.56
Operating expenses:			
Operations	10,966,598	9,937,733	10.35
Depreciation	5,484,157	5,585,745	(1.82)
Total operating expenses	16,450,755	15,523,478	5.97
Income from operations	5,205,017	4,064,562	28.06
Total nonoperating revenues	1,363,676	2,563,619	(46.81)
Total nonoperating expenses	4,981,693	4,779,364	4.23
Change in net assets	\$1,587,000	\$1,848,817	(14.16)

CAPITAL ASSETS AND DEBT ADMINISTRATION

At June 30, 2002, the Authority had a total of \$155,088,467 invested in the Systems that it operates, \$81,357,399 pertains to the Raritan Basin System and \$73,731,068 pertains to the Manasquan System. This total amount represents an overall decrease of 2.90% under last year and is detailed as follows.

The following table summarizes the changes in capital assets, net of depreciation, between fiscal years 2002 and 2001:

	2002	2001	Percent Increase (Decrease)
Land and land rights	\$9,981,170	\$9,981,170	0.00%
Dams	59,389,075	60,189,402	(1.33)
Building, structures and improvements	75,110,461	77,169,905	(2.67)
D&R canal dredging	3,709,118	4,785,343	(22.49)
Machinery and equipment	1,303,872	1,344,984	(3.06)
Construction work in progress	5,594,771	6,253,301	(10.53)
Total capital assets, net	\$155,088,467	\$159,724,105	(2.90)



MANAGEMENT'S DISCUSSION AND ANALYSIS

Year ended June 30, 2002

The following table summarizes the changes in capital debt between fiscal years 2002 and 2001:

	2002	2001	Percent Increase (Decrease)
Bonds payable	\$23,833,494	\$25,221,380	(5.50)%
Notes payable	96,409,329	99,509,660	(3.12)
Total bonds and notes payable	<u>\$120,242,823</u>	<u>\$124,731,040</u>	(3.60)

At year-end, the Authority had \$120,242,823 in bond and note principal outstanding versus \$124,731,040 at June 30, 2001, a decrease of 3.60% as shown in the table.

CURRENT AND NEW BUSINESS

During fiscal year 2002, the Authority supplied water to 14 contractual customers of the Raritan Basin System, which supplied water to 1,300,000 people in Central New Jersey. Two customers accounted for approximately 85 percent of total Raritan Basin System operating revenues. The total sales base for the Raritan Basin System is 151.875 million gallons per day (mgd). Elizabethtown Water Company recently increased its water contract by two mgd to a total of 104 mgd. In addition, during the fiscal year 2002 the Authority provided water to 13 contractual customers of the Manasquan Water Supply System, which provides water to 250,000 people in the Monmouth County area. Three customers accounted for approximately 81 percent of total Manasquan System operating revenues. The total sales base for the Manasquan Reservoir System is 17.097 million gallons per day. New Jersey-American Water Company has increased their water contract by one mgd to a total of 9.065 million gallons per day, effective July 1, 2001.

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. If you have questions about this report or need additional financial information, you can contact the New Jersey Water Supply Authority at 1851 Route 31, P.O. Box 5196, Clinton, New Jersey 08809, or visit our website at www.njwsa.org.

New Jersey Water Supply Authority

Statements of Net Assets

	June 30	
	2002	2001
Assets		
Current assets:		
Cash and cash equivalents	\$20,989,734	\$20,112,578
Unbilled sales	957,916	1,258,046
Accounts receivable, less allowance for doubtful accounts of \$1,000 at June 30, 2002 and 2001	1,530,823	711,934
Interest receivable	174,884	202,745
Prepaid expenses and other current assets	865,256	639,159
Costs to be recovered from future revenues	56,747	235,330
Total current assets	24,575,360	23,159,792
Noncurrent assets:		
Restricted assets:		
Cash equivalents	470,112	354,111
Investments	11,248,566	10,597,426
Investments	6,982,384	6,965,368
Costs to be recovered from future revenues	18,618,311	18,982,984
Deferred issuance cost	636,751	676,079
Capital assets, net of accumulated depreciation of \$75,918,658 and \$70,799,619 at June 30, 2002 and 2001, respectively	155,088,467	159,724,105
Total noncurrent assets	193,044,591	197,300,073
Total assets	217,619,951	220,459,865
Liabilities		
Current liabilities:		
Current portion of bonds and notes payable	4,055,588	4,565,330
Accounts payable	298,496	410,737
Accrued liabilities	1,786,490	1,734,075
Deferred revenue	914,550	793,421
Total current liabilities	7,055,124	7,503,563
Noncurrent liabilities:		
Long-term portion of bonds and notes payable	116,187,235	120,165,710
Total liabilities	123,242,359	127,669,273
Net Assets		
Invested in capital assets, net of related debt	34,845,644	34,993,065
Restricted	10,804,128	10,158,116
Unrestricted	48,727,820	47,639,411
Total net assets	\$94,377,592	\$92,790,592

See accompanying notes.

New Jersey Water Supply Authority

Statements of Revenues, Expenses and Changes in Net Assets

	Year ended June 30	
	2002	2001
Operating revenues:		
Water sales	\$19,912,921	\$17,986,402
Reimbursement of operating expenses	1,419,068	1,339,167
Total operating revenues	21,331,989	19,325,569
Operating expenses:		
Payroll	5,397,959	5,033,099
Operations and maintenance	4,094,169	3,537,160
Fringe benefits	1,474,470	1,367,474
Depreciation	5,484,157	5,585,745
Total operating expenses	16,450,755	15,523,478
Income from operations	4,881,234	3,802,091
Nonoperating revenues:		
State of New Jersey – Grant Programs	323,783	262,471
Investment income	1,390,588	2,424,409
Rental income	41,383	40,384
Other income	(68,295)	98,826
Total nonoperating revenues	1,687,459	2,826,090
Nonoperating expenses:		
Interest component of debt service to the State of New Jersey	4,376,027	4,413,088
Amortization of issuance costs - D & R System Revenue Refunding Bonds, Series 1998	25,229	25,229
Amortization of issuance costs - Manasquan State Loan Notes	14,100	14,100
Reduction in costs to be recovered from future revenues	566,337	326,947
Total nonoperating expenses	4,981,693	4,779,364
Change in net assets	1,587,000	1,848,817
Net assets, beginning of year	92,790,592	90,941,775
Net assets, end of year	\$94,377,592	\$92,790,592

See accompanying notes.

New Jersey Water Supply Authority

Statements of Cash Flows

	Year ended June 30	
	2002	2001
Cash flows from operating activities		
Cash received from water sales	\$19,359,893	\$18,117,456
Cash received from reimbursable expenses	1,426,486	1,423,697
Cash received from rental income	13,796	13,812
Cash paid to or on behalf of employees	(6,795,998)	(6,368,369)
Cash paid to suppliers	(4,177,012)	(3,993,713)
Cash received for grant programs	439,784	320,064
Cash received for settlement of claim		2,800,000
Net cash provided by operating activities	10,266,949	12,312,947
Cash flows from capital and related financing activities		
Principal paid on capital obligation	(4,488,219)	(4,248,972)
Interest paid on capital obligation	(4,339,391)	(4,461,020)
Acquisition and construction of capital assets	(1,196,475)	(1,776,423)
Net cash used in financing activities	(10,024,085)	(10,486,415)
Cash flows from investing activities		
Sale of investment securities	11,400,857	14,909,236
Purchase of investment securities	(12,069,013)	(16,839,902)
Interest received on investments	1,418,449	2,353,735
Net cash provided by investing activities	750,293	423,069
Net increase in cash and cash equivalents	993,157	2,249,601
Cash and cash equivalents, beginning of year	20,466,689	18,217,088
Cash and cash equivalents, end of year	\$21,459,846	\$20,466,689
Reconciliation of income from operations to net cash provided by operating activities:		
Income from operations	\$5,205,017	\$4,064,562
Adjustments to reconcile income from operations to net cash provided by operating activities:		
Non-cash items expensed to operations and maintenance	252,981	(180,686)
Cash received for operating activity shown in other income	51,845	102,533
Depreciation	5,484,157	5,585,745
Change in assets and liabilities:		
Decrease (increase) in unbilled sales	300,130	(255,411)
(Increase) decrease in accounts receivable	(846,808)	468,914
Decrease in claims receivable		2,800,000
Increase in prepaid expenses	(226,097)	(257,958)
Decrease in accounts payable	(65,440)	(81,962)
(Decrease) increase in accrued payroll and taxes	(4,837)	9,617
Increase in deferred revenue	116,001	57,593
Net cash provided by operating activities	\$10,266,949	\$12,312,947
Non cash investing activities		
Increase in fair value of investments	\$50,439	\$285,358

See accompanying notes.

New Jersey Water Supply Authority

Notes to Financial Statements

June 30, 2002

I. Organization and Operations

The New Jersey Water Supply Authority (the "Authority"), consisting of the Spruce Run/Round Valley Reservoirs Complex and 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 of New Jersey, exercising public and essential governmental functions. The Authority is a component unit of the State of New Jersey. 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 (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 (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 it 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.

2. Summary of Significant Accounting Policies

Basis of Accounting

The Authority derives most of its revenues 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.

In its accounting and financial reporting, the Authority follows the pronouncements of the Governmental Accounting Standards Board (GASB). In addition, the Authority follows the pronouncements of all applicable Financial Accounting Standards Board (FASB) Statements and Interpretations, Accounting Principles Board (APB) Opinions, and Accounting Research Bulletins (ARBs) of the Committee on Accounting Procedure issued on or before November 30, 1989, unless they conflict with or contradict GASB pronouncements. The Authority has elected not to apply pronouncements issued by the FASB after November 30, 1989.

Notes to Financial Statements (continued)

Other significant accounting policies are:

Revenues

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

Capital Assets

Capital assets are stated at original cost and consists primarily of amounts expended to license, construct, acquire, complete and place in operation the projects of the Authority. 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. Costs of computer hardware and purchased software are capitalized. Interest earned on long-term debt proceeds used for capital assets 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 asset is offset to accumulated depreciation.

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 six months or less to be cash equivalents.

Investments

Short-term investments and restricted investments 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*.

Notes to Financial Statements (continued)

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 to a maximum of \$15,000. A liability is accrued when incurred in the financial statements.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States 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 NJSA27:25-16 and, accordingly, no provision is recorded for federal and state income taxes.

Costs to be Recovered from Future Revenues

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 FASB Statement No. 71, 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. The deferred costs will be recovered through future revenues in accordance with the rate model. The deferred amount for the year ended June 30, 2002 and June 30, 2001 were determined as follows:

	June 30	
	2002	2001
Raritan Basin System		
Cost excluded from rate model:		
Depreciation of debt-financed capital assets recoverable from rate payers	\$ 2,452,145	\$ 2,506,146
Excess vacation expense over vacation paid	13,249	9,721
	2,465,394	2,515,867
Cost included in rate model:		
Debt principal repayment	(3,489,234)	(3,318,280)
	(1,023,840)	(802,413)

Notes to Financial Statements (continued)

	June 30	
	2002	2001
Manasquan System		
Cost excluded from rate model:		
Depreciation of debt-financed capital assets recoverable from rate payers	1,551,976	1,557,226
Excess vacation expense over vacation paid	4,704	1,354
	<u>1,556,680</u>	<u>1,558,580</u>
Cost included in rate model:		
Debt principal repayment	<u>(1,076,096)</u>	<u>(1,014,880)</u>
	480,584	543,700
Total Raritan Basin and Manasquan	<u>(543,256)</u>	<u>(258,713)</u>
Balance, beginning of year	<u>19,218,314</u>	<u>19,477,027</u>
Balance, end of year	<u><u>\$18,675,058</u></u>	<u><u>\$19,218,314</u></u>

The reduction of cost to be recovered from future revenues of \$566,337 as shown in the income statement for the year ended June 30, 2002 includes \$5,128 of Manasquan Water Treatment Plant deferred revenue, which is not part of the rate model, and does not include a credit balance of \$17,953 of accrued vacation.

Accounting for Monmouth County Improvement Authority Agreement

The Authority operates and maintains a Water Treatment Plant/Transmission System (“WTP/TS”) for the Monmouth County Improvement Authority (“MCIA”). The MCIA is charged for budgeted operating expenses expected to be incurred by the Authority during the MCIA’s fiscal year (January 1 through December 31).

Because of the difference resulting from billing the MCIA for budgeted expenses versus actual expenses appearing in the financial statements, the Authority includes deferred costs (actual costs exceed MCIA billings) or deferred revenues (MCIA billings exceed actual costs) in its balance sheets. These excess costs or billings will be recovered or recognized in future periods. As of June 30, 2002, deferred revenues amounted to \$444,438 and were determined as follows:

Reimbursement of operating expenses	\$1,427,579
Operating expenses	<u>(1,422,451)</u>
Deferred revenue	5,128
Balance, beginning of year	<u>439,310</u>
Balance, end of year	<u><u>\$ 444,438</u></u>

Notes to Financial Statements (continued)

Accounting for Watershed Protection Program

For the fiscal years ended June 30, 2002 and 2001, the Authority received \$0 and \$300,000, from the New Jersey Department of Environmental Protection for the costs associated with a watershed protection study of the Raritan System. These funds were restricted for the use of mapping out streams and other water sources and will be recognized as revenue as the related costs were incurred. As of June 30, 2002, the balance of restricted cash equivalents and deferred revenue is \$58,917.

Accounting for No Name Dam No. 31 Fund

During fiscal year ended June 30, 2002, the Authority received \$430,000 from the New Jersey Department of Environmental Protection for the costs associated with bringing the No Name Dam No. 31 into compliance with the requirements of the New Jersey Dam Safety Standards. These funds are restricted to be used for engineering and construction expenses. The funds will be recognized as revenue as the related costs are incurred. As of June 30, 2002, the balance of restricted cash equivalents and deferred revenue associated with the No Name Dam No. 31 is \$411,195.

3. Capital Assets

Capital assets activity for the year ended June 30, 2002 was as follows:

	Beginning Balance	Additions	Retirements	Ending Balance
Capital assets not being depreciated:				
Land	\$9,981,170			\$ 9,981,170
Construction work in progress	6,253,301	\$877,936	\$(1,536,466)	5,594,771
Total capital assets not being depreciated	16,234,471	877,936	(1,536,466))	15,575,941
Capital assets being depreciated:				
Dams	77,369,160			77,369,160
Building, structures and improvements	111,224,436	1,289,862	(305,471)	112,208,827
D & R canal dredging	21,160,274			21,160,274
Machinery and equipment	4,535,383	324,146	(166,606)	4,692,923
Total capital assets being depreciated	214,289,253	1,614,008	(472,077)	215,431,184
Less accumulated depreciation for:				
Dams	(17,179,758)	(800,327)		(17,980,085)
Building, structures and improvements	(34,054,529)	(3,248,738)	204,901	(37,098,366)
D & R canal dredging	(16,374,931)	(1,076,225)		(17,451,156)
Machinery and equipment	(3,190,401)	(358,867)	160,217	(3,389,051)
Total accumulated depreciation	(70,799,619)	(5,484,157)	365,118	(75,918,658)
Total capital assets, being depreciated, net	143,489,634	((3,870,149)	(106,959)	139,512,526
Total capital assets, net	\$159,724,105	\$(2,992,213)	\$(1,643,425)	\$155,088,467

Notes to Financial Statements (continued)

4. Cash and Investments

New Jersey statutes permit the deposit of public funds in institutions located in New Jersey which are insured by the Federal Deposit Insurance Corporation (FDIC) or by any other agencies of the United States that insure deposits or in the State of New Jersey Cash Management Fund. All funds of the Authority may be invested in obligations of, or guaranteed by, the United States 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 which are members of the Federal Reserve System, investments in the State of New Jersey Cash Management Fund and direct and general obligations of any State which meets the minimum requirements of the resolution.

The State of New Jersey Cash Management Fund is managed by the State of New Jersey, Division of Investment under the Department of the Treasury. It consists of U.S. Treasury obligations, government agencies obligations, certificates of deposit and commercial paper.

a. Cash

The Authority's bank balance was \$1,242,928 at June 30, 2002, of which \$100,000 was covered through the FDIC (Category 1). The remaining balance of \$1,142,928 was not collateralized (Category 3). The cash balance per the statement of net assets is shown exclusive of outstanding checks totaling \$554,767. The balance sheet amount includes petty cash totaling \$493.

b. Investments

Investments are categorized by credit risk as follows:

Description	GASB Category	Rate	Fair Value
Categorized investments:			
U.S. Treasury Bill (JPMorgan Chase, due 7/25/02)	2	1.750%	\$1,749,836
U.S. Treasury Bill (JPMorgan Chase, due 7/25/02)	2	1.521	67,916
U.S. Treasury Bill (JPMorgan Chase, due 7/25/02)	2	1.540	862,933
U.S. Treasury Bill (JPMorgan Chase, due 7/25/02)	2	1.690	2,996
U.S. Treasury Bill (JPMorgan Chase, due 7/25/02)	2	1.690	62,922
U.S. Treasury Bill (JPMorgan Chase, due 7/11/02)	2	1.590	11,993
U.S. Treasury Bill (JPMorgan Chase, due 7/11/02)	2	1.549	12,993
U.S. Treasury Bill (JPMorgan Chase, due 7/11/02)	2	1.549	12,993
FHLB (Fleet, due 5/15/03)	2	7.250	480,990
FHLB (Fleet, due 5/15/03)	2	7.250	240,495
FHLB (Fleet, due 5/15/03)	2	7.250	94,107
FHLB (Fleet, due 5/15/03)	2	7.250	47,053
FHLB (Fleet, due 5/15/03)	2	7.250	1,422,057
FHLB (Fleet, due 5/15/03)	2	7.250	480,990
FHLB (Fleet, due 5/15/03)	2	7.250	946,295
FHLB (Fleet, due 5/15/03)	2	7.250	182,985
FHLB (Fleet, due 5/15/03)	2	7.250	256,179
FHLB (Fleet, due 8/12/03)	2	6.700	2,939,125
U.S. Treasury Note (JPMorgan Chase, due 2/15/05)	2	7.500	2,006,814
			11,881,672

Notes to Financial Statements (continued)

Uncategorized investments	
State of New Jersey's Cash Management Fund (Morgan Stanley (Morgan Stanley Dean Witter)	various 20,894,927
Compass U.S. Treasury Fund (JPMorgan Chase)	various <u>6,400,427</u>
	<u>27,295,354</u>
Total investments, June 30, 2002	<u><u>\$39,177,026</u></u>
Component of investments:	
Cash equivalents	\$20,771,192
Interest receivable	174,884
D & R System Revenue Refunding Bonds, Series 1998 proceeds, current	6,400,427
Manasquan System-State Loan Notes proceeds, current	2,788,777
Manasquan System-State Loan Notes proceeds, long-term	2,059,362
Long-term investments	<u>6,982,384</u>
	<u><u>\$39,177,026</u></u>

Category 2 - securities held by bank's trust department (counterparty) in the Authority's name.

c. Investment Income

Investment income of \$1,390,588 and \$2,424,409 for the years ended June 30, 2002 and 2001, respectively, was comprised of the following:

	2002	2001
Interest earned on bank accounts and certificates of deposit	\$547,505	\$1,142,451
Interest earned on securities	792,644	996,600
Increase in fair value of securities	50,439	285,358
	<u>\$1,390,588</u>	<u>\$2,424,409</u>

5. Bonds and Notes Payable

A. Due to State of New Jersey

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

1. The December 12, 1985 loan of \$19,600,000 which was obtained from the 1981 bond appropriation of \$20,550,000 for the purpose of financing improvements to the Delaware and Raritan Canal. The outstanding principal and interest on this loan amounted to \$7,895,000 and \$1,165,522, respectively, as of June 30, 2002. The loan bears interest at 5.58% and is payable in semi-annual payments, including interest, which range from \$50,108 to \$1,846,108 through November 1, 2006.

2. The \$63,600,000 of Manasquan Reservoir Water Supply System (the "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 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 System.

Notes to Financial Statements (continued)

The State Loan Notes and the Completion Loan Notes bear interest at 5.93% and 6.24% (converted from 7.16% Interim Advance Notes effective February 1, 1992), respectively, and are collateralized by the property and revenues of the System.

In accordance with the terms of the State Loan Agreement, the State Loan Notes are classified as either Current Debt Service Portion Notes (the "Current Notes") or Deferred Debt Service Portion Notes (the "Deferred Notes"). At June 30, 2002 the principal amount classified as the Current Notes with the Initial Water Purchasers was \$35,362,351 and are payable through semi-annual payments, including interest, which range from \$89,327 to \$3,102,025 through August 1, 2020 and the principal amount classified with the Current Notes with the Delayed Water Purchaser was \$3,215,552 and are payable through annual installments which range from \$6,520 to \$226,421 and the principal amount classified as the Deferred Notes was \$41,488,355. Per the terms of the Agreement dated September 12, 1989, the Completion Loan Notes are to be accounted for in accordance with the terms of the State Loan Agreement. Accordingly, \$3,734,277 in Completion Loan Notes of the Initial Water Users have been classified as Current Notes and are payable through annual installments which range from \$10,117 to \$336,710 and \$339,063 in Completion Loan Notes of the Delayed Water Purchaser have been classified as Current Notes and are payable through annual installments which range from \$746 to \$25,237 and the principal amount classified as the Deferred Notes was \$4,374,732.

The 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 which accreted as principal through July 31, 1990 accrued interest; however, the interest which accreted for the period from August 1, 1990 through July 31, 1993 did not accrue interest. 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, 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 System on an annual basis. Such Current Notes are payable over a thirty-year period commencing from a date as defined in the State Loan Agreement. The accretion of interest to the principal amount for the Current Notes and the Deferred Notes is \$25,563,184 at June 30, 2002 and 2001.

B. D & R System Revenue Refunding Bonds, Series 1998

On August 4, 1998, the Authority issued Water System Revenue Refunding Bonds, Series 1998 (the "Refunding Bonds") in the amount of \$28,290,000. The Refunding Bonds are serial bonds of which \$24,080,000 are outstanding at June 30, 2002 and bear interest at varying rates from 4.5% to 5.375%, and mature in incremental annual principal amounts through 2014. Principal maturities for the year ending June 30, 2003 are \$1,530,000. The Refunding Bonds maturing on or after November 1, 2009 are subject to redemption prior to their stated maturity dates at the option of the Authority, on or after November 1, 2008. The property and revenues of the System are pledged as collateral for the Refunding Bonds.

Notes to Financial Statements (continued)

The net proceeds of the Refunding Bonds along with available funds were used to purchase U.S. Government securities. Those securities were deposited in an irrevocable trust with an escrow agent to provide for debt service on the 1988 Bonds to the call date of November 1, 1998 and a call premium of \$550,000 due at that time. Unamortized 1988 bond issuance costs and discount were \$168,000 and \$409,000, respectively, at the date of the refunding. Although the advance refunding resulted in the deferral of \$1,395,725 of costs at June 30, 1999, the Authority in effect reduced aggregate debt service payments by almost \$8,108,000 over the next 15 years and obtained an economic gain (difference between the present value of the old and new debt service payments) of \$4,208,000.

For the year ended June 30, 2002, interest expense on the Refunding Bonds amounted to \$1,270,506 and the related interest income earned on the restricted investments amounted to \$82,597.

The following table summarizes the changes in Bonds and Notes Payable between fiscal years 2002 and 2001:

	Fiscal Year 2001	Less Payments	Fiscal Year 2002
Notes Payable	\$99,509,660	\$3,100,331	\$96,409,329
Bonds Payable	25,221,380	1,387,886	23,833,494
	\$124,731,040	\$4,488,217	\$120,242,823

Aggregate maturities and Bonds and Notes principal and interest, net of unamortized issuance cost and unamortized deferral are as follows:

Year ending June 30	Notes Payable		Bonds Payable	Totals
	Raritan Basin System	Manasquan System	Delaware & Raritan 1998 Water Revenue Refunding Bonds	
2003	\$1,758,709	\$3,676,588	\$2,731,368	\$8,166,665
2004	1,755,951	3,691,956	2,728,966	8,176,873
2005	1,851,080	3,694,694	2,727,325	8,273,099
2006	1,848,675	3,696,803	2,716,950	8,262,428
2007	1,846,108	3,693,440	2,712,575	8,252,123
2008-2012		18,472,020	13,481,447	31,953,467
2013-2017		18,467,515	5,340,872	23,808,387
2018-2031		17,545,906		17,545,906
Deferred Portion		45,863,087		45,863,087
	9,060,523	118,802,009	32,439,503	160,302,035
Less amounts representing interest	1,165,523	30,287,679	8,359,503	39,812,705
	7,895,000	88,514,330	24,080,000	120,489,330
Less:				
Current Principal Portion	1,356,000	1,169,588	1,530,000	4,055,588
Unamortized deferral amount			867,992	867,992
Plus unamortized bond premium			621,485	621,485
	\$6,539,000	\$87,344,742	\$22,303,493	\$116,187,235

Notes to Financial Statements (continued)

6. 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). The Division of Pensions within the Treasury Department of the State of New Jersey is the administrator of the PERS and charges employers annually for their respective contributions. The plans provide retirement and disability benefits, annual cost of living adjustments and benefits to plan members and beneficiaries. The plan is a cost sharing multiple-employer defined benefit plan and as such does not maintain separate records for each employer in the state; therefore, the actuarial data for the Authority is not available. The Division of Pensions issues a publicly available financial report for the plan that includes financial statements and required supplementary information. The reports may be obtained by writing the State of New Jersey, Division of Pensions.

All Authority full-time employees are required as a condition of employment to be members of PERS. A member may retire on a service retirement allowance as early as age 60; no minimum service is required. The formula for benefits is an annual allowance in the amount equal to years of service, divided by 55, times the final average salary. Final average salary means the average of the salaries received by the member for the last three years of creditable membership service preceding retirement or the highest three fiscal years of membership service, whichever provides the largest benefit. Pension benefits fully vest on reaching 10 years of service. Vested employees who have established 25 years or more of creditable service may retire without penalty at or after age 55 and receive full retirement benefits. The System also provides death and disability benefits. Benefits are established by State statute.

Covered Authority employees are required by PERS to contribute 3% of their salary. The Authority is required by State statute to contribute the remaining amounts necessary to pay benefits when due. 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 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.

The payroll for employees covered by PERS for the years ended June 30, 2002, 2001 and 2000 was \$5,189,673, \$4,841,795, and \$4,401,817, respectively. The Authority's total payroll for the years ended June 30, 2002, 2001 and 2000 was \$5,433,458, \$5,073,173 and \$4,725,455, respectively. The actuarial contribution requirements and the contributions made for the years ended June 30, 2002, 2001 and 2000 were \$154,125, \$144,016 and \$167,303, respectively, all of which was made by Authority employees. The employer and employee contributions represented 0% and 2.97% of covered payroll for the year ended June 30, 2002, 0% and 2.97% of covered payroll for the year ended June 30, 2001 and 0% and 3.8% of covered payroll for the year ended June 30, 2000. Contributions were made in accordance with the actuarial funding requirement.

Notes to Financial Statements (continued)

Post-Retirement Health Care Benefits

The Authority provides continued health care benefits to employees retiring after twenty-five years of service for themselves and eligible dependents. Benefits, contributions, funding and the manner of administration are determined by the State Legislature. The Division of Pensions within the New Jersey Treasury Department administers the funds. Monthly, the Division of Pensions charges the Authority for its contribution. The total number of employees receiving benefits was 28, 28 and 27 at June 30, 2002, 2001 and 2000, respectively. Total cost for these post-retirement benefits, included in fringe benefits approximated \$167,984, \$144,195 and \$100,885 for the years ended June 30, 2002, 2001 and 2000, respectively.

7. Major Water Customers

During fiscal year 2002, the Authority supplied water to approximately 14 customers of the Raritan Basin System and 13 customers of the Manasquan System.

Two customers accounted for approximately 85% of total Raritan Basin System operating revenues. Three customers accounted for approximately 81% of total Manasquan System operating revenues.

8. Risk Management

The Authority carries insurance for all of its facilities covering direct physical loss or damage and loss of revenue resulting therefrom, with deductibles as it deems appropriate. The Authority also carries General and Umbrella Public Liability Insurance with 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.

9. 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 financial position of the Authority.

Notes to Financial Statements (continued)

10. 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 revenues each year to cover its own operating expense and debt service. Investors in the revenue bonds rely solely on the revenue generated by the individual activities for repayment. Summary financial information for the operating segments are presented below:

	Year ended June 30, 2002		
	Raritan Basin System	Manasquan Water Supply System	Manasquan Water Treatment Plant
Condensed Statement of Net Assets			
Assets:			
Current assets	\$ 18,927,313	\$ 5,785,252	
Restricted assets	6,870,539	4,848,139	
Capital assets	81,357,399	73,731,068	
Other noncurrent assets	5,117,837	21,080,280	
Total assets	<u>112,273,088</u>	<u>105,444,739</u>	
Liabilities:			
Current liabilities	4,162,872	2,990,128	
Noncurrent liabilities	28,842,494	87,344,741	
Total liabilities	<u>33,005,366</u>	<u>90,334,869</u>	
Net assets:			
Invested in capital assets, net of related debt	49,628,905	(14,783,261)	
Unrestricted	29,638,817	29,893,131	
Total net assets	<u>\$ 79,267,722</u>	<u>\$ 15,109,870</u>	<u>\$ -</u>

Notes to Financial Statements (continued)

	Year ended June 30, 2002		
	Raritan Basin System	Manasquan Water Supply System	Manasquan Water Treatment Plant
Condensed Statement of Revenues, Expensed and Changes in New Assets			
Total operating revenues	\$14,528,819	\$ 5,707,885	\$ 1,419,068
Operating expenses	7,635,807	1,908,340	1,422,451
Depreciation	3,865,863	1,618,294	
Operating income	3,027,149	2,181,251	(3,383)
Nonoperating revenues	946,033	409,132	8,511
Nonoperating expenses	(2,891,904)	(2,084,661)	(5,128)
Change in net assets	1,081,278	505,722	-
Net assets, beginning of year	78,186,444	14,604,148	-
Net assets, end of year	<u>\$79,267,722</u>	<u>\$15,109,870</u>	<u>\$ -</u>
Condensed Statement of Cash Flows			
Net cash provided by:			
Operating activities	\$ 7,191,198	\$ 3,075,751	
Capital and related financing activities	(6,351,705)	(3,672,380)	
Investing activities	545,627	204,666	
Net increase (decrease) in cash and cash equivalents	1,385,120	(391,963)	
Beginning cash and cash equivalent balances	15,429,041	5,037,648	
Ending cash and cash equivalent balances	<u>\$16,814,161</u>	<u>\$ 4,645,685</u>	<u>\$ -</u>

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Supplemental Information

New Jersey Water Supply Authority
Combining Schedule of Net Assets

June 30, 2002

	Raritan Basin System	Manasquan Reservoir System	Elimination Entries	Combined Total
Assets				
Current assets:				
Cash and cash equivalents	\$16,344,049	\$4,645,685		\$20,989,734
Unbilled sales	957,916			957,916
Accounts receivable, less allowance for doubtful accounts of \$1,000	430,135	1,198,564	\$(97,876)	1,530,823
Interest receivable	100,415	74,469		174,884
Prepaid expenses and other current assets	608,569	256,687		865,256
Costs to be recovered from future revenue	461,000	(404,253)		56,747
Deferred issuance cost	25,229	14,100		39,329
Total current assets	<u>18,927,313</u>	<u>5,785,252</u>	<u>(97,876)</u>	<u>24,614,689</u>
Noncurrent assets:				
Restricted assets:				
Cash equivalents	470,112			470,112
Investments	6,400,427	4,848,139		11,248,566
Investments	6,127,216	855,168		6,982,384
Costs to be recovered from future revenues	(1,270,244)	19,888,555		18,618,311
Deferred issuance cost	260,865	336,557		597,422
Capital assets net of accumulated depreciation of \$75,918,658	81,357,399	73,731,068		155,088,467
Total noncurrent assets	<u>93,345,775</u>	<u>99,659,487</u>		<u>193,005,262</u>
Total assets	<u>112,273,088</u>	<u>105,444,939</u>	<u>(97,876)</u>	<u>217,619,951</u>
Liabilities				
Current liabilities:				
Current portion of bonds and notes payable	2,886,000	1,169,588		4,055,588
Accounts payable	175,477	220,895	(97,876)	298,496
Accrued liabilities	631,283	1,155,207		1,786,490
Deferred revenue	470,112	444,438		914,550
Noncurrent liabilities:				
Long-term portion of bonds and notes payable	28,842,494	87,344,741		116,187,235
Total liabilities	<u>33,005,366</u>	<u>90,334,869</u>	<u>(97,876)</u>	<u>123,242,359</u>
Net assets				
Invested in capital assets, net of related debt	49,628,905	(14,783,261)		34,845,644
Unrestricted	29,638,817	29,893,131		59,531,948
Total net assets	<u>\$79,267,722</u>	<u>\$15,109,870</u>	<u>\$-</u>	<u>\$94,377,592</u>

New Jersey Water Supply Authority
Combining Schedule of Revenues, Expenses
And Changes in Net Assets
Year ended June 30, 2002

	Raritan Basin System	Manasquan Reservoir System	Manasquan Water Treatment Plant	Combined Total
Operating revenues:				
Water sales	\$14,205,036	\$5,707,885		\$19,912,921
Reimbursement of operating expenses State of New Jersey – Grant Programs	323,783		\$1,419,068	1,419,068
Total operating revenues	<u>14,528,819</u>	<u>5,707,885</u>	<u>1,419,068</u>	<u>21,655,772</u>
Operating expenses:				
Payroll	4,192,740	675,964	529,255	5,397,959
Operations and maintenance (direct)	2,739,683	610,126	620,398	3,970,207
Operations and maintenance (general and administrative)		68,114	55,848	123,962
Fringe benefits	1,169,984	169,336	135,150	1,474,470
Headquarters overhead	(466,600)	384,800	81,800	-
Depreciation	3,865,863	1,618,294		5,484,157
Total operating expenses	<u>11,501,670</u>	<u>3,526,634</u>	<u>1,422,451</u>	<u>16,450,755</u>
Income (loss) from operations	3,027,149	2,181,251	(3,383)	5,205,017
Nonoperating revenues:				
Investment income	983,924	398,153	8,511	1,390,588
Rental income	41,383			41,383
Other income	(79,274)	10,979		(68,295)
Total nonoperating revenues	<u>946,033</u>	<u>409,132</u>	<u>8,511</u>	<u>1,363,676</u>
Nonoperating expenses:				
Interest component of debt service to the State of New Jersey	1,829,586	2,546,441		4,376,027
Amortization of issuance costs - D&R System Revenue Refunding Bonds, Series 1998	25,229			25,229
Amortization of issuance costs - Manasquan State Loan Notes		14,100		14,100
Reduction in costs to be recovered from future Revenue	1,037,089	(475,880)	5,128	566,337
Total nonoperating expenses	<u>2,891,904</u>	<u>2,084,661</u>	<u>5,128</u>	<u>4,981,693</u>
Change in net assets	1,081,278	505,722	-	1,587,000
Net assets, beginning of year	78,186,444	14,604,148	-	92,790,592
Net assets, end of year	<u>\$79,267,722</u>	<u>\$15,109,870</u>	<u>\$ -</u>	<u>\$94,377,592</u>

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments
Raritan Basin System

For the year ended June 30, 2002

	Operating Fund				
	Revenue Fund	Operating Account	Payroll Account	Operating Fund	Reserve for O&M
Cash and investments - July 1, 2001	\$51,420	\$52,881	\$20,000	\$1,446,424	\$4,385,383
Cash receipts:					
Water sales operations and maintenance	5,459,775				
Water sales debt service	5,334,064				
Water sales capital fund	652,010				
Water sales overdrafts	2,915,928				
Rental income	14,279				
Manasquan reservoir support					46,030
Headquarters overhead				472,275	
Disposition of property					
Insurance reimbursement					3,023
Miscellaneous expense reimbursement					13,721
Transfers:					
Contributions from operating fund		4,363,067	2,637,852	(15,762,683)	
Contributions to operating fund				3,079,432	(700,000)
Transfers for operations	(14,377,930)			14,377,930	
Transfers for investments					
Distribution from reserves to operations		3,473,395			
Investment income				46,173	196,056
Per resolution, Section 603:					
Investment income, transfer from	467,755			(47,080)	(198,695)
Investment income, transfer to	(467,755)				372,072
Unrealized gain/(loss) on fair value					731
Total cash receipts	(1,874)	7,836,462	2,637,852	2,166,047	(267,062)
Total available cash and investments	\$49,546	\$7,889,343	\$2,657,852	\$3,612,471	\$4,118,321

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments
Raritan Basin System (continued)
For the year ended June 30, 2002

Self-Insurance Reserve	Depreciation Reserve	Pumping Reserve	Capital Improvements Investments	Watershed Management Fund	Source Water Protection Fund	Subtotal
\$938,009	\$2,859,871	\$0	\$2,946,292	\$354,111	\$0	\$7,098,283
						0
						0
						0
						0
						0
						0
	54,535					54,535
						0
						0
	200,000	50,000			225,000	475,000
				(297,268)	(17,344)	(314,612)
						-
					100,000	100,000
	(31,586)					(31,586)
65,618	93,107	612	191,323	6,928	5,975	363,563
(65,637)	(17,762)					(83,399)
	17,762					17,762
366	99		15,750			16,215
347	316,155	50,612	207,073	(290,340)	313,631	597,478
\$938,356	\$3,176,026	\$50,612	\$3,153,365	\$63,771	\$313,631	\$7,695,761

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments

Raritan Basin System (continued)

For the year ended June 30, 2002

	Subtotal	No Name Dam Fund	Major Rehabilitation	Capital Improvement Fund	Employment Benefit Funds	1998 Bonds Debt Service Account
Cash and investments - July 1, 2001	\$13,054,391	\$0	\$2,028,842	\$6,130,140	\$144,540	\$701,041
Cash receipts:						
Water sales operations and maintenance	5,459,775					
Water sales debt service	5,334,064					
Water sales capital fund	652,010					
Water sales overdrafts	2,915,928					
Rental income	14,279					
Manasquan reservoir support	46,030					
Headquarters overhead	472,275					
Disposition of property	54,535					
Insurance reimbursement	3,023					
Miscellaneous expense reimbursement	13,721	430,000			1,000	
Transfers:						
Contributions from operating fund	(8,286,764)			520,539	105,129	2,735,506
Contributions to operating fund	2,064,820	(21,661)				
Transfers for operations	-					
Transfers for investments	100,000			(100,000)	(64,940)	
Distribution from reserves to operations	3,441,809		(131,052)	(750,841)	(29,551)	
Investment income	605,792	2,856	54,807	166,438	3,943	20,942
Per resolution, Section 603:						
Investment income, transfer from	138,581					(20,143)
Investment income, transfer to	(77,921)			77,921		
Unrealized gain/(loss) on fair value	16,946					
Total cash receipts	12,968,903	411,195	(76,245)	(85,943)	15,581	2,736,305
Total available cash and investments	\$26,023,294	\$411,195	\$1,952,597	\$6,044,197	\$160,121	\$3,437,346

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments

Raritan Basin System (continued)

For the year ended June 30, 2002

1998 Bonds Debt Service Reserve	1969 Debt Service Fund	1981 Debt Service Fund	Rate Stabilization Fund	1969 Debt Service Reserve	Totals
\$2,741,997	\$2,083	\$485,082	\$2,047,676	\$181,329	\$27,517,121
					5,459,775
					5,334,064
					652,010
					2,915,928
					14,279
					46,030
					472,275
					54,535
					3,023
					444,721
	770,000	1,760,365	2,395,225		-
			(2,043,159)		-
					-
			64,940		-
	(770,000)	(1,760,365)			-
61,656	3,301	11,588	33,949	12,687	977,959
(57,778)	(2,939)	(11,033)	(34,001)	(12,687)	-
					-
				70	17,016
3,878	362	555	416,954	70	16,391,615
\$2,745,875	\$2,445	\$485,637	\$2,464,630	\$181,399	\$43,908,736

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments
Raritan Basin System (continued)
For the year ended June 30, 2002

	Operating Fund				
	Revenue Fund	Operating Account	Payroll Account	Operating Fund	Reserve for O&M
Total available cash and investments	\$49,546	\$7,889,343	\$2,657,852	\$3,612,471	\$4,118,321
Cash disbursements:					
Payroll			2,296,144		
Fringe benefits		771,637	341,708	1,245,144	
Employee deferred comp. and credit union		192,879		214,134	
Operations and maintenance		1,808,737			
Prepaid insurance		1,157,832			
Watershed Management Fund		123,121			
Capital improvements:					
Capital assets		295,126			
New five year construction project		837,398			
Principal on 1969 bonds		740,234			
Interest on 1969 bonds		29,766			
Principal on 1981 bonds		1,284,000			
Interest on 1981 bonds		476,365			
Principal on 1998 revenue bonds					
Interest on 1998 revenue bonds					
Total cash disbursements	-	7,717,095	2,637,852	1,459,278	-
Cash and investments - June 30, 2002	\$49,546	\$172,248	\$20,000	\$2,153,193	\$4,118,321
Summary of cash and investments:					
Cash	\$49,546	\$172,248	\$20,000		
Short-term investments				\$2,153,193	\$2,231,768
Long-term investments					1,886,553
Restricted investments (current)					
Total cash and investments	\$49,546	\$172,248	\$20,000	\$2,153,193	\$4,118,321

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments
Raritan Basin System (continued)
For the year ended June 30, 2002

Self-Insurance Reserve	Depreciation Reserve	Pumping Reserve	Capital Improvements Investments	Watershed Management Fund	Source Water Protection Fund	Subtotal
\$938,356	\$3,176,026	\$50,612	\$3,153,365	\$63,771	\$313,631	\$26,023,294
						2,296,144
						2,358,489
						407,013
						1,808,737
						1,157,832
						123,121
	5,400					300,526
						837,398
						740,234
						29,766
						1,284,000
						476,365
						-
						-
-	5,400	-	-	-	-	11,819,625
\$938,356	\$3,170,626	\$50,612	\$3,153,365	\$63,771	\$313,631	\$14,203,669
			\$286,154			\$527,948
\$262	\$2,916,667	\$50,612		\$63,771	\$313,631	7,729,904
938,094	253,959		2,867,211			5,945,817
						-
\$938,356	\$3,170,626	\$50,612	\$3,153,365	\$63,771	\$313,631	\$14,203,669

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments

Raritan Basin System (continued)

For the year ended June 30, 2002

	Subtotal	No Name Dam Fund	Major Rehabilitation	Capital Improvement Fund	Employment Benefit Funds	1998 Bonds Debt Service Account
Total available cash and investments	\$26,023,294	\$411,195	\$1,952,597	\$6,044,197	\$160,121	\$3,437,346
Cash disbursements:						
Payroll	2,296,144					
Fringe benefits	2,358,489				11,801	
Employee deferred comp. and credit union	407,013					
Operations and maintenance	1,808,737					
Prepaid insurance	1,157,832					
Watershed Management Fund	123,121					
Capital improvements:						
Capital assets	300,526					
New five year construction project	837,398					
Principal on 1969 bonds	740,234					
Interest on 1969 bonds	29,766					
Principal on 1981 bonds	1,284,000					
Interest on 1981 bonds	476,365					
Principal on 1998 revenue bonds	-					1,465,000
Interest on 1998 revenue bonds	-					1,270,506
Total cash disbursements	<u>11,819,625</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>11,801</u>	<u>2,735,506</u>
Cash and investments - June 30, 2002	<u>\$14,203,669</u>	<u>\$411,195</u>	<u>\$1,952,597</u>	<u>\$6,044,197</u>	<u>\$148,320</u>	<u>\$701,840</u>
Summary of cash and investments:						
Cash	\$527,948				\$3,790	
Short-term investments	7,729,904	\$411,195	\$1,952,597	\$6,044,197	144,530	
Long-term investments	5,945,817					
Restricted investments (current)	-					\$701,840
Total cash and investments	<u>\$14,203,669</u>	<u>\$411,195</u>	<u>\$1,952,597</u>	<u>\$6,044,197</u>	<u>\$148,320</u>	<u>\$701,840</u>

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments

Raritan Basin System (continued)

For the year ended June 30, 2002

1998 Bonds Debt Service Reserve	1969 Debt Service Fund	1981 Debt Service Fund	Rate Stabilization Fund	1969 Debt Service Reserve	Totals
\$2,745,875	\$2,445	\$485,637	\$2,464,630	\$181,399	\$43,908,736
					2,296,144
					2,370,290
					407,013
					1,808,737
					1,157,832
					123,121
					300,526
					837,398
					740,234
					29,766
					1,284,000
					476,365
					1,465,000
					1,270,506
-	-	-	-	-	14,566,932
\$2,745,875	\$2,445	\$485,637	\$2,464,630	\$181,399	\$29,341,804
					\$531,738
					16,282,423
				\$181,399	6,127,216
\$2,745,875	\$2,445	\$485,637	\$2,464,630		6,400,427
\$2,745,875	\$2,445	\$485,637	\$2,464,630	\$181,399	\$29,341,804

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments
Manasquan Water Supply System
For the year ended June 30, 2002

	Operating Fund				Reserve for O&M
	Revenue Fund	Operating Account	Payroll Account	Operating Fund	
Cash and investments - July 1, 2001	\$7,835	\$31,050	\$20,000	\$786,913	\$828,699
Cash receipts:					
Water sales operations and maintenance	1,102,697				
Water sales debt service	3,222,340				
Water sales overdrafts	648,043				
NJ-American pumping costs	20,625				160,361
Headquarters overhead					
Reimbursement of WTP capital expenses					
Disposition of assets					
Reimbursement from Raritan Basin					4,167
Miscellaneous reimbursement	204				12,221
Transfers:					
Contributions from operating fund		2,856,837	789,489	(8,014,258)	
Contributions to operating fund				1,631,822	(201,826)
Transfers for operations	(4,964,900)			4,964,900	
Distribution from reserves to operations		90,441			
Investment income				11,717	44,651
Per resolution, Section 603:					
Investment income, transfer from	244,007			(12,039)	(45,012)
Investment income, transfer to	(244,007)			42,064	59,812
Unrealized gain/(loss) on fair value					
Total cash receipts	<u>29,009</u>	<u>2,947,278</u>	<u>789,489</u>	<u>(1,375,794)</u>	<u>34,374</u>
Total cash and investments	<u>\$36,844</u>	<u>\$2,978,328</u>	<u>\$809,489</u>	<u>(\$588,881)</u>	<u>\$863,073</u>

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments
Manasquan Water Supply System (continued)

For the year ended June 30, 2002

Self- Insurance Reserve	Renewal and Replacement Account	Depreciation Reserve	Pumping Reserve	Sediment Reserve	Subtotal
\$248,705	\$2,184,140	\$557,012	\$96,996	\$97,929	\$4,859,279
					1,102,697
					3,222,340
					648,043
					180,986
					-
					-
		6,300			6,300
					4,167
					12,425
	120,000				(4,247,932)
					1,429,996
					-
	(85,176)				5,265
16,958	62,812	19,539	4,650	2,700	163,027
(16,968)		(6,525)	(4,702)	(2,800)	155,961
					(142,131)
		1			1
(10)	97,636	19,315	(52)	(100)	2,541,145
\$248,695	\$2,281,776	\$576,327	\$96,944	\$97,829	\$7,400,424

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments
Manasquan Water Supply System (continued)
For the year ended June 30, 2002

	Water Treatment Plant/Transmission System				
	Subtotal	Operating Account	Operating Fund	Residuals Reserve	Carbon Filter Reserve
Cash and investments - July 1, 2001	\$4,859,279	\$34,469	\$186,236	\$28,196	\$123,537
Cash receipts:					
Water sales operations and maintenance	1,102,697				
Water sales debt service	3,222,340				
Water sales overdrafts	648,043				
NJ-American pumping costs	180,986				
Headquarters overhead	-		1,419,068		
Reimbursement of WTP capital expenses	-		84,154		
Disposition of assets	6,300				
Reimbursement from Raritan Basin	4,167				
Miscellaneous reimbursement	12,425				
Transfers:					
Contributions from operating fund	(4,247,932)	668,060	(668,060)		
Contributions to operating fund	1,429,996		(834,142)		
Transfers for operations	-				
Distribution from reserves to operations	5,265				
Investment income	163,027		4,356	771	3,383
Per resolution, Section 603:					
Investment income, transfer from	155,961			(1,171)	(5,134)
Investment income, transfer to	(142,131)		6,306		
Unrealized gain/(loss) on fair value	1				
Total cash receipts	2,541,145	668,060	11,682	(400)	(1,751)
Total cash and investments	\$7,400,424	\$702,529	\$197,918	\$27,796	\$121,786

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments
Manasquan Water Supply System (continued)

For the year ended June 30, 2002

1981 Bonds Debt Service Account	1981 Bonds Debt Service Reserve	Rebate Fund	General Reserve Fund	Employment Benefit Funds	Totals
\$2,579,509	\$1,919,893	\$120,379	\$596,675	\$64,190	\$10,512,363
					1,102,697
					3,222,340
					648,043
					180,986
					1,419,068
					84,154
					6,300
					4,167
					12,425
3,506,951	38,748		676,556	25,677	-
			(595,854)		-
			17,199	(22,464)	-
74,096	135,825	3,356	13,253	1,769	399,836
	(135,825)		(13,831)		-
135,825					-
(2,797)	36,220				33,424
3,714,075	74,968	3,356	97,323	4,982	7,113,440
\$6,293,584	\$1,994,861	\$123,735	\$693,998	\$69,172	\$17,625,803

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments
Manasquan Water Supply System (continued)

For the year ended June 30, 2002

	Operating Fund				
	Revenue Fund	Operating Account	Payroll Account	Operating Fund	Reserve for O&M
Total available cash and investments	\$36,844	\$2,978,328	\$809,489	(\$588,881)	\$863,073
Cash disbursements:					
Payroll			705,882		
Fringe benefits		1,645,855	83,607	(1,242,368)	
Employee deferred comp. and credit union		120,601		110,935	
Operations and maintenance		666,165			
NJ-American pumping costs		167,835			
Prepaid insurance		201,814			
Headquarters overhead				390,475	
Capital assets reservoir		34,339			
Capital improvement program (reservoir)		85,176			
Principal on 1981 bonds					
Interest on 1981 bonds					
Total cash disbursements	-	2,921,785	789,489	(740,958)	-
Cash and investments - June 30, 2002	\$36,844	\$56,543	\$20,000	\$152,077	\$863,073
Summary of cash and investments:					
Cash (Manasquan)	\$36,844	\$56,543	\$20,000		
Cash (Water Treatment Plant/TS)					
Short-term investments				\$152,077	\$386,251
Short-Term investments (WTP/TS)					
Long-term investments					476,822
Restricted investments (current)					
Restricted investments (long-term)					
Total cash and investments	\$36,844	\$56,543	\$20,000	\$152,077	\$863,073

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments
Manasquan Water Supply System (continued)

For the year ended June 30, 2002

Self- Insurance Reserve	Renewal and Replacement Account	Depreciation Reserve	Pumping Reserve	Sediment Reserve	Subtotal
\$248,695	\$2,281,776	\$576,327	\$96,944	\$97,829	\$7,400,424
					705,882
					487,094
					231,536
					666,165
					167,835
					201,814
					390,475
					34,339
					85,176
					-
					-
-	-	-	-	-	2,970,316
\$248,695	\$2,281,776	\$576,327	\$96,944	\$97,829	\$4,430,108
					\$113,387
					-
\$10,285	\$2,281,776	\$483,035	\$50,300	\$97,829	3,461,553
					-
238,410		93,292	46,644		855,168
					-
					-
\$248,695	\$2,281,776	\$576,327	\$96,944	\$97,829	\$4,430,108

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments
Manasquan Water Supply System (continued)

For the year ended June 30, 2002

	Water Treatment Plant/Transmission System				
	Subtotal	Operating Account	Operating Fund	Residuals Reserve	Carbon Filter Reserve
Total available cash and investments	\$7,400,424	\$702,529	\$197,918	\$27,796	\$121,786
Cash disbursements:					
Payroll	705,882				
Fringe benefits	487,094				
Employee deferred comp. and credit union	231,536				
Operations and maintenance	666,165	661,959			
NJ-American pumping costs	167,835				
Prepaid insurance	201,814				
Headquarters overhead	390,475		81,800		
Capital assets reservoir	34,339				
Capital improvement program (reservoir)	85,176				
Principal on 1981 bonds	-				
Interest on 1981 bonds	-				
Total cash disbursements	<u>2,970,316</u>	<u>661,959</u>	<u>81,800</u>	<u>-</u>	<u>-</u>
Cash and investments - June 30, 2002	<u>\$4,430,108</u>	<u>\$40,570</u>	<u>\$116,118</u>	<u>\$27,796</u>	<u>\$121,786</u>
Summary of cash and investments:					
Cash (Manasquan)	\$113,387				
Cash (Water Treatment Plant/TS)	-	\$40,570			
Short-term investments	3,461,553				
Short-Term investments (WTP/TS)	-		\$116,118	\$27,796	\$121,786
Long-term investments	855,168				
Restricted investments (current)	-				
Restricted investments (long-term)	-				
Total cash and investments	<u>\$4,430,108</u>	<u>\$40,570</u>	<u>\$116,118</u>	<u>\$27,796</u>	<u>\$121,786</u>

New Jersey Water Supply Authority
Schedule of Changes in Cash and Investments
Manasquan Water Supply System (continued)

For the year ended June 30, 2002

1981 Bonds Debt Service Account	1981 Bonds Debt Service Reserve	Rebate Fund	General Reserve Fund	Employment Benefit Funds	Totals
\$6,293,584	\$1,994,861	\$123,735	\$693,998	\$69,172	\$17,625,803
					705,882
				1,000	488,094
					231,536
					1,328,124
					167,835
					201,814
					472,275
					34,339
					85,176
1,076,096					1,076,096
2,485,640					2,485,640
3,561,736	-	-	-	1,000	7,276,811
\$2,731,848	\$1,994,861	\$123,735	\$693,998	\$68,172	\$10,348,992
					\$116,346
\$1,084	\$1,221			\$654	40,570
			\$693,998	67,518	4,223,069
					265,700
					855,168
2,665,042		\$123,735			2,788,777
65,722	1,993,640				2,059,362
\$2,731,848	\$1,994,861	\$123,735	\$693,998	\$68,172	\$10,348,992

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Statistical Section

Summary of Financial Information.....	1993 - 2002
Summary of Raritan Basin System Water Use Contracts	1993 - 2002
Summary of Manasquan Water Supply System Water Use Contracts	1993 - 2002
Raritan Basin System Revenue Bond Coverage	1993 - 2002
Raritan Basin System Water Charges	1983 - 2002
Manasquan Water Supply System Water Charges	1991 - 2002
Spruce Run Rain Gauge	1993 - 2002
West Windsor Rain Gauge	1993 - 2002
Spruce Run Reservoir Storage	1993 - 2002
Round Valley Reservoir Storage	1993 - 2002
Manasquan System Rainfall	1992 - 2002
Manasquan Reservoir Storage Data.....	1992 - 2002

New Jersey Water Supply Authority
SUMMARY OF FINANCIAL INFORMATION 1993 - 2002

	1993	1994	1995	1996	1997
REVENUE AND EXPENSES					
Operating revenue	\$19,739,401	\$20,750,036	\$21,316,171	\$21,138,739	\$19,689,581
Operating expense	<u>13,420,796</u>	<u>13,920,092</u>	<u>14,419,455</u>	<u>14,737,181</u>	<u>14,595,697</u>
Income from operations	6,318,605	6,829,944	6,896,716	6,401,558	5,093,884
Nonoperating revenues	674,872	(542,296)	4,047,594	1,640,593	1,732,570
Nonoperating expenses	<u>2,919,137</u>	<u>3,425,702</u>	<u>3,736,807</u>	<u>3,685,788</u>	<u>5,662,454</u>
Change in net assets	4,074,340	2,861,946	7,207,503	4,356,363	1,164,000
Net assets, beginning of year	<u>73,964,398</u>	<u>78,038,738</u>	<u>80,900,684</u>	<u>88,108,187</u>	<u>80,902,286</u>
Net assets, end of year	78,038,738	80,900,684	88,108,187	92,464,550	82,066,286
ASSETS					
Current assets	9,160,729	10,570,615	13,393,669	15,478,480	29,399,350
Noncurrent assets	<u>222,217,097</u>	<u>220,970,154</u>	<u>223,220,579</u>	<u>222,215,188</u>	<u>194,796,155</u>
Total assets	231,377,826	231,540,769	236,614,248	237,693,668	224,195,505
LIABILITIES					
Current liabilities	7,198,372	6,647,350	6,213,269	6,194,871	6,249,610
Noncurrent liabilities	<u>146,140,716</u>	<u>143,992,735</u>	<u>142,292,792</u>	<u>139,034,247</u>	<u>135,879,609</u>
Total liabilities	153,339,088	150,640,085	148,506,061	145,229,118	142,129,219
NET ASSETS					
Invested in capital assets, net of related debt	28,695,029	33,802,019	35,259,046	34,890,453	34,576,571
Restricted					
Unrestricted	<u>49,343,709</u>	<u>47,098,665</u>	<u>52,849,141</u>	<u>57,574,097</u>	<u>47,489,715</u>
Total net assets	\$78,038,738	\$80,900,684	\$88,108,187	\$92,464,550	\$82,066,286

New Jersey Water Supply Authority
SUMMARY OF FINANCIAL INFORMATION 1993 - 2002

<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
\$19,795,670	\$19,554,202	\$19,718,194	\$19,325,569	\$21,331,989
<u>14,133,556</u>	<u>14,480,879</u>	<u>15,632,775</u>	<u>15,523,478</u>	<u>16,450,755</u>
5,662,114	5,073,323	4,085,419	3,802,091	4,881,234
2,003,192	1,629,293	4,709,579	2,826,090	1,687,459
<u>5,403,594</u>	<u>4,096,607</u>	<u>4,787,230</u>	<u>4,779,364</u>	<u>4,981,693</u>
2,261,712	2,606,009	4,007,768	1,848,817	1,587,000
<u>82,066,286</u>	<u>84,327,998</u>	<u>86,934,007</u>	<u>90,941,775</u>	<u>92,790,592</u>
84,327,998	86,934,007	90,941,775	92,790,592	94,377,592
17,986,650	20,002,203	23,716,294	23,159,792	24,575,360
<u>204,817,282</u>	<u>202,985,659</u>	<u>199,107,133</u>	<u>197,300,073</u>	<u>193,044,591</u>
222,803,932	222,987,862	222,823,427	220,459,865	217,619,951
5,930,253	7,164,444	7,234,800	7,503,563	7,055,124
<u>132,545,681</u>	<u>128,889,411</u>	<u>124,646,852</u>	<u>120,165,710</u>	<u>116,187,235</u>
138,475,934	136,053,855	131,881,652	127,669,273	123,242,359
34,093,007	33,814,869	34,304,082	34,993,065	34,845,644
50,234,991	53,119,138	56,637,693	10,158,116 47,639,411	10,804,128 48,727,820
<u>\$84,327,998</u>	<u>\$86,934,007</u>	<u>\$90,941,775</u>	<u>\$92,790,592</u>	<u>\$94,377,592</u>

**New Jersey Water Supply Authority
RARITAN BASIN SYSTEM
SUMMARY OF WATER USE CONTRACTS
MAXIMUM DAILY ALLOCATION IN MILLIONS GALLONS PER DAY - MGD**

<u>WATER USER</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>
UNITED WATER LAMBERTVILLE, INC	0.200	0.200	0.200	0.200	0.200
MERCER COUNTY PARK COMMISSION	0.100	0.100	0.100	0.100	0.100
TRENTON COUNTRY CLUB	0.250	0.250	0.250	0.250	0.250
VACCARO BROTHERS	0.200	0.050	0.050	0.050	
MERCER COUNTY PARK COMMISSION	0.135	0.135	0.135	0.135	0.135
PRINCETON UNIVERSITY	1.000	1.000	1.000	1.000	0.500
PRINCETON NURSERIES	0.300	0.300	0.300	0.300	
NORTH BRUNSWICK TOWNSHIP	8.000	8.000	8.000	8.000	8.000
SELODY SOD FARMS, INC.	0.100	0.100	0.100	0.100	0.100
ELIZABETHTOWN WATER COMPANY	102.000	102.000	102.000	102.000	102.000
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
JOHNSON & JOHNSON CORPORATION	2.326	0.500	0.500	0.500	0.500
MIDDLESEX WATER COMPANY	20.000	20.000	20.000	20.000	20.000
TREDEGAR INDUSTRIES	0.012				
FLEMINGTON FILM PRODUCTS		0.012	0.012	0.012	0.012
SYSTEM TOTAL	153.123	151.147	151.147	151.147	150.297

**New Jersey Water Supply Authority
 RARITAN BASIN SYSTEM
 SUMMARY OF WATER USE CONTRACTS
 MAXIMUM DAILY ALLOCATION IN MILLIONS GALLONS PER DAY - MGD**

<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
0.200	0.200	0.200	0.200	0.200
0.100	0.100	0.100	0.100	0.100
0.250	0.250	0.250	0.250	0.250
0.135	0.135	0.135	0.135	0.135
0.500	0.500	0.500	0.500	0.500
8.000	8.000	8.000	8.000	8.000
0.100	0.100	0.100	0.100	0.100
102.000	102.000	102.000	104.000	104.000
8.000	8.000	8.000	8.000	8.000
10.500	10.500	10.500	10.500	10.500
20.000	20.000	20.000	20.000	20.000
<u>0.012</u>	<u>0.012</u>	<u>0.012</u>	<u>0.012</u>	<u>0.012</u>
149.797	149.797	149.797	151.797	151.797

**New Jersey Water Supply Authority
MANASQUAN WATER SUPPLY SYSTEM
SUMMARY OF WATER USE CONTRACTS
MAXIMUM DAILY ALLOCATION IN MILLIONS GALLONS PER DAY - MGD**

	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>
WALL TOWNSHIP	2.300	2.300	2.300	2.300	2.300
BOROUGH OF AVON	0.142	0.142	0.142	0.142	0.142
SHORELANDS WATER COMPANY	1.900	1.900	1.900	1.900	1.900
NEW JERSEY-AMERICAN WATER CO.	6.305	7.035	7.035	7.035	7.035
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	0.310	0.310	0.310	0.310	0.310
BOROUGH OF SPRING LAKE HEIGHTS	0.450	0.450	0.450	0.450	0.450
BOROUGH OF BELMAR	0.650	0.650	0.650	0.650	0.650
HOWELL TOWNSHIP	1.130	0.730	0.730	0.730	0.730
BOROUGH OF BRIELLE	0.400	0.400	0.400	0.400	0.400
BOROUGH OF HIGHLANDS	0.330				
ADELPHIA WATER COMPANY	0.300	0.300	0.300	0.300	0.300
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 SOUTH BELMAR	0.100	0.100	0.100	0.100	0.100
	<u>16.097</u>	<u>16.097</u>	<u>16.097</u>	<u>16.097</u>	<u>16.097</u>

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

**New Jersey Water Supply Authority
 MANASQUAN WATER SUPPLY SYSTEM
 SUMMARY OF WATER USE CONTRACTS
 MAXIMUM DAILY ALLOCATION IN MILLIONS GALLONS PER DAY - MGD**

<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
2.300	2.300	2.300	2.300	2.300
0.142	0.142	0.142	0.142	0.142
1.900	1.900	1.900	1.900	1.900
7.765	8.065	8.065	9.065	11.000
0.778	0.778	0.778	0.778	0.778
0.075	0.075	0.075	0.075	0.075
0.310	0.310	0.310	0.310	0.310
0.450	0.450	0.450	0.450	0.450
0.650	0.650	0.650	0.650	0.650
0.400	0.400	0.400	0.400	0.400
0.300				
0.458	0.458	0.458	0.458	0.458
0.469	0.469	0.469	0.469	0.469
0.100	0.100	0.100	0.100	0.100
16.097	16.097	16.097	17.097	19.032

NEW JERSEY WATER SUPPLY AUTHORITY
RARITAN BASIN SYSTEM

SERIES 1988, D & R SYSTEM REVENUE BOND COVERAGE*
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
2002	\$13,978,577	\$7,638,000	\$6,340,577	\$2,735,506	2.32
2001	\$14,928,628	\$7,623,800	\$7,304,828	\$2,738,631	2.67
2000	\$14,467,229	\$7,187,900	\$7,279,329	\$2,745,394	2.65
1999	\$14,073,166	\$8,433,100	\$5,640,066	\$3,151,000	1.79
1998	\$14,402,400	\$8,433,400	\$5,969,000	\$3,150,000	1.89
1997	\$13,804,500	\$7,829,500	\$5,975,000	\$3,160,000	1.89
1996	\$13,747,250	\$7,697,050	\$6,050,200	\$3,160,000	1.91
1995	\$13,703,700	\$7,754,700	\$5,949,000	\$3,162,000	1.88
1994	\$12,764,300	\$6,815,300	\$5,949,000	\$3,162,000	1.88
1993	\$12,153,357	\$6,915,198	\$5,238,159	\$2,500,000	2.10

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.

* 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>7/1/83</u>	<u>10/1/85</u>	<u>7/1/86</u>	<u>7/1/88</u>	<u>7/1/89</u>	<u>7/1/90</u>	<u>7/1/91</u>	<u>7/1/92</u>	<u>7/1/93</u>
RATE PER MGD	\$105.39	\$147.37	\$152.17	\$152.12	\$187.56	\$188.60	\$201.33	\$214.86	\$220.47

<u>EFFECTIVE DATE</u>	<u>7/1/94</u>	<u>7/1/95</u>	<u>7/1/96</u>	<u>7/1/97</u>	<u>7/1/98</u>	<u>7/1/99</u>	<u>7/1/00</u>	<u>7/1/01</u>	<u>7/1/02</u>
RATE PER MGD	\$229.50	\$220.78	\$211.16	\$211.16	\$211.16	\$205.00	\$205.00	\$205.00	\$205.00

**New Jersey Water Supply Authority
MANASQUAN WATER SUPPLY SYSTEM
WATER CHARGES PER MILLION GALLONS OF RAW WATER DAILY**

<u>EFFECTIVE DATE</u>	<u>7/01/91</u>	<u>2/01/92</u>	<u>7/01/92</u>	<u>2/01/93</u>	<u>7/01/93</u>	<u>2/01/94</u>	<u>7/01/94</u>	<u>7/01/95</u>
RATE PER MGD	\$1,000.86	\$1,033.53	\$1,054.27	\$1,086.67	\$1,064.33	\$1,096.75	\$1,114.98	\$1,105.47

<u>EFFECTIVE DATE</u>	<u>7/01/96</u>	<u>7/01/97</u>	<u>7/01/98</u>	<u>7/01/99</u>	<u>7/01/00</u>	<u>7/01/01</u>	<u>7/01/02</u>
RATE PER MGD	\$1,065.15	\$938.92	\$832.92	\$695.31	\$728.81	\$797.92	\$794.97

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

**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
2002	1.60	0.30	3.40	2.90	5.10	3.60	0.40	2.80	3.90	4.20	3.80	3.70	35.70
2001	2.70	2.20	4.40	1.10	3.70	5.80	3.60	3.50	4.30	0.50	0.80	1.90	34.50
2000	2.90	2.00	3.20	2.90	4.70	4.10	4.00	4.80	2.00	0.90	2.60	3.70	37.80
1999	6.00	2.90	4.20	2.60	1.80	0.50	0.20	3.60	10.60	3.70	2.70	2.00	40.80
1998	3.70	4.50	3.60	5.20	5.60	3.60	1.40	4.20	2.50	3.50	1.20	0.80	39.80
1997	3.20	1.60	2.80	2.40	3.00	2.30	6.90	4.10	1.70	1.70	3.20	3.80	36.70
1996	6.00	1.50	3.90	5.50	2.40	5.50	8.00	1.40	4.20	8.10	3.70	8.20	58.40
1995	3.00	2.50	1.40	1.90	2.10	2.50	5.20	1.00	4.40	11.00	4.30	2.30	41.60
1994	5.30	2.70	4.80	2.20	3.20	6.00	3.00	3.60	1.80	1.30	3.50	2.70	40.10
1993	2.30	3.50	7.20	4.30	1.70	2.40	1.60	3.20	5.70	3.00	3.50	4.90	43.30
TOTAL*	36.70	23.70	38.90	31.00	33.30	36.30	34.30	32.20	41.10	37.90	29.30	34.00	408.70
AVERAGE*	3.67	2.37	3.89	3.10	3.33	3.63	3.43	3.22	4.11	3.79	2.93	3.40	40.87
MAXIMUM*	6.00	4.50	7.20	5.50	5.60	6.00	8.00	4.80	10.60	11.00	4.30	8.20	58.40
MINIMUM*	1.60	0.30	1.40	1.10	1.70	0.50	0.20	1.00	1.70	0.50	0.80	0.80	34.50

* Reflects 10 year period 1993 - 2002 only

**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
2002	3.50	0.60	4.50	1.60	3.50	4.60	2.30	3.80	5.70	6.00	4.90	4.30	45.30
2001	3.20	2.10	6.30	1.70	2.70	3.50	3.00	2.40	2.30	0.50	0.80	2.20	30.70
2000	2.90	2.30	3.70	3.10	4.60	3.80	6.00	6.10	6.70	0.80	3.20	3.90	47.10
1999	7.60	3.50	4.20	2.20	3.30	0.60	1.00	6.80	11.00	3.60	2.00	3.70	49.50
1998	4.70	3.30	5.50	3.80	8.00	4.90	1.80	3.50	1.90	1.50	1.40	1.10	41.40
1997	3.70	2.60	1.60	3.50	3.50	2.50	5.70	1.80	1.30	1.80	3.00	3.90	34.90
1996	5.40	1.10	4.30	4.50	1.60	8.20	7.40	3.00	5.60	6.00	2.70	7.50	57.30
1995	2.60	2.60	1.40	1.40	1.80	0.20	1.90	1.20	4.90	5.00	4.40	2.30	29.70
1994	6.80	3.10	8.10	3.50	3.90	4.50	6.10	5.80	2.70	0.70	3.70	2.80	51.70
1993	2.30	2.20	8.30	4.40	1.50	2.90	4.70	3.10	9.50	4.60	2.30	4.40	50.20
TOTAL*	42.70	23.40	47.90	29.70	34.40	35.70	39.90	37.50	51.60	30.50	28.40	36.10	437.80
AVERAGE*	4.27	2.34	4.79	2.97	3.44	3.57	3.99	3.75	5.16	3.05	2.84	3.61	43.78
MAXIMUM*	7.60	3.50	8.30	4.50	8.00	8.20	7.40	6.80	11.00	6.00	4.90	7.50	57.30
MINIMUM*	2.30	0.60	1.40	1.40	1.50	0.20	1.00	1.20	1.30	0.50	0.80	1.10	29.70

**New Jersey Water Supply Authority
RARITAN BASIN SYSTEM
SPRUCE RUN RESERVOIR STORAGE
BILLION GALLONS**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2002	3.6	3.7	3.8	4.5	5.3	7.1	7.8	7.6	7.0	5.3	5.5	6.4
2001	10.4	10.3	11.0	11.0	11.0	11.0	11.0	10.1	8.7	7.0	4.8	3.7
2000	10.0	10.4	11.1	10.9	11.0	11.0	11.0	10.2	11.0	11.0	10.4	10.3
1999	3.7	5.5	6.4	8.2	9.4	9.9	8.1	7.4	6.6	8.2	8.7	9.9
1998	5.6	6.9	8.6	10.7	11.0	11.0	11.0	9.2	6.4	4.3	3.9	3.9
1997	11.0	10.9	11.0	11.0	11.0	11.0	10.3	9.1	8.0	6.5	4.6	5.0
1996	8.9	11.0	10.7	11.1	11.2	11.0	11.0	11.0	10.3	9.9	10.6	11.0
1995	9.1	9.9	9.1	10.6	11.0	10.9	9.5	7.9	5.0	4.5	6.8	9.0
1994	7.5	7.4	7.8	11.1	11.0	10.8	10.9	10.7	10.5	9.7	8.4	8.3
1993	10.5	10.5	10.6	11.2	10.8	10.6	10.0	7.7	5.7	4.9	4.9	5.7
AVERAGE*	8.0	8.7	9.0	10.0	10.3	10.4	10.1	9.1	7.9	7.1	6.9	7.3
MAXIMUM*	11.0	11.0	11.1	11.2	11.2	11.0	11.0	11.0	11.0	11.0	10.6	11.0
MINIMUM*	3.6	3.7	3.8	4.5	5.3	7.1	7.8	7.4	5.0	4.3	3.9	3.7

MAXIMUM CAPACITY 11.0 BG

* Reflects 10 year period 1993 - 2002 only

**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
2002	51.4	50.9	50.6	50.7	51.1	51.8	51.9	48.9	44.5	44.6	44.7	44.9
2001	54.4	54.5	54.7	55.0	55.0	55.2	55.1	54.9	55.0	54.9	54.4	52.7
2000	43.0	43.6	46.8	51.1	53.6	54.4	54.6	54.6	54.8	54.7	54.4	54.3
1999	49.4	49.6	49.8	50.0	50.1	50.2	49.8	44.7	42.3	43.1	43.1	43.0
1998	54.4	54.6	54.8	54.8	55.1	54.4	54.6	54.4	54.4	54.4	52.8	51.1
1997	54.3	54.4	54.5	54.9	55.0	54.5	54.6	54.7	54.7	54.6	54.4	54.3
1996	51.3	51.8	51.9	52.1	52.6	52.8	53.1	53.4	53.2	53.3	53.6	53.7
1995	53.2	53.2	53.3	54.2	54.6	54.7	54.5	54.5	53.3	50.9	51.2	51.3
1994	51.9	52.5	52.2	53.1	53.4	53.5	53.7	53.7	53.8	53.5	53.2	53.2
1993	52.2	52.2	52.4	53.1	53.9	54.0	54.0	52.8	52.2	51.8	51.8	51.8
AVERAGE*	51.55	51.73	52.10	52.90	53.44	53.55	53.59	52.66	51.82	51.58	51.36	51.03
MAXIMUM*	54.4	54.6	54.8	55.0	55.1	55.2	55.1	54.9	55.0	54.9	54.4	54.3
MINIMUM*	43.0	43.6	46.8	50.0	50.1	50.2	49.8	44.7	42.3	43.1	43.1	43.0

MAXIMUM CAPACITY 55.0 BG

**New Jersey Water Supply Authority
MANASQUAN SYSTEM RAINFALL
INCHES**

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	
2001	1.23	0.68	2.14	2.90	0.88	5.17	2.94	4.19	4.70	2.21	4.18	4.51	2002
2000	1.08	3.80	2.63	3.60	2.54	9.00	1.81	1.57	5.65	4.49	4.61	2.51	2001
1999	2.98	1.73	2.52	1.86	1.54	2.70	2.60	3.30	2.69	6.11	4.29	6.18	2000
1998	1.37	1.24	0.94	7.03	2.22	2.97	2.07	1.70	1.47	1.05	4.28	4.86	1999
1997	2.80	4.67	3.57	5.56	7.51	6.17	5.19	5.82	6.22	3.11	1.95	2.88	1998
1996	5.52	2.34	6.97	2.48	3.45	4.63	3.99	2.97	2.42	4.27	7.50	3.13	1997
1995	6.63	6.52	2.16	5.86	1.06	3.47	4.63	2.70	4.83	6.83	3.47	5.52	1996
1994	1.00	3.76	2.64	3.12	2.65	1.20	2.79	2.97	2.42	1.77	3.50	3.72	1995
1993	5.08	1.12	3.73	5.38	2.10	5.93	2.72	3.46	1.80	3.12	6.75	2.89	1994
1992	2.08	3.89	7.00	2.05	2.78	8.42	1.91	1.36	1.31	4.45	4.16	6.50	1993
TOTAL*	29.77	29.75	34.30	39.84	26.73	49.66	30.65	30.04	33.51	37.41	44.69	42.70	
AVERAGE*	2.98	2.98	3.43	3.98	2.67	4.97	3.07	3.00	3.35	3.74	4.47	4.27	
MAXIMUM*	6.63	6.52	7.00	7.03	7.51	9.00	5.19	5.82	6.22	6.83	7.50	6.50	
MINIMUM*	1.00	0.68	0.94	1.86	0.88	1.20	1.81	1.36	1.31	1.05	1.95	2.51	

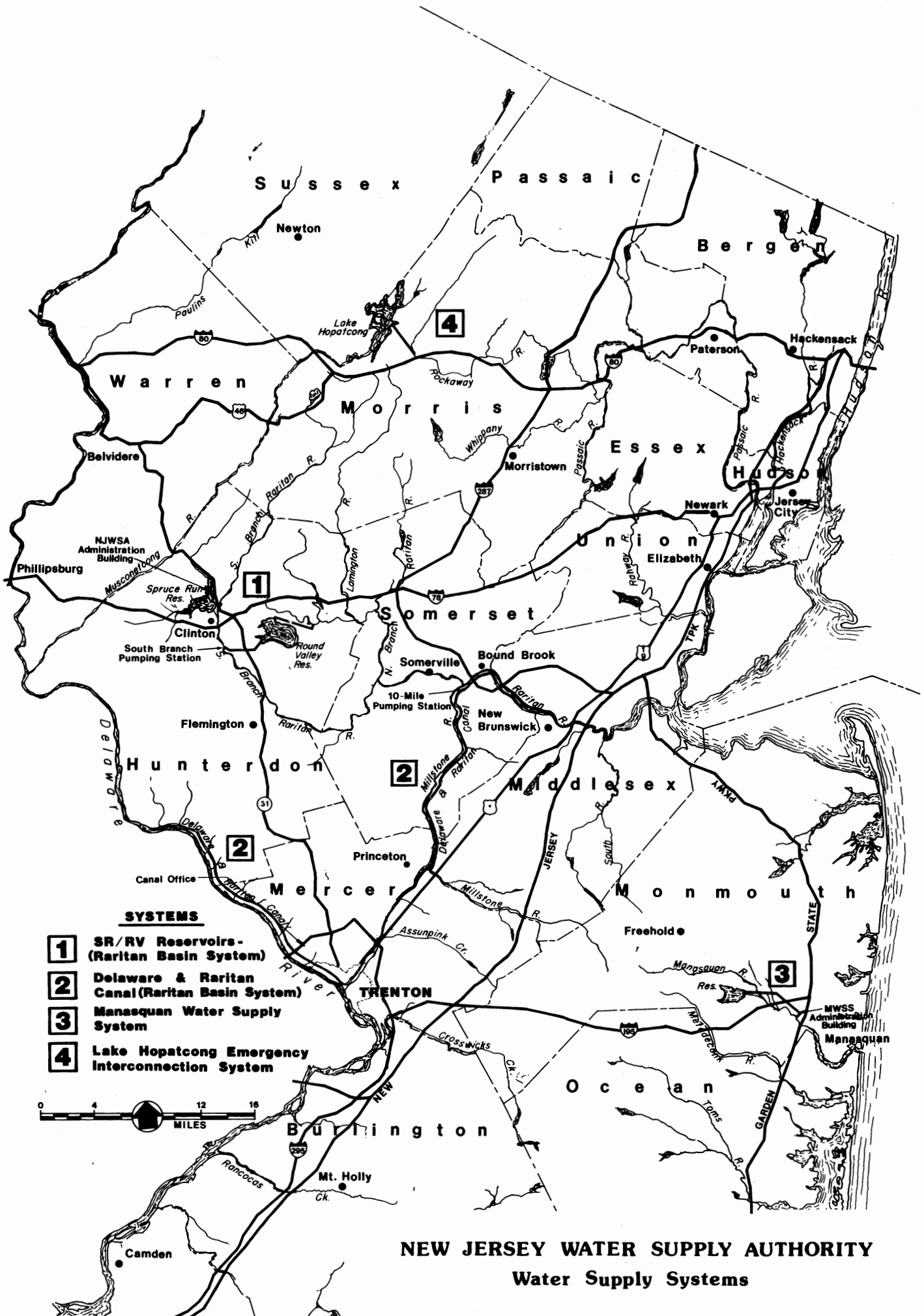
NOTE: The Manasquan System started operations July 1, 1990

* Reflects the 10 year period Oct. 1992 - Sep. 2002 only

**New Jersey Water Supply Authority
MANASQUAN RESERVOIR STORAGE DATA
BILLION GALLONS**

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	
2001	3.31	3.04	2.96	3.15	3.33	4.14	4.61	4.55	4.48	4.01	3.42	3.27	2002
2000	4.39	4.33	4.37	4.31	4.55	4.62	4.62	4.50	4.55	4.50	4.20	3.82	2001
1999	3.65	3.72	3.90	4.07	4.33	4.64	4.62	4.62	4.60	4.42	4.57	4.39	2000
1998	4.16	3.86	3.80	4.16	4.48	4.53	4.55	4.53	4.31	3.84	3.47	3.41	1999
1997	3.76	3.80	3.95	4.39	4.55	4.64	4.62	4.60	4.57	4.50	4.42	4.23	1998
1996	4.46	4.35	4.50	4.50	4.60	4.62	4.64	4.55	4.50	4.24	4.09	3.95	1997
1995	3.78	3.97	4.39	4.39	4.37	4.46	4.53	4.55	4.55	4.50	4.50	4.44	1996
1994	4.09	4.05	3.88	3.99	4.20	4.42	4.44	4.48	4.44	4.37	4.33	3.82	1995
1993	3.97	3.95	4.11	4.24	4.23	4.46	4.55	4.50	4.44	4.29	4.22	4.16	1994
1992	4.18	4.14	4.37	4.53	4.55	4.64	4.64	4.57	4.46	4.24	4.03	3.95	1993
AVERAGE*	3.98	3.92	4.02	4.17	4.32	4.52	4.58	4.55	4.49	4.29	4.13	3.94	
MAXIMUM*	4.46	4.35	4.50	4.53	4.60	4.64	4.64	4.62	4.60	4.50	4.57	4.44	
MINIMUM*	3.31	3.04	2.96	3.15	3.33	4.14	4.44	4.48	4.31	3.84	3.42	3.27	

MAXIMUM CAPACITY 4.7 BG





New Jersey Water Supply Authority
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