

NEW ISSUE – Book-Entry Only

RATINGS: See “Ratings of the Bonds” herein

In the opinion of Bond Counsel, under existing law, and subject to continuing compliance by the Authority with certain covenants to comply with the provisions of the Internal Revenue Code of 1986, as amended (the “Code”), interest on and accruals of original issue discount with respect to the Bonds are excluded from gross income for Federal income tax purposes and are not items of tax preference for purposes of Federal alternative minimum tax imposed on individuals and corporations; however, with respect to corporations (as corporations are defined for federal income tax purposes), such interest and accruals are taken into account in determining adjusted current earnings for the purpose of computing the alternative minimum tax. The Bonds are exempt from personal property taxes in Pennsylvania and the interest on the Bonds is exempt from Pennsylvania corporate net income tax and from personal income taxation by the Commonwealth of Pennsylvania (See “Tax Matters” herein).

THE PITTSBURGH WATER AND SEWER AUTHORITY

\$167,390,000

Water and Sewer System Revenue Refunding Bonds Series of 2003

Dated: September 15, 2003

Interest Payment Dates: March 1 and September 1,
commencing March 1, 2004

Due: September 1, of the years shown on inside front cover.

Denomination: Integral multiples of \$5,000

Form: Book-Entry Only

The Water and Sewer System Revenue Refunding Bonds, Series of 2003 (the “Bonds”), will be special limited obligations of The Pittsburgh Water and Sewer Authority (the “Authority” or “PWSA”). The Bonds will be issued under a Trust Indenture dated as of October 15, 1993, as amended and supplemented by a First Supplemental Indenture dated as of July 15, 1995, a Second Supplemental Indenture dated as of March 1, 1998, a Third Supplemental Indenture dated as of March 1, 2002 and a Fourth Supplemental Indenture dated as of September 15, 2003 (collectively, the “Indenture” or “First Lien Indenture”) between the Authority and J.P. Morgan Trust Company, National Association, as Trustee (the “Trustee”). Interest on the Bonds will be paid on March 1, 2004 and thereafter on March 1 and September 1 of each year. **The Indenture provides that the Bonds shall be secured by a first lien pledge of the Receipts and Revenues of the Authority, after deduction of the proper expenses of the operation, maintenance and repair of the water supply and distribution and wastewater collection systems of the Authority (the “Water and Sewer System”), and reserves therefor as provided in the Indenture.**

The scheduled payment of the principal of and interest on the Bonds when due will be guaranteed under an insurance policy to be issued concurrently with the delivery of the Bonds by FINANCIAL SECURITY ASSURANCE INC.



The Bonds are issuable only as fully registered bonds initially registered in the name of Cede & Co., as nominee for The Depository Trust Company (“DTC”), New York, New York, which will act as securities depository for the Bonds. Purchasers will not receive certificates representing their ownership interest in the Bonds purchased. So long as Cede & Co. is the registered owner, or nominee of DTC, references herein to “Owners” or “registered owners” shall mean Cede & Co., as aforesaid and shall not mean the Beneficial Owners (as defined herein) of the Bonds. Beneficial ownership of the Bonds may be acquired in denominations of \$5,000, principal amount, and any integral multiple thereof.

Principal and interest on the Bonds will be paid by the Trustee.

The Bonds will be subject to redemption prior to maturity as set forth herein.

So long as DTC or its nominee, Cede & Co., is the registered owner, such payments will be made directly to Cede & Co. Disbursement of such payments to the DTC Participants is the responsibility of DTC and disbursement of such payments to the Beneficial Owners is the responsibility of the DTC Participants and the Indirect Participants, as more fully described herein. Interest will be payable on the Bonds on March 1 and September 1 commencing March 1, 2004 to the registered owners of the Bonds as of the close of business on the fifteenth day of the month preceding the relevant Interest Payment Date (the “Record Date”). Certain Bonds are subject to optional and mandatory redemption as described under heading “Redemption of the Bonds” herein.

THE BONDS ARE OBLIGATIONS OF THE AUTHORITY PAYABLE FROM THE RECEIPTS AND REVENUES PLEDGED THERETO. NEITHER THE CITY OF PITTSBURGH NOR THE COMMONWEALTH OF PENNSYLVANIA NOR ANY POLITICAL SUBDIVISION THEREOF IS OBLIGATED TO PAY THE PRINCIPAL, REDEMPTION PRICE OF, OR INTEREST ON, THE BONDS, AND NEITHER THE FAITH, CREDIT NOR TAXING POWER OF THE CITY OF PITTSBURGH OR THE COMMONWEALTH OF PENNSYLVANIA OR ANY OTHER POLITICAL SUBDIVISION THEREOF IS PLEDGED TO SUCH PAYMENT. THE AUTHORITY HAS NO TAXING POWER.

The Bonds are offered when, as and if issued by the Authority and received by the Underwriter, subject to the receipt of the approving legal opinion of Klett Rooney Lieber & Schorling, a Professional Corporation, Bond Counsel. Certain legal matters will be passed upon for the Authority by the Authority’s Counsel, Thorp, Reed & Armstrong, LLP, and by Disclosure Counsel, Grogan Graffam, P.C. The Authority expects that delivery of the Bonds in definitive form will be made in New York, New York, on or about September 24, 2003.

Financial Advisor: PNC Capital Markets

Underwriter: Lehman Brothers

MATURITY SCHEDULE

The Pittsburgh Water and Sewer Authority
\$167,390,000
Water and Sewer System Revenue Refunding Bonds
Series of 2003

<u>Maturity</u> <u>September 1</u>	<u>Principal</u> <u>Amount</u>	<u>Coupon</u>	<u>Yield</u>	<u>Public Offering</u> <u>Prices</u>
2004	\$9,855,000	1.150%	1.150%	100.000%
2005	13,640,000	1.450	1.450	100.000
2006	13,835,000	1.900	1.900	100.000
2007	14,100,000	2.300	2.300	100.000
2008	14,425,000	2.650	2.650	100.000
2009	14,805,000	3.000	3.000	100.000
2010	15,250,000	3.300	3.350	99.691
2011	405,000	3.375	3.560	98.729
2012	415,000	3.625	3.770	98.906
2013	430,000	3.750	3.890	98.853
2014	18,990,000	4.000	4.000	100.000
2015	19,750,000	4.000	4.100	99.061
2016	20,535,000	4.000	4.190	98.115
2017	1,375,000	4.125	4.250	98.693
2018	1,430,000	4.250	4.375	98.637
2019	1,490,000	4.375	4.490	98.698
2020	1,560,000	4.375	4.590	97.485
2021	1,625,000	4.500	4.690	97.709
2022	1,700,000	4.625	4.790	97.957
2023	1,775,000	4.750	4.875	98.414

THE PITTSBURGH WATER AND SEWER AUTHORITY

Joseph Preston, Jr., Chairman
Richard Fees, Vice Chairman
Jan Hedquist, Secretary
Ellen M. McLean, Treasurer
Robert Provolt, Sr., Assistant Secretary/
Assistant Treasurer
Ann J. Davis, Member
Len Bodack, Jr., Member

Gregory F. Tutsock, Executive Director

AUTHORITY COUNSEL

Thorp, Reed & Armstrong, LLP
Pittsburgh, Pennsylvania

AUTHORITY CONSULTING ENGINEER

Chester Engineers, Inc.
Pittsburgh, Pennsylvania

FINANCIAL ADVISOR

PNC Capital Markets, Inc.
Pittsburgh, Pennsylvania

UNDERWRITER

Lehman Brothers
New York, New York

BOND COUNSEL

Klett Rooney Lieber & Schorling, a Professional Corporation
Pittsburgh, Pennsylvania

DISCLOSURE COUNSEL

Grogan Graffam, P.C.
Pittsburgh, Pennsylvania

TRUSTEE AND PAYING AGENT

J.P. Morgan Trust Company, National Association
Pittsburgh, Pennsylvania

No dealer, broker, salesperson or other person has been authorized by the Authority to give any information or to make any representation in connection with the Bonds or the matters described herein, other than those contained in this Official Statement, and, if given or made, such other information or representation must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of the Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale.

All quotations from and summaries and explanations of provisions of laws herein do not purport to be complete and reference is made to said laws for full and complete statements of their provisions.

This Official Statement is not to be construed as a contract or agreement between the Authority and the purchasers or holders of any of the Bonds. Any statements made in this Official Statement involving matters of opinion, whether or not expressly so stated, are intended merely as opinion and not as representations of fact. The information contained herein is subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the Authority since the date hereof.

The order and placement of materials in this Official Statement, including the Appendices, are not to be deemed to be a determination of relevance, materiality or importance, and this Official Statement, including the Appendices, must be considered in its entirety.

The Authority has deemed this Official Statement to be final for the purposes of Rule 15c2-12(b)(3) of the Securities and Exchange Commission.

Other than with respect to information concerning Financial Security Assurance Inc. ("Financial Security") contained under the caption "Bond Insurance" and Appendix F "Form of Municipal Bond Insurance Policy" herein, none of the information in this Official Statement has been supplied or verified by Financial Security and Financial Security makes no representation or warranty, express or implied, as to (i) the accuracy or completeness of such information; (ii) the validity of the Bonds; or (iii) the tax exempt status of the interest on the Bonds.

THE BONDS HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, NOR HAS THE INDENTURE BEEN QUALIFIED UNDER THE TRUST INDENTURE ACT OF 1939, IN RELIANCE UPON EXEMPTIONS CONTAINED IN SUCH ACTS. THE REGISTRATION OR QUALIFICATION OF THE BONDS IN ACCORDANCE WITH APPLICABLE PROVISIONS OF THE SECURITIES LAWS OF THE STATES, IF ANY, IN WHICH THE BONDS HAVE BEEN REGISTERED OR QUALIFIED AND THE EXEMPTION FROM REGISTRATION OR QUALIFICATION IN CERTAIN OTHER STATES CANNOT BE REGARDED AS A RECOMMENDATION THEREOF. NEITHER THESE STATES NOR ANY OF THEIR AGENCIES HAVE PASSED UPON THE MERITS OF THE BONDS OR THE ACCURACY OR COMPLETENESS OF THIS OFFICIAL STATEMENT. ANY REPRESENTATION TO THE CONTRARY MAY BE A CRIMINAL OFFENSE.

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SUMMARY INFORMATION

THIS SUMMARY STATEMENT IS SUBJECT IN ALL RESPECTS TO THE MORE COMPLETE INFORMATION CONTAINED IN THIS OFFICIAL STATEMENT, AND OFFERING OF THE BONDS TO THE POTENTIAL PURCHASERS IS MADE ONLY BY MEANS OF THIS OFFICIAL STATEMENT. NO PERSON IS AUTHORIZED TO DETACH THIS SUMMARY FROM THE OFFICIAL STATEMENT OR OTHERWISE TO USE THE SAME WITHOUT THE ENTIRE OFFICIAL STATEMENT.

- Issuer The Pittsburgh Water and Sewer Authority (the “Authority”)
- Series of 2003 Bonds..... The Pittsburgh Water and Sewer Authority, \$167,390,000 Water and Sewer System Revenue Refunding Bonds are issued pursuant to a resolution adopted by the Authority dated May 9, 2003.
- Dated Date of Bonds September 15, 2003
- Denomination \$5,000 or integral multiples thereof.
- Maturity September 1 of the years specified on the inside front cover hereof.
- Interest..... Payable on March 1 and September 1 of each year commencing March 1, 2004.
- Security..... The Bonds are secured (along with all other bonds issued pursuant to the Indenture) by a first lien pledge of the Receipts and Revenues of the Authority after payment of the Current Expenses, together with funds held by the Trustee under the Indenture as provided therein. The timely payment of principal of and interest on the Bonds is insured under a bond insurance policy issued by Financial Security Assurance Inc. (the “Bond Insurer”). (See “SECURITY FOR THE BONDS” and “MUNICIPAL BOND INSURANCE” herein.)
- Use of Proceeds..... The proceeds of the Bonds will be used (a) to currently refund the Authority’s 1993 Series A Bonds maturing September 1, 2004 through September 1, 2010, its 1993 Series A Term Bonds maturing September 1, 2016 and its 1993 Series B Bonds (collectively, the “Refunded Bonds”), the “Refunding Project”; and (b) to pay all costs of issuance with respect to the Bonds.
- Redemption The Bonds are subject to optional and extraordinary optional redemption prior to maturity. (See “REDEMPTION OF THE BONDS” herein.)
- Rate Covenant The Authority must employ rates and charges as set forth in the Indenture, which together with other receipts and revenues, including any unrestricted cash and investments, are sufficient to provide annually, (a) amounts sufficient to pay, all current expenses of the Authority, and (b) an amount equal to 120% of the debt service requirements with respect to all First Lien Bonds and other long term debt of the Authority during the then current fiscal year, OR, the Authority must employ rates and charges as set forth in the Indenture, which together with other receipts and revenues (but not including unrestricted investments), are sufficient to provide annually (a) amounts sufficient to pay all current expenses of the Authority, and (b) an amount equal to 100% of the debt service requirements with respect to the First Lien Bonds and other long term debt of the Authority during the then current fiscal year.
- Expected Bond Ratings The following ratings are based solely upon the creditworthiness of the Bond Insurer. There is no underlying rating associated with the creditworthiness of the Authority.
Fitch Ratings: “AAA”
Moody’s Investors Service, Inc.: “Aaa”
Standard & Poor’s Ratings Group: “AAA”
- Trustee & Paying Agent J.P. Morgan Trust Company, National Association

THE PITTSBURGH WATER AND SEWER AUTHORITY
\$167,390,000
Water and Sewer System Revenue Refunding Bonds
Series of 2003

INTRODUCTION

The purpose of this Official Statement, which includes this introductory statement, the cover page and the Appendices hereto, is to set forth certain information pertaining to The Pittsburgh Water and Sewer Authority (the “Authority” or “PWSA”), a body corporate and politic duly created and existing under the Pennsylvania Municipality Authorities Act, 53 Pa. C.S.A. §5601 et seq. (the “Act”), and to the issuance by the Authority of \$167,390,000 aggregate principal amount, Water and Sewer System Revenue Refunding Bonds, Series of 2003 (the “Bonds”). The Bonds are being issued pursuant to a Trust Indenture dated as of October 15, 1993 as amended and supplemented by a First Supplemental Indenture dated as of July 15, 1995, a Second Supplemental Indenture dated as of March 1, 1998, a Third Supplemental Indenture dated as of March 1, 2002 and a Fourth Supplemental Indenture dated as of September 15, 2003 (collectively, the “Indenture” or “First Lien Indenture”) by and between the Authority and J.P. Morgan Trust Company, National Association, successor to Chase Manhattan Trust Company, National Association, successor to PNC Bank, National Association, as Trustee (the “Trustee”).

The Authority was established in February 1984 by the City of Pittsburgh (the “City”) for the purpose of assuming responsibility for the operation of the City’s water supply and distribution and wastewater collection systems (the “Water and Sewer System”). Pursuant to a lease and management agreement dated March 29, 1984 between the Authority and the City (the “Lease and Management Agreement”), the Water and Sewer System was leased to the Authority. In 1995, the Lease and Management Agreement was terminated and the Authority is acquiring the portion of the Water and Sewer System owned by the City pursuant to a Capital Lease Agreement dated as of July 15, 1995 between the Authority and the City (the “Capital Lease Agreement”). (See “OWNERSHIP AND OPERATIONS” in Appendix A – Description of the Authority.)

The Water and Sewer System provides water to approximately 83,000 customers and wastewater collection and transmission service to a population of approximately 130,000 customers. The Water and Sewer System does not include wastewater treatment facilities; such facilities are the responsibility of Allegheny County Sanitary Authority, a separate and distinct legal entity. Rates and charges established by the Authority are not subject to the approval of any department, board or agency of the Commonwealth of Pennsylvania or the City.

THE AUTHORITY

The Authority is a body corporate and politic organized and existing under the Act pursuant to Resolution No. 36 of the Council of the City of Pittsburgh, duly enacted on February 6, 1984, approved by the Mayor on February 8, 1984, and effective February 14, 1984. The Secretary of the Commonwealth of Pennsylvania approved the Authority’s Articles of Incorporation and issued a Certificate of Incorporation on February 17, 1984. Articles of Amendment were approved and a Certificate of Amendment was issued by the Pennsylvania Department of State on December 11, 1989 to include, among authorized projects, low head dams and facilities for generating surplus electric power.

Under its Articles of Incorporation, the Authority is specifically authorized to acquire, hold, construct, finance, improve, maintain, operate, own and lease, either as lessor or lessee, projects of the following kinds and character: sewers, sewer systems or parts thereof, waterworks, water supply works, and water distribution systems, low head dams and facilities for generating surplus power.

See Appendix A for a description of the Authority.

DEBT OF THE AUTHORITY

Upon issuance of the Bonds, the Authority will also have outstanding under the Indenture 2002 Bonds in the principal amount of \$107,500,000, 1993 Series A Bonds in the principal amount of \$49,105,000, 1998 Series A Bonds in the principal amount of \$93,355,000, and 1998 Series B Capital Appreciation Bonds with an original issuance amount of \$36,439,231 (proceeds). The Authority also has outstanding under the 1995 Subordinate Trust Indenture 1998 Series C Bonds in the principal amount of \$101,970,000 and under four loans from the Pennsylvania Infrastructure Investment Authority (“PENNVEST”) the outstanding principal amount of approximately \$4,488,000. See “CERTAIN BONDHOLDERS’ RISKS – IRS Investigation of the 1998 Bonds.”

THE BONDS

Description of the Bonds

The Bonds will be issued as fully registered bonds in book-entry form. The Bonds will be issued in denominations of \$5,000 principal amount, or any integral multiple thereof, and will bear interest at the rates and will mature on the dates and in the amounts set forth on the inside cover of this Official Statement. Principal and interest shall be paid in such coin or currency of the United States of America as at the time of payment is legal tender for the payment of public and private debts. Interest on the Bonds will be computed on the basis of a 360-day year of twelve 30-day months.

Interest shall be payable on the Bonds on March 1 and September 1 of each year commencing March 1, 2004 (each an “Interest Payment Date”). Each Bond will be initially dated September 15, 2003, and thereafter will be dated as of its date of authentication.

The Bonds are payable as to principal at the designated office of the Trustee or any successor trustee or paying agent. Payment of interest on the Bonds shall be made to the Bondholders of record on the registration books of the Trustee as of the close of business on the fifteenth day of the month (whether or not such day is a business day) next preceding the Interest Payment Date (the “Record Date”) by check mailed to such owner at the address shown on the registration books, by wire transfer under certain circumstances, as described below, or in any other manner as may be mutually acceptable to the owner and the Trustee. Defaulted interest with respect to any Bond shall cease to be payable to the holder thereof on the relevant Record Date and shall be payable instead to the registered Bondholder as of the close of business on a Special Record Date for the payment of such defaulted interest established by the Trustee in accordance with the Indenture.

Payment of interest on any Bond shall be made to any owner of \$1,000,000 or more in aggregate principal amount of such Bonds by wire transfer to such owner on any Interest Payment Date upon written notice from such owner received by the Trustee not later than the Business Day next preceding the Record Date for the applicable Interest Payment Date, such notice to contain the wire transfer address within the continental United States to which such owner wishes to have such wire directed.

The Bonds are subject to optional redemption as described herein under the captions “Optional Redemption” and “Extraordinary Optional Redemption.”

Book-Entry-Only System

The Bonds, when issued, will be registered in the name of Cede & Co., the partnership nominee of The Depository Trust Company (“DTC”). When the Bonds are issued, ownership interests will be available to purchasers only through a book-entry system maintained by DTC (the “Book-Entry-Only System”). One fully registered bond certificate will be issued for the Bonds in the aggregate principal amount of such issue or series and will be deposited with DTC.

DTC and its Participants. DTC is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934, as amended. DTC holds bonds that its participants (“Direct Participants”) deposit with DTC. DTC also facilitates the settlement among Direct Participants of bond transactions, such as transfers and pledges, in deposited bonds through electronic computerized book-entry changes in Direct Participants’ accounts, thereby eliminating the need for physical movement of securities certificates. Direct Participants include securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is owned by a number of its Direct Participants and by the New York Stock Exchange, Inc., the American Stock Exchange LLC, and the National Association of Securities Dealers, Inc. Access to the DTC system is also available to others such as securities brokers and dealers, banks, and trust companies that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). The Rules applicable to DTC and its Direct and Indirect Participants are on file with the Securities and Exchange Commission (“SEC”).

Purchase of Ownership Interests. Purchases of the Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Bonds on DTC’s records. The ownership interest of each actual purchaser of each Bond (“Beneficial Owner”) is in turn to be recorded on the Direct and Indirect Participants’ records. Beneficial Owners will not receive written confirmation from DTC of their purchase, but beneficial Owners are expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of beneficial owners. Beneficial Owners will not receive certificates representing their ownership interests in the Bonds, except in the event that use of the book-entry system for the Bonds is discontinued.

Payments of Principal, Tender Price, Premium, if Any, and Interest. Redemption proceeds, principal, tender price and interest payments on the Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC’s practice is to credit Direct Participants’ accounts, upon DTC’s receipt of funds and corresponding detail information from the Trustee on the payable date in accordance with their respective holdings shown on DTC’s records. Payments by Direct and Indirect Participants to beneficial owners will be governed by standing instructions and customary practices, as is the case with municipal securities held for the accounts of customers in bearer form or registered in “street name”, and will be the responsibility of such Participant and not of DTC, the Trustee, or the Authority, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, principal, tender price and interest payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Trustee, disbursement of such payments to Direct Participants shall be the responsibility of DTC, and disbursement of such payments to the beneficial owners shall be the responsibility of Direct and Indirect Participants.

Notices. Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to beneficial owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial owners of the Bonds may wish to take certain steps to augment transmission to them of notices of significant events with respect to the Bonds, such as redemptions, tenders, defaults, and proposed amendments to the bond documents. Beneficial owners of the Bonds may wish to ascertain that the nominee holding the Bonds for their benefit has agreed to obtain and transmit notices to beneficial owners, or in the alternative, beneficial owners may wish to provide their names and addresses to the Trustee and request that copies of the notices be provided directly to them. Redemption notices shall be sent to DTC. If less than all of the Bonds within an issue are being redeemed, DTC’s practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Bonds. Under its usual procedures, DTC mails an Omnibus Proxy to the Authority as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

NEITHER THE AUTHORITY NOR THE TRUSTEE WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO SUCH PARTICIPANTS OR THE PERSONS FOR WHOM THEY ACT AS NOMINEES WITH RESPECT TO THE PAYMENT TO, OR THE PROVIDING OF NOTICE FOR, SUCH PARTICIPANTS OR THE PERSONS FOR WHOM THEY ACT AS NOMINEES.

Transfers of Bonds. To facilitate subsequent transfers, all Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co. or such other name as may be requested by an authorized representative of DTC. The deposit of the Bonds with DTC and their registration in the name of Cede & Co. or such other nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual beneficial owners of the Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Bonds are credited, which may or may not be the beneficial owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

None of the Authority, the Underwriter or the Trustee will have any responsibility or obligation, legal or otherwise, to any party other than to the registered owners of any Bond on the registration books of the Trustee.

Discontinuance of Book-Entry-Only System. In the event (i) DTC determines not to continue to act as securities depository for the Bonds or (ii) the Authority, with the consent of the Trustee, determines in accordance with the terms of the Indenture that (a) DTC is incapable of discharging its duties, or (b) it is in the best interests of the holders of the Bonds not to continue the Book-Entry-Only System or that interests of the beneficial owners of the Bonds might be adversely affected if the Book-Entry-Only System is continued, then the Authority will discontinue the Book-Entry-Only System with DTC. Upon the occurrence of the event described in (i) or (ii)(a) above, the Authority will attempt to locate another qualified securities depository. If the Authority fails to identify another qualified securities depository to replace DTC or makes the determination noted in (ii)(b) above, the Trustee will authenticate and deliver the Bonds in accordance with the Indenture.

No Assurance Regarding DTC Practices

The foregoing information in this section concerning DTC and DTC's book-entry system has been obtained from sources that the Authority believes to be reliable, but the Authority, the Underwriter and the Trustee do not take any responsibility for the accuracy thereof.

So long as Cede & Co. is the registered owner of the Bonds as nominee of DTC, references herein to the holders or registered owners of the Bonds will mean Cede & Co. and will not mean the beneficial owners of the Bonds.

None of the Authority, the Trustee, or the Underwriter will have any responsibility or obligation to the Participants, DTC or the persons for whom they act with respect to (i) the accuracy of any records maintained by DTC or by any Direct or Indirect Participant of DTC, (ii) payments or the providing of notice to Direct Participants, the Indirect Participants or the beneficial owners, (iii) the selection by DTC or by any Direct or Indirect Participant of any beneficial owner to receive payment in the event of a partial redemption of the Bonds or (iv) any other action taken by DTC or its partnership nominee as owner of the Bonds.

REDEMPTION OF THE BONDS

Optional Redemption

The Bonds which mature on or after September 1, 2014 are subject to redemption, at the option of the Authority, in whole or in part, in the order of maturity selected by the Authority and by lot within a maturity, at any time on or after September 1, 2013. Any such redemption will be made at a redemption price equal to 100% of the principal amount thereof plus accrued interest to the redemption date.

Mandatory Sinking Fund Redemption

The Bonds are not subject to mandatory sinking fund redemption prior to their stated maturity dates.

Extraordinary Optional Redemption

The Bonds are subject to extraordinary redemption prior to maturity at the option of the Authority in whole or in part at any time, in the event of condemnation, damage or destruction of the Water and Sewer System, from moneys deposited with or held by the Trustee for such purpose, upon payment of 100% of the principal amount thereof being redeemed, together with interest accrued to the date fixed for redemption for the Bonds, as of the date of redemption.

The redemption of the Bonds shall be made in the manner and upon the terms and conditions set forth in the Indenture.

BOND INSURANCE

Bond Insurance Policy

Concurrently with the issuance of the Bonds, Financial Security Assurance Inc. ("Financial Security") will issue its Municipal Bond Insurance Policy for the Bonds (the "Policy"). The Policy guarantees the scheduled payment of principal of and interest on the Bonds when due as set forth in the form of the Policy included as an exhibit to this Official Statement.

The Policy is not covered by any insurance security or guaranty fund established under New York, California, Connecticut or Florida insurance law.

Financial Security Assurance Inc.

Financial Security is a New York domiciled insurance company and a wholly owned subsidiary of Financial Security Assurance Holdings Ltd. ("Holdings"). Holdings is an indirect subsidiary of Dexia, S.A., a publicly held Belgian corporation. Dexia, S.A., through its bank subsidiaries, is primarily engaged in the business of public finance in France, Belgium and other European countries. No shareholder of Holdings or Financial Security is liable for the obligations of Financial Security.

At June 30, 2003, Financial Security's total policyholders' surplus and contingency reserves were approximately \$1,986,068,000 and its total unearned premium reserve was approximately \$1,195,179,000 in accordance with statutory accounting practices. At June 30, 2003, Financial Security's total

shareholders' equity was approximately \$2,152,547,000 and its total net unearned premium reserve was approximately \$1,010,472,000 in accordance with generally accepted accounting principles.

The financial statements included as exhibits to the annual and quarterly reports filed by Holdings with the Securities and Exchange Commission are hereby incorporated herein by reference. Also incorporated herein by reference are any such financial statements so filed from the date of this Official Statement until the termination of the offering of the Bonds. Copies of materials incorporated by reference will be provided upon request to Financial Security Assurance Inc.: 350 Park Avenue, New York, New York 10022, Attention: Communications Department (telephone (212) 826-0100).

The Policy does not protect investors against changes in market value of the Bonds, which market value may be impaired as a result of changes in prevailing interest rates, changes in applicable ratings or other causes. Financial Security makes no representation regarding the Bonds or the advisability of investing in the Bonds. Financial Security makes no representation regarding the Official Statement, nor has it participated in the preparation thereof, except that Financial Security has provided to the Issuer the information presented under this caption for inclusion in the Official Statement.

ESTIMATED SOURCES AND USES OF FUNDS

SOURCES OF FUNDS

Principal	\$167,390,000.00
Original Issue Discount	(830,486.70)
Accrued Interest	<u>128,269.28</u>
TOTAL	<u>\$166,687,782.58</u>

USES OF FUNDS

Redemption Fund Deposit	\$161,948,072.44
Yield Reduction Payment to U.S. Treasury	1,602,424.97
Costs of Issuance*	<u>3,009,015.89</u>
Accrued Interest	<u>128,269.28</u>
TOTAL	<u>\$166,687,782.58</u>

*Includes the bond insurance premium, underwriter's discount, fees of the financial advisor, bond counsel, disclosure counsel, IRS examination counsel, rating agencies, trustee, printing costs and other miscellaneous fees and expenses.

USE OF PROCEEDS: THE REFUNDING PROJECT

The proceeds of the Bonds will be used (a) to currently refund the Authority's 1993 Series A Bonds maturing September 1, 2004 through September 1, 2010, its 1993 Series A Term Bonds maturing September 1, 2016 and its 1993 Series B Bonds (collectively, the "Refunded Bonds"), the "Refunding Project" and (b) to pay all costs of issuance with respect to the Bonds.

DEBT SERVICE REQUIREMENTS*

Fiscal Year	Series 1993 A	Combined Series 1998 A,B,C	Series 2002	Series 2003	Annual Requirements
2004	\$3,191,825.00	\$9,910,443.75	\$7,294,862.50	\$14,786,241.26	\$35,183,372.51
2005	3,191,825.00	9,910,443.75	7,298,462.50	18,657,438.75	39,058,170.00
2006	3,191,825.00	9,910,443.75	7,298,862.50	18,654,658.75	39,055,790.00
2007	3,191,825.00	9,910,443.75	7,296,062.50	18,656,793.75	39,055,125.00
2008	3,191,825.00	9,910,443.75	7,295,062.50	18,657,493.75	39,054,825.00
2009	3,191,825.00	9,910,443.75	7,294,487.50	18,655,231.25	39,051,987.50
2010	3,191,825.00	9,910,443.75	7,294,412.50	18,656,081.25	39,052,762.50
2011	18,541,825.00	9,910,443.75	7,296,812.50	3,307,831.25	39,056,912.50
2012	18,539,075.00	9,910,443.75	7,294,812.50	3,304,162.50	39,048,493.75
2013	18,541,650.00	9,910,443.75	7,298,237.50	3,304,118.75	39,054,450.00
2014		9,910,443.75	7,297,487.50	21,847,993.75	39,055,925.00
2015		9,910,443.75	7,294,737.50	21,848,393.75	39,053,575.00
2016		9,910,443.75	7,294,237.50	21,843,393.75	39,048,075.00
2017		29,890,443.75	7,294,387.50	1,861,993.75	39,046,825.00
2018		29,891,443.75	7,295,512.50	1,860,275.00	39,047,231.25
2019		29,893,193.75	7,294,762.50	1,859,500.00	39,047,456.25
2020		29,893,443.75	7,295,012.50	1,864,312.50	39,052,768.75
2021		29,894,263.75	7,295,800.00	1,861,062.50	39,051,126.25
2022		29,892,788.75	7,295,562.50	1,862,937.50	39,051,288.75
2023		29,893,261.25	7,298,775.00	1,859,312.50	39,051,348.75
2024		31,756,380.00	7,294,650.00		39,051,030.00
2025		31,756,635.00	7,299,037.50		39,055,672.50
2026		31,755,000.00	7,295,356.25		39,050,356.25
2027		31,755,000.00	7,298,350.00		39,053,350.00
2028		31,755,000.00	7,296,993.75		39,051,993.75
2029		31,755,000.00	7,295,775.00		39,050,775.00
2030		14,660,000.00	7,293,925.00		21,953,925.00
2031			7,295,675.00		7,295,675.00
Totals	\$77,965,325.00	\$543,277,622.50	\$204,288,112.50	\$215,209,226.26	\$1,040,740,286.26

*Excludes debt service on the refunded bonds.

SECURITY FOR THE BONDS

Limited Obligations

The Bonds are limited obligations of the Authority. The Bonds do not pledge the general credit or taxing power of the City of Pittsburgh, the Commonwealth of Pennsylvania (the "Commonwealth") or any political subdivision thereof; nor shall the Bonds be deemed a general obligation of the City, the Commonwealth or any political subdivision thereof; nor shall the City, the Commonwealth or any political subdivision thereof (other than the Authority) be liable for payment of the principal of, premium, if any, or interest on the Bonds. The Authority has no taxing power.

Pledge of Receipts and Revenues

The Bonds together with the 1993 Series A Bonds, the 1998 Series A Bonds, the 1998 Series B Bonds, and the Series of 2002 Bonds, and any additional bonds which are hereafter issued pursuant to the First Lien Indenture (collectively, the "First Lien Bonds"), are secured, on a parity, by a first lien pledge of the Receipts and Revenues of the Water and Sewer System after payment of Current Expenses, each as defined in the First Lien Indenture, together with cash and investments from time to time held in certain funds pursuant to the First Lien Indenture. (See Appendix B – "Summary of Indenture".)

Debt Service Reserve Fund and Insurance

The First Lien Indenture requires that a Debt Service Reserve Fund be funded in an amount equal to the maximum annual debt service requirements on the First Lien Bonds. Currently, the Debt Service Reserve Fund for such First Lien Bonds is fully funded as required under the First Lien Indenture and is comprised of the following instruments:

Cash and Investments of \$7,657,357.11. In conjunction with the issuance of the Authority's Series 2002 Bonds on March 26, 2002, \$7,299,038 in cash was deposited into the Debt Service Reserve Fund as established under the First Lien Indenture. As of September 8, 2003, the market value of the cash and any investments derived from the initial cash deposit was \$7,657,357.11.

Financial Security Assurance Inc. Policy #28419-S in the amount of \$9,911,000. On February 6, 2002 Financial Security Assurance Inc. issued a Municipal Bond Debt Service Reserve Fund Policy (the "FSA Reserve Fund Policy") in the amount of \$9,911,000. Such amount equated to the incremental maximum annual debt service requirements created by the issuance of the 1998 Series A Bonds, the 1998 Series B Bonds and the 1998 Series C Bonds (collectively, the "Series 1998 Bonds"). The FSA Reserve Policy is non-cancelable and the premium was fully paid at the time of the issuance of the Series 1998 Bonds. The FSA Reserve Policy covers failure to pay principal of the Series 1998 Bonds on their respective stated maturity dates, or dates on which the same shall have been called for mandatory sinking fund redemption, but not on any other date on which the payment of the Series 1998 Bonds is accelerated, and covers the failure to pay interest on the stated due dates. The FSA Reserve Policy shall terminate on the earlier of the final maturity date of the Series 1998 Bonds and the date on which Series 1998 Bonds are no longer outstanding under the First Lien Indenture.

Financial Guaranty Insurance Company Policy #93010812 in the amount of \$21,583,920. On November 16, 1993, Financial Guaranty Insurance Company issued a Municipal Bond Debt Service Reserve Fund Policy (the "FGIC Reserve Policy") in the amount of the maximum annual debt service requirements on the 1993 Series A Bonds and the 1993 Series B Bonds (collectively, the "Series of 1993 Bonds"). The FGIC Reserve Policy is non-cancelable and the premium was fully paid at the time of delivery of the Series 1993 Bonds. Upon its initial issuance, the FGIC Reserve Policy covered failure to pay principal of the Series 1993 Bonds on their respective stated maturity dates, or dates on which the same shall have been called for mandatory sinking fund redemption, and not on any other date on which the payment of the Series 1993 Bonds is accelerated, and covered the failure to pay interest on the stated due dates. On March 2, 1998 the FGIC Reserve Policy was extended to a maturity date of September 1, 2030 and expanded to cover the Series 1998 Bonds and any additional parity obligations issued under the Indenture, in addition to the Series 1993 Bonds.

As the 2003 Bonds are currently refunding a portion of the Series 1993 Bonds (the "Refunded Bonds"), under the terms and conditions of the FGIC Reserve Policy and its 1998 amendment, the FGIC Reserve Policy will support the debt service of the 2003 Bonds as well as remain as support for all other First Lien Bonds issued under the First Lien Indenture.

Payments of principal and interest on the 2003 Bonds when due are insured by a municipal bond insurance policy to be issued by Financial Security Assurance Inc. simultaneously with the issuance of the Bonds. See "BOND INSURANCE" herein.

Additional Debt

The Authority may issue additional bonds on a parity with the Bonds for the purposes of financing the cost of acquiring, constructing or completing capital additions or refunding outstanding Bonds, upon satisfaction of the conditions set forth in the First Lien Indenture.

Covenants of the Authority

Under the Indenture, the Authority covenants, among other things: (1) to insure the property of the Water and Sewer System in accordance with customary practice, (2) to employ a consulting engineer to make recommendations annually concerning, among other things, the proper maintenance, repair and operation of the Water and Sewer System and (3) to maintain the Water and Sewer System in good repair, working order and condition. (See “*Summary of Indenture*” – Appendix B herein.) (Also, see “RATE COVENANT” herein.)

FLOW OF FUNDS

The Authority has heretofore established a special fund (the “Revenue Fund”) into which it deposits its Receipts and Revenues with Authorized Depositories. The Authority will withdraw from the Revenue Fund for deposit to the credit of the following funds in the order, on the dates and for the following purposes:

1. *Operation and Maintenance Fund*
On the first day of each month moneys are to be transferred to the Operation and Maintenance Fund in an amount equal to the amount budgeted by the Authority for that month for the payment of the Current Expenses as the same become due.
2. *Debt Service Fund*
On or before each Interest Payment Date, moneys in the amount of the interest to come due on the First Lien Bonds on such Interest Payment Date and on or before the first day of each month moneys in the amount of 1/12 of the principal to come due on the First Lien Bonds on the next principal payment date are to be transferred to the Debt Service Fund of the First Lien Indenture.
3. *Debt Service Reserve Fund/Operating Reserve Account*
On the first day of each month in which there is a deficiency in the Debt Service Reserve Fund or the Operating Reserve Account of the Indenture or if there has been a draw on the surety bond held in the Debt Service Reserve Fund of the Indenture, amounts sufficient to repay any deficiency or repay any such draw, together with expenses due, in not more than 12 equal monthly payments shall be transferred, as applicable, to the Debt Service Reserve Fund or the Operating Reserve Account held pursuant to the Indenture or paid to the surety provider.
4. *Renewal and Replacement Fund*
On the dates and in the amounts set forth in the annual consulting engineer’s report moneys are to be transferred to the Renewal and Replacement Fund held pursuant to the Indenture.

5. *Debt Service for Subordinated Debt*
After making the foregoing transfers, on the first day of each month moneys shall be transferred:
 - (a) all payments due on Subordinate Bonds, and
 - (b) all payments due on any other subordinated debt.
6. *Depreciation Reserve Account – First Lien Indenture*
On December 1 of each year moneys shall be transferred to the Depreciation Reserve Account held pursuant to the First Lien Indenture.

RATE COVENANT

Under the Indenture, the Authority has covenanted with the owners of the Bonds to adopt rates complying with either (1) or (2) of the following in each fiscal year:

(1) The Authority will maintain, charge and collect, so long as any Bonds are outstanding, reasonable rates, rentals and other charges for the use of the facilities of the Water and Sewer System which (after making due and reasonable allowances for contingencies and a margin of error in the estimates) together with other Receipts and Revenues, including any unrestricted cash and investments accumulated in the Revenue Fund at the beginning of each Fiscal Year, shall be at all times at least sufficient to provide annually:

- (a) Amounts sufficient to pay all of the Current Expenses of the Authority; and
- (b) An amount equal to 120% of the debt service requirements with respect to the Bonds and other Authority Long Term Indebtedness during the then current fiscal year of the Authority.

(2) The Authority will maintain, charge and collect, so long as any Bonds are outstanding, reasonable rates, rentals and other charges for the use of the facilities of the Water and Sewer System which (after making due and reasonable allowances for contingencies and a margin of error in the estimates), together with other Receipts and Revenues, for the then current fiscal year (exclusive of interest income earned by the Authority on funds other than the Debt Service Reserve Fund; provided, however, that earnings on the construction/acquisition funds may also be included during any construction period, but only to the extent such earnings are expressly required to be either retained in the construction/acquisition funds and may be used to pay debt service on the Bonds or other Authority Long Term Indebtedness or are applied directly to payment of debt service on the Bonds or other Authority Long Term Indebtedness), shall be at all times at least sufficient to provide annually:

- (a) Funds to pay all of the Current Expenses of the Authority; and
- (b) An amount equal to 100% of the debt service requirements with respect to the Bonds and other Authority Long Term Indebtedness during the then current fiscal year of the Authority.

Calculation of compliance with the covenant shall be made on the following basis: (a) operating revenue, construction/acquisition fund income, earnings on the Debt Service Reserve Fund, expenses, required deposits to replenish any withdrawals from the Debt Service Reserve Fund and the Renewal and Replacement Fund which have not been capitalized shall be accounted for on the accrual basis; (b) costs of issuance of the Authority Bonds and other Authority Long Term Indebtedness may be treated as if such amounts are amortized over the life of the Authority Bonds and other Authority Long Term Indebtedness irrespective of any shorter period over which such costs are actually amortized; and (c) depreciation is specifically excluded from the calculation. In the event that any Policy Costs are due and owing at the time of the calculation of the rate covenant, Gross Revenues of the Authority shall be reduced by the amount of any Policy Costs then due and owing.

The Authority also covenants with the holders of the Bonds that if at any time the revenues collected shall not be sufficient to enable the Authority to comply with the provisions set forth above, it will promptly revise its water or sewer rates, rents and other charges so that the Authority will be in compliance and so that any deficiencies in transfers of funds required to be made pursuant to the First Lien Indenture will be remedied before the end of the next ensuing fiscal year.

FUTURE INDEBTEDNESS

The Authority has established a five (5) year capital improvement program encompassing years 2002 to 2006 (the "Capital Improvement Program"). The primary objectives of the Authority's Capital Improvement Program are to assure uninterrupted service to the Authority's customers and to enhance the system's capabilities. The Capital Improvement Program was designed to maintain a satisfactory level of service to Water and Sewer System users, to improve operating efficiency, to address future requirements and to assure a safe supply of water to its users. The current program was implemented in 1984 and has resulted in major improvements, additions and rehabilitation to all components of the Water and Sewer System.

Additionally, as more fully discussed under "Certain Environmental Matters" herein, the Authority is subject to a U.S. Environmental Protection Agency Combined Sewer Overflow Policy ("CSO Policy") regarding overflows from combined sewers during events that result in the discharge to receiving water of untreated sanitary sewage. The cost of the studies and construction activities that will be required to reach target goals that are to be established through the CSO Policy is estimated at \$300,000,000. The Authority has developed a plan, a portion of which was funded with proceeds of the 2002 Bonds, to address the combined sewer overflow issue and achieve compliance with the Clean Water Act which it believes to be financially responsible. Such funding included \$4.8 million for a CSO study, engineering and flow monitoring; \$8 million for elimination of small CSO's and \$2.5 million for various sewer separation projects. The final three years of the Capital Improvement Program contemplate additional expenditures for sewer compliance issues and infrastructure improvements. It is anticipated that funding for these expenditures would be provided by through the issuance of additional debt.

LITIGATION

In the opinion of Authority Counsel, there is no litigation pending or threatened seeking to enjoin the issuance, sale or delivery of the Bonds or affecting the security pledged therefor.

There are no pending claims or actions against the Authority arising from the operation and maintenance of the Water and Sewer System, which, if determinations or settlements were made adverse to the Authority, and upon consideration of available insurance coverage, would have, in the opinion of the Authority's Counsel, a material adverse effect on the Authority's financial position.

U.S. Environmental Protection Agency Matter

Although it has not commenced litigation, the U.S. Environmental Protection Agency issued a letter in February 2002 directed to each of the entities owning or operating sewer systems with combined sewer overflows that convey wastewater to the Allegheny County Sanitary Authority ("ALCOSAN") for treatment. In this letter, EPA expressed a specific intent to commence enforcement actions unless the entities addressed (including the Authority) entered into a consent order; the consent order attached to said letter contained assertions that the Authority and others are in violation of outstanding permit conditions and regulatory requirements. In response to this letter, the Authority and other municipalities that convey wastewater to ALCOSAN have been engaged in discussions with the Pennsylvania Department of Environmental Protection ("PADEP") and the Allegheny County Health Department ("ACHD") that are more fully discussed below in the section entitled "Certain Environmental Matters". (See "CERTAIN BONDHOLDERS' RISKS" hereinafter.)

FINANCIAL STATEMENTS

The audited financial statements of the Authority for the years ended December 31, 2001 and December 31, 2002 are included in Appendix C attached hereto.

TAX MATTERS

Federal Tax Exemption

Bond Counsel is expected to issue its opinion that under existing law, the interest on and accruals of original issue discount with respect to the Bonds (a) are excluded from gross income for federal income tax purposes and (b) are not items of tax preference within the meaning of Section 57 of the Internal Revenue Code of 1986, as amended (the "Code") for purposes of the alternative minimum tax imposed by Section 55 of the Code on individuals and corporations; however, it should be noted, with respect to corporations (as defined for federal income tax purposes), such interest and accruals are taken into account in determining adjusted current earnings for the purpose of computing the alternative minimum tax imposed by Section 55 of the Code on such corporations. Accruals of the original issue discount with respect to a Bond allocable to an owner of a Bond under a constant yield method of accrual (a) are not included in gross income for federal income tax purposes, and (b) are added to such owner's tax basis in the Bond for the purpose of determining gain or loss for federal income tax purposes upon sale, exchange, redemption and other disposition of the Bond. The opinions set forth in the preceding two sentences are subject to the condition that the Authority complies with all the requirements of the Code that must be satisfied subsequent to the issuance of the Bonds in order that interest on and accruals of original issue discount with respect to the Bonds be (or continue to be) excluded from gross income for federal income tax purposes. Failure to comply with such requirements could cause the interest on and accruals of original issue discount with respect to the Bonds to be included in gross income retroactively to the date of issuance of the Bonds. The Authority has covenanted to comply with all such requirements.

Ownership of the Bonds may give rise to collateral federal income tax consequences to taxpayers, including, without limitation, financial institutions, property and casualty insurance companies, S corporations with Subchapter C earnings and profits, individual recipients of Social Security or Railroad Retirement benefits and taxpayers who may be deemed to have incurred or continued indebtedness to purchase or carry the Bonds. Bond Counsel expresses no opinion as to any such collateral federal income tax consequences. Purchasers of Bonds should consult their own tax advisors as to such collateral federal income tax consequences.

Original Issue Discount

The initial public offering price of certain of the Bonds as shown on the inside front cover page is less than the amount payable on such Bonds at maturity (the “OID Bonds”). The difference between the initial public offering price at which the OID Bonds are sold and the principal amount thereof constitutes original issue discount (“OID”). OID is apportioned among the original purchasers of the OID Bonds and subsequent holders thereof during their periods of ownership on a daily basis. Section 1288 of the Code is applicable to the OID Bonds and requires holders of the OID Bonds to accrue OID tax-exempt interest income on the basis of an economic constant interest rate method over the life of the OID Bonds, taking into account the semiannual compounding of accrued interest. Under this provision, for the purpose of determining gain or loss upon the disposition (including sale, redemption or payment at maturity) of any OID Bond, a holder of such OID Bond is entitled to increase his or her adjusted basis with respect to the OID Bond by the amount of OID which shall have accrued under the constant interest method as tax-exempt interest income during the period such OID Bond is held by the holder. Owners of OID Bonds should consult their tax advisors as to the determination for federal income tax purposes of interest accrued or accredited upon purchase, sale or redemption of such OID Bonds.

Pennsylvania Tax Exemption

In the opinion of Bond Counsel, under existing law, the Bonds are exempt from personal property taxes in Pennsylvania and the interest on the Bonds is exempt from Pennsylvania personal income tax and corporate net income tax.

CERTAIN BONDHOLDERS’ RISKS

Investment in the Bonds may involve certain risks and each investor should consider the risks involved to determine the suitability of investing in the Bonds. Each prospective investor should carefully examine this Official Statement and his or her own financial condition (including the diversification of his or her investment portfolio) in order to make a judgment as to whether the Bonds are an appropriate investment.

The Authority has identified and summarized below certain “Bondholders’ Risks” that could adversely affect the finances of the Authority, the operation of the Water and Sewer System and/or the funds available for payment of the Bonds, which should be considered by prospective investors. The following discussion is not intended to be exhaustive, but includes certain major factors, which should be considered along with other factors set forth elsewhere in this Official Statement, including the Appendices hereto. See Appendix A – “DESCRIPTION OF THE AUTHORITY” – “*Government Regulation.*”

IRS Investigation of the Authority’s 1998 Bonds

The Internal Revenue Service (“IRS”) has had two series of the Authority’s 1998 revenue bonds under examination since April of 2000. On November 27, 2002, the IRS notified the Authority of a “preliminary adverse determination” that the interest on the bonds is not excludable from gross income for Federal income tax purposes. The preliminary adverse determination states that the cost of liquidation options purchased with respect to refunding escrows in which the Authority invested the bond proceeds should not have been included in the calculation of the bond yield. The Authority and its counsel, Ballard Spahr Andrews & Ingersoll, LLP, Washington, DC, do not agree with the determination and are working with representatives of the IRS to resolve the matter without subjecting the bondholders to tax.

Certain Environmental Matters

The Authority is subject to a variety of federal, state and local environmental laws and regulations governing discharges to air and water, treatment of sanitary wastewaters and the storage and disposal of solid waste materials. (See Appendix A – “*Government Regulation*”.) The Sewer System conveys wastewater generated within the City boundaries, and from certain other municipalities connected to the Sewer System to ALCOSAN interceptors located along the rivers of the City for conveyance to ALCOSAN's wastewater treatment facility for processing prior to discharge into the Ohio River. (See Appendix A – “*The Sewer System*”.) The Sewer System is designed so that during wet weather, a portion of the collected storm water and diluted wastewater is discharged to natural watercourses by diversion chambers located throughout the Sewer System and at connections to the ALCOSAN interceptors. The Sewer System operates satisfactorily and has adequate capacity for the dry weather wastewater flows; during wet weather, however, the Sewer System is often taxed beyond its capacity, resulting in overflows, bypassing and flooding.

The U.S. Environmental Protection Agency ("USEPA") has adopted regulations governing discharges to surface bodies of water, coupled with a Combined Sewer Overflow Policy (the “CSO Policy”) regarding overflows from combined sewers during wet weather events that result in the discharge to receiving water of untreated sanitary sewage. These combined sewer overflows ("CSOs") contain pollutants that are present in domestic and industrial wastewater, as well as those in the urban storm water runoff that enter the combined sewer system. Most of the Authority's sewers are combined sewers and there are well over 200 CSOs within the Authority's Sewer System and at connections to ALCOSAN's interceptors. The USEPA CSO Policy requires owners of any sewer system having CSOs to acquire NPDES discharge permits for each overflow site. The Authority has applied for a permit applicable to CSO's, however, such permit has not yet been issued by the PADEP. The USEPA CSO Policy establishes a multi-step program toward controlling CSOs. In the first step, the owners of such systems were required to implement the USEPA's “Nine Minimum Control Measures” by January 1, 1997. In subsequent steps, permittees with CSOs must prepare and submit long-term CSO control plans that will ultimately result in compliance with requirements of the Clean Water Act. These long-term CSO control plans must include: (1) characterization, monitoring, and modeling of the combined sewer system; (2) public participation; (3) consideration of sensitive areas (with an adopted approach that shows compliance with a presumptive criteria of no more than 4 overflow events per year, or demonstration of adequacy to meeting water quality-based requirements of the Act); (4) evaluation of alternatives; (5) cost/performance considerations; (6) an operating plan; (7) maximizing treatment at existing treatment plant facilities; and (8) an implementation schedule.

The Authority has not yet identified the most efficient and cost effective method of eliminating or controlling the CSOs; however, the Authority will be required over the next several years to expend significant funds to inventory and monitor combined sewer overflows and to evaluate the impact on receiving streams.

The USEPA, the PADEP, and the ACHD are currently negotiating a consent decree with ALCOSAN for the purpose of providing a basis for the development of a Long Term Control Plan addressing CSOs and the elimination of sanitary sewer overflows. Although it is too early to predict the outcome of the negotiations, either the result of such negotiations or an adverse ruling in any enforcement action brought by the USEPA could have a material financial impact on ALCOSAN and the municipalities within the service area and require both ALCOSAN and the municipalities to undertake capital projects that would significantly increase existing sewer rates. As a result, all systems that are tributary to the ALCOSAN system, including the Authority's Sewer System, will be directly and significantly impacted by this situation.

In addition, in early February 2002, USEPA directed correspondence to each of the entities owning or operating sewer systems that convey wastewater to the ALCOSAN system, including the Authority, inviting those entities to execute consent orders with PADEP and/or ACHD, containing a multi-step plan for the evaluation and implementation of CSO and sanitary sewer overflow corrective measures. Since that time, the Authority has been engaged in discussions with the PADEP and the ACHD, as well as

other municipalities in the ALCOSAN system to develop consent orders for the evaluation and assessment of the ALCOSAN region's sewers to address CSOs and sanitary sewer overflows. Generally, this is to include a physical survey of the system, cleaning and internal inspection, mapping using a Geographic Information System ("GIS") as prescribed by the ACHD, dye testing of illegal connections to the sanitary sewers, a hydraulic capacity evaluation, and flow monitoring, as well as the implementation of the Nine Minimum Controls. The Authority and the other municipalities are still engaged in discussions with the PADEP and the ACHD and a schedule for the implementation of the tasks set forth in the consent orders has not yet been finally established.

Ultimately a long-term control plan ("Long-Term Control Plan") must be developed for the elimination of sanitary sewer overflows and the reduction of combined sewer overflows to acceptable levels. The cost of the studies and construction activities to reach target goals is estimated to cost at least \$300,000,000. The time required for full implementation of the plan has not yet been determined. As of this date the regulatory agencies, the Authority, the other municipalities, and ALCOSAN have not reached concurrence with regard to the schedule for such implementation.

The Authority lists a total of about 225 CSOs in the sewerage system that it operates. Of these, approximately forty-five (twenty percent) will be addressed and eliminated through the Capital Improvement Program. While the elimination of CSOs in the future will become more difficult and costly, the initial elimination of twenty percent of the CSOs in the system over the next two to three years represents a significant step toward compliance with the requirements of the CSO Policy.

The Authority has developed a plan, which it believes to be financially responsible, to address the combined sewer overflow issue and to meet the requirements of the CSO Policy and the Clean Water Act. This plan is reflected in the 2002–2003 Capital Improvement Program. Included within the program are \$4.8 million for a CSO study, engineering and flow monitoring; \$8 million for elimination of small CSO's; and \$2.5 million for various sewer separation projects. A proposed Capital Improvement Program has been developed that identifies the anticipated needs of the Authority for an additional three-year period. Included in this program are additional expenditures for sewer compliance issues and infrastructure improvements. It is anticipated that funding for these expenditures would be provided by the proceeds of the issuance of additional debt.

Water Supply

Although the quantity of water available from the Authority's sole source of water, the Allegheny River, is believed to be adequate, it is possible that circumstances could change this condition. The total flow of the river could, for example be limited by drought conditions, and any constraints that may be imposed on withdrawals in drought conditions, such as pass-by flow conditions designed to leave sufficient water in the stream for navigation and fisheries.

Geographic Concentration

The number of customers using the Water and Sewer System may be adversely affected by regional and local economic conditions, competitive conditions, changes in population and general market conditions. There can be no assurance that the Water and Sewer System will be able to maintain the current number of existing users if there are changes in the resident and/or commercial population of the service area.

Insurance and Legal Proceedings

The Authority carries property and general liability insurance in amounts deemed adequate by the Board and consistent with industry practices. Since January 1, 2002, the Authority has been self-insured as to general liability claims. While there are no current claims in excess of liability limits, there can be no assurance that future claims will be covered by applicable insurance coverage. A claim against the

Authority not covered by, or in excess of, the Authority's insurance could have a material adverse effect upon the financial affairs of the Authority.

Governmental Regulation

The federal and local government significantly regulates the industry. Regulations and conditions affecting the acquisition, development ownership and operation of the Water and Sewer System could increase the operating expenses of the Water and Sewer System or could otherwise have a material adverse effect on the financial condition of the Authority. (See Appendix A – “*Government Regulation*”.)

Uncertainty of Investment Income

The investment earnings of, and accumulations in, certain funds and accounts established by the Indenture have been estimated and are based on assumed earnings' rates. While these assumptions are believed to be reasonable in view of the rates of return presently available, there is no assurance that similar interest rates will be available on such investments in the future, nor is there any assurance that the potential accumulations assumed will be realized.

THE TRUSTEE

The obligations and duties of the Trustee are described in the Indenture, and the Trustee has undertaken only those obligations and duties which are expressly set out in the Indenture. The Trustee has not independently passed upon the validity of the Bonds, the security therefor, the adequacy of the provisions for payment thereof or the tax-exempt status of the interest on the Bonds. The Trustee has relied upon the opinion of Bond Counsel for the validity and tax-exempt status of the interest on the Bonds. The Indenture expressly provides that the Trustee shall not be responsible for any loss or damage resulting from any action or inaction taken in good faith in reliance upon an opinion of counsel.

Under the terms of the Indenture, the Trustee is liable only for those damages caused by its gross negligence or willful misconduct. Under the Indenture, the Trustee is not required to take notice and is not deemed to have notice, of any default under the Indenture, except failure by the Authority to cause to be made any of the payments required to be made for payment of principal of the Bonds, when due at maturity or earlier redemption, or interest on the Bonds, or unless the Trustee has been specifically notified in writing of such default by the Authority or the owners of at least 25% in aggregate principal amount of the Outstanding Bonds affected by such default. All notices or other instruments required by the Indenture to be delivered to the Trustee must be delivered at the principal corporate trust office of the Trustee. In the absence of any such notice, the Trustee may conclusively assume no Event of Default (as defined in the Indenture) exists, except as expressly stated above and in the Indenture.

LEGAL OPINIONS

Purchase of the Bonds by the Underwriter is subject to the receipt of the approving legal opinion of Klett Rooney Lieber & Schorling, a Professional Corporation, Pittsburgh, Pennsylvania, Bond Counsel, Pittsburgh, Pennsylvania. The unqualified approving opinion of Bond Counsel will be printed on the Bonds in substantially the form attached to this Official Statement as Appendix F. Certain legal matters for the Authority will be passed upon by its Counsel, Thorp, Reed & Armstrong, LLP, Pittsburgh, Pennsylvania, and by Disclosure Counsel, Grogan Graffam, P.C., Pittsburgh, Pennsylvania.

RATINGS OF THE BONDS

The Bonds will be assigned a rating of “AAA” by Fitch Ratings (“Fitch”), “Aaa” by Moody’s Investors Service, Inc. (“Moody’s”) and “AAA” by Standard & Poor’s Ratings Group, a Division of The McGraw-Hill Companies (“S&P”), all of which are based solely upon the creditworthiness of the Bond Insurer, with the understanding that upon delivery of the Bonds, the municipal bond insurance policy insuring payment when due of principal of and interest and premium, if any, on the Bonds will be issued by the Insurer.

Any explanation of the significance of such ratings may only be obtained from the rating agency furnishing the same. There is no assurance that such rating will be maintained for any given period of time or that it may not be revised downward or withdrawn entirely by the rating agency if, in its judgment, circumstances so warrant. Any downward change in or the withdrawal of such rating may have an adverse effect on the price at which the Bonds may be resold by the holder of such Bonds.

The Authority has not applied for an underlying rating based upon its own creditworthiness.

CONTINUING DISCLOSURE

Pursuant to Securities and Exchange Commission Rule 15c2-12 under the Securities Exchange Act of 1934, as amended (the “Rule”), the Authority has entered into a Continuing Disclosure Agreement (the “Disclosure Agreement”) which includes an undertaking (the “Undertaking”) for the benefit of the holders of the Bonds to provide certain financial information and operating data on an annual basis (the “Annual Report”) and to provide notice of certain enumerated events if such events are determined to be material under the federal securities laws.

The Annual Report is to be filed by the Trustee not later than 210 days after the end of the Authority’s fiscal year with each Nationally Recognized Municipal Securities Information Repository as defined in the Rule (“NRMSIR”). Notices of material events are to be filed with each NRMSIR or with the Municipal Securities Rulemaking Board (“MSRB”) and any State Information Depository established by the Commonwealth under the Rule, if any (“SID”). The Authority has complied with its continuing disclosure obligations under the Rule since 1995.

Annual Information. The Annual Information concerning the Authority shall consist of (1) audited financial statements or the disclosure of the absence of such an audit, prepared in accordance with generally accepted accounting principles (“GAAP”), or accompanied by a quantified explanation of material deviations from GAAP or a full explanation of the accounting principles used, and a certificate regarding annual debt service coverage; (2) operating data regarding the Authority substantially of the type included in the tables appearing under the following headings and subheadings of this Official Statement or in Appendix A hereto entitled “Water and Sewer Rates,” “Water Consumption by Customer Classification,” and “Survey of 10 Largest Users”; and (3) a narrative discussion that analyzes the Authority’s financial condition and results of operations, as well as facts likely to have a material impact on the Authority. In addition, the Authority will provide updated information as it become available regarding the IRS investigation described in “CERTAIN BONDHOLDERS’ RISKS.”

Notice of Material Events. The notices to be provided under the Rule, which the Authority will undertake to provide as described above, include written or notice of the occurrence of any of the following events, if material, with respect to the Bonds:

- (i) Principal and interest payment delinquencies;
- (ii) Non-payment related defaults;
- (iii) Unscheduled draws on debt service reserves reflecting financial difficulties;
- (iv) Unscheduled draws on credit enhancements reflecting financial difficulties;
- (v) Substitution of credit or liquidity providers, or their failure to perform;
- (vi) Adverse tax opinions or events affecting the tax-exempt status of the Bonds;
- (vii) Modifications to rights of holders of the Bonds;
- (viii) Bond calls (other than mandatory sinking fund redemptions);
- (ix) Defeasances;
- (x) Release, substitution or sale of property securing repayment of the Bonds; and
- (xi) Rating changes.

The Securities and Exchange Commission requires the listing of (i) through (xi) although some of such events may not be applicable to the Bonds.

Amendments. The Undertaking may be amended, without the consent of the holders of the Bonds, but only upon the Authority obtaining an opinion of nationally recognized bond counsel to the effect that such amendment, and giving effect thereto, will not adversely affect the compliance of the Undertaking with the Rule; provided that the Authority shall have provided notice of such delivery and of the amendment to each then existing NRMSIR or the MSRB and the SID, if any. Any such amendment shall satisfy, unless otherwise permitted by the Rule, the following conditions:

- (i) the amendment may only be made in connection with a change in circumstances that arises from a change in legal requirements, change in law or change in the identity, nature or status of the Obligated Person (as defined hereinafter) or type of business conducted;
- (ii) the Undertaking, as amended, would have complied with the requirements of the Rule at the time of the primary offering, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and
- (iii) the amendment does not materially impair the interests of Bondholders, as determined either by parties unaffiliated with the Authority (such as nationally recognized bond counsel), or by approving vote of Bondholders pursuant to the terms of the Indenture at the time of the amendment.

Termination. The continuing obligation of the Authority and each other Obligated Person to provide Annual Information and Material Event Notices shall terminate immediately once the Bonds no longer are Outstanding. In addition, the Undertaking, or any provision thereof, shall be null and void in the event that the Authority obtains an opinion of nationally recognized bond counsel to the effect that those portions of the Rule which require the Undertaking, or any such provision, are invalid, have been repealed retroactively or otherwise do not apply to the Bonds, provided that the Authority shall have provided notice of such delivery and the cancellation of the Undertaking to the Trustee and to each then existing NRMSIR or the MSRB and the SID, if any.

Obligated Persons. At this time, only the Authority is an “Obligated Person” for annual reporting purposes under the criteria described in the Disclosure Agreement.

Any failure by the Authority to comply with the provisions of the Undertaking shall not be an event of default with respect to the Bonds (although any available remedy in equity may be pursued to compel the Authority’s compliance). Nevertheless such failure must be reported in accordance with the Rule and must be considered by any broker, dealer or municipal securities dealer before recommending the purchase or sale of the Bonds in the secondary market. Consequently, any such failure may adversely affect the transferability and liquidity of the Bonds and their market price.

The Authority has not failed to comply with any prior such undertaking under the Rule. A failure by the Authority to comply with the Undertaking will not constitute an Event of Default under the Indentures (although Bondholders will have any available remedy at law or in equity). Nevertheless, such a failure must be reported in accordance with the Rule and must be considered by any broker, dealer or municipal securities dealer before recommending the purchase or sale of the Bonds in the secondary market. Consequently, such a failure may adversely affect the transferability and liquidity of the Bonds and their market price.

Bondholders are advised that the Disclosure Agreement, copies of which are available at the office of the Authority, should be read in its entirety for more complete information regarding its contents.

COMPETITIVE SALE OF BONDS

After competitive bidding on September 16, 2003, the Bonds were awarded to Lehman Brothers (the “Underwriter”) upon the terms and conditions set forth in the Notice of Sale dated September 10, 2003. The Bonds are being purchased by the Underwriter at an aggregate purchase price equal to \$165,116,611.50 which represents the principal amount of the Bonds, less original issue discount of \$830,486.70 and less an underwriter’s discount of \$1,442,901.80 plus accrued interest.

FINANCIAL ADVISOR

PNC Capital Markets, Inc. (the “Financial Advisor”) has served as the financial advisor to the Authority since 2000. The Financial Advisor is not obligated to undertake, and has not undertaken to make, an independent verification or to assume responsibility for the accuracy, completeness or fairness of the information contained in this Official Statement. The Financial Advisor will receive a fee, payable from Bond proceeds, for its services with regard to the issuance of the Bonds.

MISCELLANEOUS

The references, excerpts and summaries of all documents referred to herein do not purport to be complete statements of the provisions of such documents, and reference is made to all such documents for full and complete statements of all matters of fact relating to the Bonds, the security for the payment of the Bonds and the rights of the owners thereof. All capitalized terms used herein are used with the meaning set forth in the Indentures unless otherwise so specified.

The information contained in this Official Statement has been compiled from official and other sources deemed to be reliable and, while not guaranteed as to completeness or accuracy, is believed to be correct as of its date.

Any statement made in this Official Statement involving matters of opinion or of estimates, whether or not expressly so stated, are set forth as such and not as representations of fact, and no representation is made that any of the estimates will be realized. The information and expressions of opinion herein are subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the Authority since the date hereof.

This Official Statement has been duly executed and delivered on behalf of the Authority by an Authorized Representative.

THE PITTSBURGH WATER AND SEWER AUTHORITY

By: Gregory F. Tutsock
Executive Director

APPENDIX A
DESCRIPTION OF THE AUTHORITY

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Governance

The Board of the Authority consists of seven (7) members with no fewer than six (6) members appointed by the Mayor of the City and approved by City Council. The terms of Office of the members commence on the date of appointment, and the members serve staggered five (5) year terms from the first Monday in January next succeeding the date of appointment or until appointment of a successor, whichever is later. The present members of the Board and officers of the Authority and their principal private affiliations are as follows:

<u>Member</u>	<u>Occupation</u>
Joseph Preston Jr. Chairman	Member, Pennsylvania General Assembly
Richard Fees Vice Chairman	Treasurer, City of Pittsburgh
Jan Hedquist Secretary	Advisor, formerly Managing Partner, Young & Rubicam Europe London, England
Ellen M. McLean Treasurer	Director, Finance and Budget, City of Pittsburgh
Robert Provolt, Sr. Assistant Secretary/Treasurer	Union Representative
Ann J. Davis	Community Representative
Len Bodack, Jr.	Member, City Council City of Pittsburgh

Organization Summary

The Authority is organized into three operating divisions: Administration, Water and Sewer Operations, and Engineering and Construction.

The Administration Division is responsible for the various administrative and support functions within the Authority. These include: customer service, billing and collections, personnel and finance, procurement, and management and data information systems.

The Water and Sewer Operations Division is responsible for the production and transmission of potable water and the collection and transmission of wastewater. Operating sections within this Division are: "Water Quality Operations" which ensures that the water produced meets all health and safety requirements; "Distribution and Collection" which is responsible for maintaining and repairing the water distribution system and repairing and maintaining the sewer collection system; "Treatment Process" which includes the water treatment plant and storage facilities; "Facilities Support" which is responsible for overseeing capital and scheduled facility repairs and "Stores Management" which is responsible for inventory.

The Engineering and Construction Division is responsible for developing, designing, initiating and monitoring all of the Authority's Capital Improvement Projects. In addition, this Division is responsible for reviewing plans prior to issuing permits for any connection into, or modification of, the water and sewer system; and for the maintenance and updating of the Authority's geographical information system.

Key Management Personnel

Executive Director -- Gregory F. Tutsock was appointed by the Board to the position of Executive Director in December 2000. Mr. Tutsock began his employment by the Authority and its predecessor, the City of Pittsburgh, Department of Water, in 1991 and has since held various management positions. Prior to his appointment to Executive Director Mr. Tutsock served as the Authority's Deputy Executive Director (1997-2000) and Acting Executive Director (1996-1997). Mr. Tutsock has an Associate Degree in Engineering Technology and a Bachelor of Science Degree in Public Administration, both from Point Park College, Pittsburgh, Pennsylvania. He is a member of the American Water Works Association and the Pennsylvania Water Works Operator Association.

Finance Director -- Kelly Sikorski, CFA, joined the Authority's Administrative Division in January 2002. Ms. Sikorski is responsible for the financial affairs of the Authority including Accounting, Financial Reporting, Budgeting, Financial Planning, Banking, and Investor Relations. Ms. Sikorski was previously employed by Northeast Utilities where she gained over 11 years of experience in various finance related positions. Ms. Sikorski graduated from Bryant College, Smithfield, Rhode Island, with a Bachelor of Science Degree in Accounting, and earned a Master's Degree in Finance from the University of Hartford. Ms. Sikorski is a Chartered Financial Analyst and a State of Connecticut Certified Public Accountant. She is a member of the Pittsburgh Society of Financial Analysts, the Association for Investment Management and Research and the Government Finance Officers Association of Pennsylvania.

Director of Operations -- David J. Walker has been employed by the Authority and its predecessor, the City of Pittsburgh, Department of Water, since 1978. Mr. Walker began his employment as a laborer and advanced to his present position in 2002. He is responsible for plant operations, the distribution of the Authority's potable water supply, the collection and conveyance of sewage within the water and sewer system and stores management. Mr. Walker earned his Bachelor of Arts Degree in 1972 from Belmont Abbey College, Belmont, North Carolina, in Economic and Business. He received his Masters Degree in 2001 from Carnegie Mellon University, Pittsburgh, Pennsylvania, in Public Management. He is a member of the American Water Works Association, The Water Works Operators' Association of Pennsylvania and holds a Class D Type 1 waterworks license from The Commonwealth of Pennsylvania Department of Environmental Protection.

Water Quality Manager -- Stanley States, Ph.D., has been the Water Quality Manager for the Authority and its predecessor the City of Pittsburgh, Department of Water, since 1977. In that position he is responsible for the laboratory; compliance with federal, state, and county water quality regulations; and the actual treatment process. He holds an MS in Forensic Chemistry and a Ph.D. in Environmental Biology from the University of Pittsburgh. Dr. States has conducted research and published extensively in the areas of water quality and treatment. He has served as an adjunct professor and has taught in the Graduate School of Public Health and the School of Engineering at the University of Pittsburgh. Most recently Dr. States has been involved in authoring and delivering counterterrorism security courses, to water and wastewater personnel across the nation, for the Department of Homeland Security and the Environmental Protection Agency. Dr. States is a member of the American Water Works Association, the Water Works Operators Association of Pennsylvania, the American Society for Microbiology, and the American Chemical Society.

Director of Engineering and Construction -- Larry L. McCoy, PE, joined the Authority in December 2002 after completing a 33 year career with the U.S. Army Corps of Engineers. Mr. McCoy is responsible for the overall coordination and management of the Engineering and Construction Division's involvement in the Capital Improvement Program. Mr. McCoy graduated from West Virginia University Institute of Technology in 1969 with a Bachelor of Science Degree in Civil Engineering. He earned a Master of Science in Engineering Management from West Virginia University College of Graduate Studies. He is a Registered Professional Engineer in the Commonwealth of Pennsylvania and the State of West Virginia and is a member of the Water Environment Federation and American Water Works Association.

U.S. Water, L.L.C. Management Contract With the Authority

Following an extensive Request for Qualifications and Proposal process, the Authority entered into a short-term executive management agreement in May 2001 with U.S. Water, L.L.C. ("US Water") (the "Management Contract"). This Management Contract expired on December 31, 2001. Pursuant to the Management Contract, US Water conducted a series of system audits and reviews of the Authority's current functions and activities. At the conclusion of the first six months, US Water submitted a five year business plan based on the best practice recommendations set out in the audits. The Authority Board has since extended US Water's contract to facilitate the implementation of key elements of their recommendations.

US Water, L.L.C. is a limited liability company organized under the laws of the State of Delaware, and is a wholly-owned subsidiary of United Water. US Water operates 67 water and wastewater treatment facilities in the United States, serving customers in New Jersey, Pennsylvania, North Carolina, and Massachusetts and Connecticut, including the City of Easton, Pennsylvania.*

In addition to US Water's domestic experience, United Water provides water and wastewater services to 11 million people in the United States. In addition to owning and operating utilities, United Water operates municipal systems through public-private partnerships and contract agreements. United Water operates four of the nations' largest water and waste water contracts. United Water's corporate parent, Suez has a 120-year water and wastewater service history. Suez has 3,000 water management contracts serving over 120 million people in 30 countries.*

US Water provides an on-site management and information technology support to the Authority. The on-site US Water management representatives assist in directing the daily operations, maintenance and management of the Water and Sewer System. The Executive Director of the Authority is the liaison and advisory resource between US Water, the Authority, and its Board of Directors.

US Water is currently providing executive management services and is expected to assist the Authority in the following areas:

- Implementation support for information technology systems;
- Developing training modules for Maintenance, Customer Services and Operations;
- Introduction of Career Development Plans;
- Support for strategic and tactical business plan and process implementation.

* Source: U.S. Water, L.L.C.

Capital Lease Agreement With the City of Pittsburgh

In 1984, pursuant to the Lease and Management Agreement, the Authority leased the Water and Sewer System from the City and assumed responsibility for establishing and collecting user fees and charges and for maintaining and improving the Water and Sewer System. The Lease and Management Agreement further provided that the Water and Sewer System was to be operated and maintained for the Authority by the City, subject to the general supervision of the Authority. In 1995, the Authority and the City terminated the Lease and Management Agreement, and the Authority is acquiring the Water and Sewer System pursuant to the terms of the Capital Lease Agreement. The Capital Lease Agreement, which has a term of thirty (30) years, provided for payments totaling Ninety-Six Million Seventeen Thousand Two Hundred Forty-Nine Dollars and Sixty Cents (\$96,017,249.60) that were made to the City during the initial three (3) years of said contract and further provides that on September 1, 2025, upon payment of One Dollar (\$1.00) the Authority will acquire title to the Water and Sewer System.

Concurrently with entering into the Capital Lease Agreement, the City and the Authority entered into a Cooperation Agreement, dated as of June 15, 1995 (the "Cooperation Agreement"). Pursuant to the Cooperation Agreement, the City provides certain specified engineering, communications, vehicle maintenance, legal, information and financial services to the Authority on a fee for services basis and the Authority makes certain other payments to the City to reimburse it for costs and capital expenses incurred by the City in regard to the operation and maintenance of the Sewer System. The Cooperation Agreement may be terminated by either party, upon ninety (90) days written notice. (See "City of Pittsburgh 2003 Operating Budget Developments" herein.)

The Water Supply and Distribution System

The water supply and distribution system (the "Water System") consists of a 117 million gallon per day rapid sand type treatment plant which was placed in service in 1969, 1,200 miles of mains and service lines, 30,000 valves, 8,000 fire hydrants, nine pumping stations, five reservoirs, and eleven storage tanks. The total storage capacity of the reservoirs and tanks is approximately 455 million gallons. Based on the average usage over the past several years, this capacity is sufficient to provide storage equivalent to approximately five to seven days of normal water usage. In the opinion of the Authority's Consulting Engineer, Chester Engineers, Inc., the Water System's treated water quality exceeds all the current standards and levels of the federal Safe Drinking Water Act and the Pennsylvania Department of Environmental Protection ("PADEP").

The sole source of water for the Water System is the Allegheny River for which the Authority and its predecessors have held withdrawal permits since 1943. In March 1989, the then Pennsylvania Department of Environmental Resources (now the "PADEP") issued the Authority a Water Allocation Permit under the 1939 Water Rights Act. This permit authorizes the withdrawal of up to 100 million gallons per day and the PADEP determined that this would cause no major impact on navigation. The current average withdrawal of water from the Allegheny River is approximately 65 million gallons per day, and the maximum withdrawal made on any one day was approximately 95 million gallons during the past year. The Authority's Consulting Engineer is of the opinion that the Allegheny River's water is of good quality, and that there is ample quantity to meet foreseeable demands given current allocation permit conditions and foreseeable river flow conditions.

The Water System currently provides approximately 83,000 residential, commercial, industrial and public customers with potable water and water for fire protection within the geographic boundaries of the City. This represents approximately 84 percent of the total population within the City with the balance served by three independent water purveyors.

In 2002, the total amount of water supplied by the Authority was approximately 26 billion gallons, an average of 73 million gallons per day. Approximately 1 billion gallons were sold to adjacent municipalities for resale to customers within their service areas.

No material decreases in customers or water usage are anticipated in the foreseeable future. The Authority's water treatment plant is capable of providing more water than is currently being used by its existing customers. The Authority has undertaken a marketing effort to sell potable water to municipalities and municipal authorities within the region. It is also investigating the opportunity to purchase existing water systems located in municipalities adjacent to its current service area. Sale of this available water to additional regional communities would be a source of new revenue to the Authority. To realize this potential revenue the Authority would be required to construct water lines or improve pumping facilities to serve some regional communities; and those communities would need to obtain subsidiary water allocation permits from PADEP.

The Authority's Consulting Engineer is of the opinion that the Water System is in adequate operating condition and has adequate capacity to meet demands in the foreseeable future, provided the Authority continues the rehabilitation and replacement program provided for in its ongoing Capital Improvement Program.

Drinking Water Quality Regulatory Requirements

The Authority monitors water drinking quality on a continuous basis, 365 days a year. Tests are conducted for contaminants that may be present in source water prior to treatment, during treatment and on finished water. The Authority meets or exceeds all current Federal and State water quality requirements and anticipates compliance with future proposed regulations, including the pending Stage 2 Disinfection Byproducts Rule and the Long-term Enhanced Surface Water Treatment Rule. Results of water quality measurements and regulatory compliance are reported annually in the Authority's Consumer Confidence Report.

The Authority operates an on site water quality laboratory capable of conducting analysis and detection on numerous contaminants. The PADEP has certified the laboratory to conduct and certify results for a number of these contaminants. The Authority routinely provides analysis for other water providers and the Allegheny County Health Department. The Federal Safe Drinking Act requires each state to prepare a comprehensive Source Water Protection Plan to identify potential sources of contaminants. The Authority, working with the PADEP, has prepared the plan for the Allegheny River.

The Pilot Plant

The pilot plant, located at the Pittsburgh Water Treatment Facility, was designed to simulate treatment and hydraulic conditions in the Authority's main plant. Constructed in 2000, the pilot plant enables the Authority to determine process control parameters and chemical applications and to conduct stress testing the plant to achieve the best effective and efficient plant operations to meet current and future regulatory compliance issues. The Authority has addressed the new regulations for Stage 1, the disinfection byproduct rule and the interim enhanced surface water treatment rule. The Authority has met the requirements for both rules. This was accomplished through studies by utilizing the pilot plant. The authority is confident it will meet requirements for the pending long-term enhanced surface water treatment rule and Stage 2 disinfection byproducts rule, again through studies utilizing the pilot plant, once the requirements are finalized.

The Microfiltration Facility

Pennsylvania's Department of Environmental Protection Regulations based on the Federal Safe Drinking Water Act of 1984 required all finished drinking water reservoirs to be covered by December 31, 1995. In order that Highland #1 reservoir could remain uncovered for environmental and limited recreational considerations a 20 million gallon a day Microfiltration Facility was designed to provide further treatment before water is put into distribution. Microfiltration is a pressure-driven membrane process and consists of (0.1 micron pore size) membrane series for removal of suspended matter, turbidity, algae, fungi, protozoa, some microorganisms and cysts (including Cryptosporidium and Giardia). The Microfiltration Facility was placed into production in July 2002.

The Sewer System

The wastewater collection and transmission system (the "Sewer System") is part of a regional system which provides service to about 550,000 people, of whom nearly 335,000 live within the City. The total drainage area served by the regional system is approximately 80 square miles, of which the City comprises about 55 square miles, or nearly 70 percent of the total. The Sewer System is primarily a combined system designed to carry both storm and sanitary flows. The Sewer System is comprised of an extensive network of approximately 1,400 miles of sewer lines and four wastewater pumping stations. The average age of the sewer lines is between 60 and 70 years old, with some portions reaching nearly 150 years in age.

The Sewer System conveys wastewater generated within the City boundaries to Allegheny County Sanitary Authority ("ALCOSAN") interceptors along the rivers of the City for conveyance to ALCOSAN's wastewater treatment facility for processing prior to discharge into the Ohio River. The ALCOSAN treatment facility, which is not part of the Water and Sewer System, is operated by ALCOSAN pursuant to the National Pollutant Discharge Elimination System ("NPDES") under Permit No.0025984.

The Sewer System also is utilized by 24 suburban municipalities pursuant to agreements with the City to convey their wastewater to the ALCOSAN treatment facility. Many of the agreements with the suburban municipalities provide for the sharing of maintenance or reconstruction costs of the Sewer System.

The Sewer System is designed so that during wet weather, a portion of the collected storm water and diluted wastewater is discharged to natural water courses by diversion chambers located throughout the Sewer System and at connections to the ALCOSAN interceptors. The Sewer System is in satisfactory operating condition and has adequate capacity for the dry weather wastewater flows; however, in the past during wet weather, the Sewer System has often been taxed beyond its capacity and has resulted in overflow, bypassing and flooding. Some of these conditions have been or will be eliminated through the implementation of the Authority's ongoing Capital Improvement Program. Federal and State Combined Sewer Overflow requirements are expected to have some future impact and, so far as possible at this stage, this has been taken into account in the Authority's 5 year Business Plan. The Authority's Consulting Engineer is of the opinion that the Sewer System is in adequate operating condition but is in need of the ongoing Capital Improvement Program in order to correct existing deficiencies and maintain and upgrade the system to meet regulatory requirements (see discussion below under the heading "Government Regulation"). With the continuation of the Capital Improvement Program, it is anticipated that the Sewer System will be sufficient to meet foreseeable future demands and provide uninterrupted service to its users. See "CERTAIN BONDHOLDERS' RISKS, Certain Environmental Matters" above.

Description of Service Area

A description of the area served by the Water and Sewer System and selected demographics of the service area are set forth in Appendix D.

Water and Sewer Rates

The following tables present the Authority's Water and Sewer Rates and certain data with respect thereto and have been prepared by the Authority.

Ten Year Historical Rates (1992–2001) and Two Year Approved Rate Schedules (2002 –2003)

Year	Residential (1)		Commercial (1)		Industrial (1)		Wholesale (2)		Health & Education Rate Inc(4)	
	Rate	Inc(3)	Rate	Inc(3)	Rate	Inc(3)	Rate	Inc(3)	Rate	Inc(4)
	\$	%	\$	%	\$	%	\$	%	\$	%
1992	2.90	8.5	2.86	8.5	2.67	8.5	1.95	8.5	0	0
1993	3.00	3.5	2.96	3.5	2.76	3.5	2.02	3.5	0	0
1994*	3.12	4	3.08	4	2.87	4	2.10	4	0	0
1994**	3.42	9.5	3.37	9.5	3.14	9.5	2.30	9.5	0	0
1995	3.76	9.9	3.70	9.9	3.45	9.9	2.53	9.9	0	0
1996	3.76	0	3.70	0	3.45	0	2.53	0	0	0
1997	3.76	0	3.70	0	3.45	0	2.53	0	0	0
1998	3.85	2.5	3.79	2.5	3.54	2.5	2.59	2.5	0	0
1999	3.95	2.5	3.88	2.5	3.63	2.5	2.65	2.5	5.31	(4)
2000	3.95	0	3.88	0	3.63	0	2.65	0	5.31	0
2001	3.95	0	3.88	0	3.63	0	2.65	0	5.31	0
2002	4.34	9.8	4.26	9.8	3.99	9.8	2.91	9.8	5.83	9.8
2003	4.64	7.0	4.56	7.0	4.26	7.0	3.11	7.0	6.24	7.0

*Jan. 94

**Sept. 94

(1) Rate per 1,000 gallons over minimum use per month.

(2) Up to 500,000 gallons

(3) Represents percentage increase over prior year

(4) New Rate Classification, rate per 1,000 gallons over minimum use per month.

2002 Water Consumption by Customer Classification (1)

<u>Classification</u>	<u>Customer</u>	<u>Percentage of usage</u>
Residential (2)	75,423	42.6%
Commercial (3)	6,794	44.0%
Industrial	156	6.2%
Wholesale	15	7.2%
TOTAL (4)	82,388	100.0%

(1) Excludes customers of other water purveyors.

(2) Residential customers are the Water System's major block of customers.

(3) The "Commercial" category includes water usage by health and education sector, as well as various units of government.

(4) A detailed analysis of historical water consumption prepared by the Authority indicates that consumption in any one quarter differed by no more than 3% from the mean consumption level. Therefore, seasonal variability is not a significant factor in water consumption nor in the Water and Sewer System's revenue stream.

2002 Survey of 10 Largest Users

<u>User</u>	<u>% of Total Usage for 2002</u>
1. Fox Chapel Municipal Authority	2.3
2. University of Pittsburgh	1.0
3. Housing Authority of Pittsburgh	0.5
4. University of Pittsburgh Medical Center	0.5
5. Duquesne University	0.2
6. Carnegie Mellon University	0.2
7. Veterans Affairs Medical Center	0.1
8. Spectacor Management Inc	0.1
9. ALCOSAN	0.1
10. Port Authority of Allegheny County	0.1

Source: Pittsburgh Water and Sewer Authority

2002 Water Rate Survey of Major Area Suppliers

	Rate 1,000 Gal.	Minimum Monthly Charge	Minimum Gallons Per Month	Average Charge 5,000 Gal. Per Month
Pittsburgh Water and Sewer Authority (1)	\$4.64	\$ 9.97	1,000	\$28.53
1. Wilkinsburg - Penn Joint Water Authority	3.21	8.84	2,750	16.06
2. Monroeville Authority	3.41	6.82	2,000	17.05
3. Shaler Township	4.40	4.66	1,000	22.26
4. Westmoreland Auth - Forward Township	3.51	14.20	2,000	24.73
5. Plum Borough Municipal Authority	3.08	15.54	1,870	25.18
6. Richland Township Municipal Authority	3.84	14.35	2,000	25.87
7. Aspinwall Borough	5.50	5.50	1,000	27.50
8. Westmoreland Authority - White Oak	4.96	10.26	1,000	30.10
9. Westmoreland Authority – McKeesport	6.08	12.49	2,000	30.73
10. Southwestern - Penn Water Authority	4.61	12.82	-	35.87
11. Fox Chapel Authority	5.25	10.00	-	36.25

(1) Includes \$0.63 for Sewage Use Rate Charge

Relations with Other Municipalities

In addition to the Authority's sales to residential, commercial and industrial customers, the Authority has entered into contracts with eight adjacent municipalities and one wholesale customer for the sale of water. The Authority is the primary source of water for three municipalities, pursuant to long-term contracts expiring in 2012 through 2015, which establish pricing structures with each municipality. Four municipalities and one wholesale customer each have entered into contracts with the Authority for peak capacity needs. Four of these contracts require monthly minimum charges to be received by the Authority and one is on an emergency basis only.

Prospective Water Sales and Sewer Services

The Authority is capable of producing up to 100 million gallons of potable water each day. With current demand (including the requirements (and reserves) of other municipalities) at 65 million gallons per day the Authority has available surplus capacity. Also, in order to comply with current regulatory requirements the Authority will be making enhancements to the Sewer System through the Capital Improvement Program. These Sewer System enhancements will involve interaction with other municipalities (See "The Sewer System" for additional detail) and in connection therewith the Authority is continuing an initiative to market its surplus water capacity and extend its sewer services to other municipalities and water authorities in the region.

Expenses of Operation

Salaries and related expenses account for approximately twenty-seven percent (27%) of the 2003 Budget for current expenses. In 2003, the Authority's budget provides for two hundred seventy-three (273) positions as follows: thirty-nine (39) in billing and collections; twenty-one (21) in administrative and accounting positions; one hundred ninety-six (196) in water and sewer operations and seventeen (17) in engineering. Payments to the City of Pittsburgh for services to be provided to the Authority under the Cooperation Agreement are approximately fifteen percent (15%) of the 2003 budgeted current expenses. In addition, utility fees and the cost of chemicals account for approximately thirteen (13%) of the 2003 current expense budget.

Financial Operations

The Authority's income statement and annual debt service requirements are set forth in the following Financial History table. The table was prepared by the Authority using information contained in the audited financial statements for the years ended December 31, 1998 through December 31, 2002. The audited financial statements and management discussion and analysis for the years ended December 31, 2002 and 2001 are included as Appendix C.

Financial History*

(Dollars expressed in thousands)

	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>
Operating revenues:					
Residential, commercial and industrial water sales	\$ 62,236	\$ 58,892	\$ 56,915	\$ 58,209	\$ 54,438
Utility water sales	--	--	--	--	--
Other	1,680	1,509	2,726	1,110	398
Total operating revenues	<u>63,916</u>	<u>60,401</u>	<u>59,641</u>	<u>59,319</u>	<u>54,836</u>
Operating Expenses:					
Direct operating expenses	26,367	27,364	21,494	16,615	15,859
Cooperation agreement operating expenses:					
Wastewater direct expenses	2,300	2,300	--	1,491	1,491
Indirect cost allocation - wastewater	3,000	3,000	3,000	1,509	1,509
Indirect cost allocation - water	1,850	1,850	4,150	4,150	1,850
Transfer costs, net				1,893	2,138
Expense of water provided by other entities:					
Subsidy of customers located in the City	3,886	3,864	3,694	3,070	3,050
Depreciation	9,877	8,201	7,788	6,912	6,595
Amortization of capitalized lease assets	2,554	2,554	2,554	2,554	2,554
Total operating expenses	<u>49,834</u>	<u>49,133</u>	<u>42,680</u>	<u>38,194</u>	<u>35,046</u>
Operating income	<u>14,082</u>	<u>11,268</u>	<u>16,961</u>	<u>21,125</u>	<u>19,790</u>
Other revenues (expenses):					
Interest revenue	1,480	1,770	3,614	3,130	2,801
Interest expense	(25,944)	(23,459)	(22,116)	(21,324)	(20,700)
Unrealized gain/(loss) on trust investments	84	(94)			
Amortization of bond issue costs	(496)	(267)	(273)	(291)	(319)
Total other revenue (expense)	<u>(24,876)</u>	<u>(21,956)</u>	<u>(18,775)</u>	<u>(18,485)</u>	<u>(18,218)</u>
Increase/(Decrease) in Net Assets	<u>(10,794)</u>	<u>(10,688)</u>	<u>(1,814)</u>	<u>2,640</u>	<u>1,572</u>
Net Asset Surplus/(Deficit):					
Beginning of year	(6,212)	4,476	6,290	3,650	2,078
End of year	<u>\$ (17,006)</u>	<u>\$ (6,212)</u>	<u>\$ 4,476</u>	<u>\$ 6,290</u>	<u>\$ 3,650</u>
Annual debt service requirement					
Principal	\$ 10,065	\$ 9,635	\$ 9,245	\$ 8,885	\$ 8,550
Interest	25,738	22,123	22,516	22,953	18,250
Total annual debt service requirement	<u>\$ 35,803</u>	<u>\$ 31,758</u>	<u>\$ 31,761</u>	<u>\$ 31,838</u>	<u>\$ 26,800</u>

* Financial history restated to conform with new requirements of Governmental Accounting Standards Board 34, *Basic Financial Statements – and Management’s Discussion and Analysis – for State and Local Governments* adopted by the Authority as of January 1, 2001.

The Financial History table reflects the results of past operations and is not necessarily indicative of results of future operations. Future operations will be affected by various factors, including, but not limited to, regulatory mandates, rate changes, weather, labor contracts, population changes, business environment and other matters, the nature and effect which cannot now be determined. See "CERTAIN BONDHOLDERS’ RISKS".

DEBT SERVICE COVERAGE FORECAST*

(Dollars expressed in thousands)

<u>DESCRIPTION</u>	<u>Rev. Budget</u>		<u>Forecast</u>		
	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>
CASH BEGINNING OF YEAR	\$ 31,643	\$ 24,074	\$ 22,846	\$ 26,269	\$ 25,836
OPERATING COLLECTIONS	66,430	74,902	80,894	84,938	84,938
DELINQUENT SEWAGE COLLECTIONS	3,465	4,500	5,184	5,184	5,184
INTEREST EARNINGS	1,866	2,084	2,371	2,263	777
TRANSFER FROM CONSTRUCTION FUND	1,092	894	919	947	975
OTHER COLLECTIONS	<u>1,518</u>	<u>1,518</u>	<u>1,518</u>	<u>1,518</u>	<u>1,518</u>
TOTAL AVAILABLE FUNDS	\$106,014	\$107,972	\$113,731	\$121,119	\$119,228
OPERATING EXPENSES	<u>\$ 50,136</u>	<u>\$ 48,986</u>	<u>\$ 48,264</u>	<u>\$ 48,786</u>	<u>\$ 49,866</u>
NET AVAILABLE FOR DEBT SERVICE	\$ 55,878	\$ 58,985	\$ 65,468	\$ 72,333	\$ 69,362
DEBT SERVICE REQUIREMENTS**	\$ 37,803	\$ 40,139	\$ 45,199	\$ 47,497	\$ 48,500
COVERAGE FACTOR	1.48	1.47	1.45	1.52	1.43
REQUIRED COVERAGE	1.20	1.20	1.20	1.20	1.20
CASH AT END OF YEAR	\$ 24,074	\$ 22,846	\$ 26,269	\$ 25,836	\$ 21,862

Source: PWSA

As illustrated by this table, the Debt Service Coverage Factor of 1.20 (minimum) required by the Indenture as described in the paragraph marked "(1)" under "Rate Covenant" in this Official Statement is satisfied in each year of the study period (2003 through 2007).

* Preliminary, subject to change.

** Reflects debt service to be paid from operating funds and capitalized interest accounts advanced funded by bond proceeds.

Billings, Collections and Enforcement

All bills are due 20 days after the billing date and a penalty is applied 10 days past that date. The penalty is reflected on dunning notices generated and mailed to customers above a certain dollar threshold (dependent on customer class), and all unpaid balances and penalty are reflected on the next regularly monthly scheduled statement. In addition specified delinquent accounts are also issued to a collection agency, as a matter of routine, as part of the overall collection process. Termination is dependent on customer class and time of year. The Authority estimates that on average less than 5% of all customers experience discontinued service as a result of nonpayment.

In March 2003, as Phase 1 of an information technology ("IT") implementation plan the Authority upgraded to an SAP billing and customer information system which has the ability to combine water and delinquent waste water charges on a single customer account, and has dunning abilities never before used by the Authority. This new system has enabled the Authority to better manage metering, billing and collection of customer accounts, as well as improving management of revenue forecasting and service work processing.

Also as part of the Phase 1 IT implementation the Authority upgraded to an SAP finance and materials management system. The second phase of the IT implementation plan, expected to be complete in mid 2004, includes additional enhancements to billing and collection capabilities and implementation of a comprehensive IT asset management system. Upon completion of Phase 2, the Authority intends to begin billing directly for current waste water charges in an effort to improve collections.

Employee Relations and Retirement System

The majority of employees of the Authority are represented by a labor organization under Act 195 of 1970 of the Commonwealth of Pennsylvania. The Pittsburgh Joint Collective Bargaining Committee represents blue-collar employees, the American Federation of State, County and Municipal Employees, Local 2719 represents white-collar employees and Local 2037 represents the foreman. Act 195 requires that bargaining start at least six months prior to the date on which the Authority's budget is adopted and that mediation be used if an impasse is reached. Since the time they were certified, the Authority has concluded numerous negotiations with these bargaining units without any labor stoppages. Four-year agreements were reached with each of the American Federation of State, County and Municipal Employees Locals. Effective January 1, 2002, Local 2719 received a salary increase to be followed by additional increases on January 1, 2003, January 1, 2004, and January 1, 2005; and Local 2037 received a salary increase effective January 1, 2002, to be followed by increases in January 1, 2003, 2004, and 2005. A five-year agreement was recently reached with the Pittsburgh Joint Collective Bargaining Committee which provides for salary increases effective January 1, 2003, followed by additional increases on January 1, 2004, 2005, 2006, and 2007.

Government Regulation

The Authority is subject to Federal, State and County regulations in connection with water treatment, water distribution, wastewater collection, construction activities, storage tank use and air emissions. At the Federal level, regulatory oversight is provided by the United States Environmental Protection Agency ("USEPA"); at the State level, oversight is provided by the PADEP; and at the local level, oversight is provided by the Allegheny County Health Department ("ACHD"). The system meets or is in the process of planning and implementing improvements to meet all applicable regulations, permits and licenses. The major regulatory programs governing the Authority's operations are discussed below, grouped by subject matter.

Drinking Water

Large municipal water suppliers, such as the Authority, provide drinking water in accordance with the Federal Safe Drinking Water Act which was passed in 1974 and was amended in 1986 and 1996, regulating all systems which provide water for human consumption through at least 15 service connections, or regularly serve at least 25 individuals.. The Federal Act gave USEPA the authority to establish drinking water standards to control the level of contaminants in drinking water, rules prescribing minimum methods of drinking water treatment, and requirements for monitoring and reporting of drinking water quality. Pennsylvania has adopted a corresponding Pennsylvania Safe Drinking Water Act in 1984, and the state regulatory program has received USEPA primary approval, meaning that PADEP primarily administers the permitting and regulatory program in Pennsylvania.

The Authority holds permits issued by PADEP for the operation of a public water supply system, and is required to comply with federal and state requirements for treatment, monitoring of water quality, reporting of monitoring results and notification of exceedances, and issuance of consumer confident reports to our customers.

Water Quality

Federal regulations adopted under the Federal Clean Water Act, and State rules enacted under the Pennsylvania Clean Streams Law, govern discharges of wastewater and stormwater. Any facility which discharges sewage, process wastewater, non-contact cooling water or stormwater associated with an industrial activity must obtain a National Pollutant Discharge Elimination System ("NPDES") Permit. Under program approval from USEPA, PADEP administers the NPDES Permit program in Pennsylvania.

The PWSA Water Treatment Plant recently applied for an NPDES Permit to allow treated process water discharges to the Allegheny River. The PWSA has been asked by the PADEP to provide additional information for their review of the permit application. Discharges have occurred prior and subsequent to submission of the application. The PWSA will determine what action if any is required once the permit has been issued.

An NPDES permit is also required for discharges from sewage treatment facilities and combined sewer overflows ("CSO"). Such a permit establishes discharge limitations, monitoring, and reporting requirements and compliance schedules. The PWSA has applied for and is awaiting its Phase I NPDES CSO Permit for its combined sewer overflows. It is expected a permit will be issued after a final consent order has been signed (see below for further detail).

Large municipal wastewater collection systems are subject to federal regulation under the Clean Water Act (1977) and regulations adopted under that Act. Among the specific requirements applicable to the Authority's system are those imposed by EPA's Combined Sewer Overflow ("CSO") Policy (1994). The USEPA CSO Policy is a national framework for control of CSOs through the NPDES permitting program. The USEPA CSO Policy establishes a multi-step program toward controlling CSOs. In the first step, by January 1, 1997, the owners of such systems were required to implement the EPA's "Nine Minimum Control Measures", i.e., (1) proper operation and regular maintenance programs for the sewer system and CSOs; (2) maximum use of the collection system for storage; (3) review and modification of industrial wastewater pretreatment requirements to assure CSO impacts are minimized; (4) maximization of flow to the publicly owned treatment works for treatment; (5) prohibition of CSOs during dry weather; (6) control of solid and floatable materials in CSOs; (7) pollution prevention; (8) public notification of CSO occurrences and impacts; and (9) monitoring to effectively characterize CSO impacts and the efficacy of CSO controls. In subsequent steps, permittees with CSOs must prepare and submit long-term CSO control plans that will ultimately result in compliance with requirements of the Clean Water Act. These long-term CSO control plans must include: (1) characterization, monitoring, and modeling of the combined sewer system; (2) public participation; (3) consideration of sensitive areas (with an adopted approach that shows compliance with a presumptive criteria of no more than 4 overflow events per year, or demonstration of adequacy to meeting water quality-based requirements of the Act); (4) evaluation of alternatives; (5) cost/performance considerations; (6) an operating plan; (7) maximizing treatment at existing treatment plant facilities; and (8) an implementation schedule.

The City of Pittsburgh is the largest of the 83 municipalities that convey raw sewage to the Allegheny County Sanitary Authority ("ALCOSAN") for treatment. Three regulatory agencies, the USEPA, PADEP, and ACHD, have been involved in negotiations with ALCOSAN to address wet weather issues in the ALCOSAN service area. These negotiations will result in development of a regional Long Term Control Plan.

The regulatory agencies have taken the position that operators of sewer systems that convey wastewater to the ALCOSAN system share responsibility for addressing the CSO issues relating to their particular sewer systems. In early February 2002, USEPA directed correspondence to each of the entities owning or operating sewer systems with CSOs that convey wastewater to the ALCOSAN system, including the Authority, inviting those entities to execute a consent order and agreement with PADEP, containing a multi-step plan for the evaluation and implementation of CSO corrective measures. The proposed consent order and agreement did not contain fines or penalties for past non-compliance, but did propose binding obligations for work on a going forward basis. Entities that choose not to negotiate a consent order with PADEP will face enforcement actions by USEPA and PADEP.

In its model consent order form, USEPA presented proposed milestones for the characterization of the Sewer System, which is described as Phase I. This is to include a physical survey of the entire system, cleaning and internal inspection, mapping using a Geographic Information System as prescribed by the ACHD, dye testing of illegal connections to the sanitary sewers, a hydraulic capacity evaluation and flow monitoring, as well as implementation of the Nine Minimum Controls. Since the receipt of the USEPA's correspondence, the Authority has been engaged in discussions with the PADEP and the ACHD, as well as other municipalities in the ALCOSAN system, to develop consent orders for the evaluation and assessment of the ALCOSAN region's sewers to address CSOs and sanitary sewer overflows.

The Authority has developed what it believes to be a rational and financially responsible plan to address the combined sewer overflow issue and achieve compliance with the Clean Water Act. The Authority in conjunction with 82 other municipalities within the ALCOSAN service area have submitted revisions to the draft consent orders and are in ongoing discussions with the regulators. The Authority's and collaborating municipalities' objective is to arrive at a mutually acceptable agreement that enables the Authority to achieve compliance in a realistic time frame and with minimal financial impact.

The City of Pittsburgh, ACHD and the Authority have rules and regulations prohibiting the introduction of hazardous chemicals or materials, including industrial byproducts, into the sewer collection and conveyance system. Enforcement is through the Allegheny County Health Department, the City of Pittsburgh, Department of Public Safety, and the PADEP. Under USEPA requirements governing pre-treatment of industrial wastewaters discharged to publicly owned treatment works, pretreatment regulations and monitoring of those regulations are the responsibility of ALCOSAN and the ACHD.

Section 303(d) of the federal Clean Water Act requires Pennsylvania to identify all impaired waters within the Commonwealth where technology-based treatment requirements for point and non point sources of pollution are not stringent enough to attain and or maintain applicable water quality standards. This is an ongoing evaluation program being conducted by the PADEP. At this time, the PWSA has not been notified of any identified problems.

Storage Tanks

The Pennsylvania Storage Tank and Spill Prevention Act established a comprehensive regulatory program for both aboveground and underground storage tanks and facilities. The Act allows the PADEP to develop environmental protection programs to prevent and clean up storage tank product releases and spills. The Act includes both enforcement provisions and a strong reliance on the private sector to implement the major program elements. PADEP has received approval to administer the state storage tank program in lieu of most corresponding provisions of the Federal Resource Conservation and Recovery Act underground storage tank program.

The Authority currently has 12 tanks requiring frequent inspections under the regulatory provisions.

All Authority storage tanks have been upgraded to meet current regulatory requirements for protection, monitoring and containment.

Air Quality

The Authority has completed a \$3 million upgrade to the chemical treatment facility at the water treatment plant. This upgrade addresses storage, handling and distribution, containment and monitoring. These improvements will ensure compliance with current and proposed water quality and environmental regulations. A major aspect of the upgrade has been the conversion of the chlorination system from one utilizing gaseous chlorine to one utilizing liquid chlorine. Chlorine in a liquid form is safer to handle and store.

ACHD administers the air quality permitting program under the provisions of the Federal Clean Air Act and the Pennsylvania Air Pollution Control Act. Under Article XXI of the ACHD Air Pollution Control Regulations, pollution prevention is recognized as the preferred strategy (over pollution control) for reducing risk to air resources. Stack emission standards are set for specific air quality parameters and enforced by permit. On January 29, 1996 the Allegheny Health Department, Air Quality Program, issued the Authority an Annual Air Quality Operating Permit, # 96-0117. This permit covers emissions generated at the Water Treatment Plant and is reviewed and renewed annually. PWSA is required to periodically sample and meet stack air emission standards at the treatment plant from its boilers.

City of Pittsburgh 2003 Operating Budget Developments

The City of Pittsburgh's 2003 General Fund budget of \$386 Million contemplated new tax revenue sources and expenditure cuts to become effective July 1, 2003 to assist the City in meeting a \$60 million 2003 operating budget shortfall. The new tax revenue sources require state legislative action to enable the City to expand its taxing power to tax currently excluded businesses, such as financial institutions, utilities, and manufacturers, and non-residents through an increase in the occupational privilege tax. The state legislature is expected formally to consider the City's legislative package this fall.

In August the City took steps to reduce spending through employee layoffs in various operating departments. No essential services are affected as a result of these employee reductions. No layoffs adversely impact services provided to the Authority by the City under the Cooperation Agreement.

No assurance can be made that the Commonwealth will authorize the proposed taxes, or similar revenue raising measures, or increase the amount of state aid for City employee pensions. The City, however, has the legal authority to raise real property taxes (or eliminate certain exemptions, specifically the City homestead exemption), the earned income tax, the parking tax and the deed transfer tax with respect to its annual operating budget. Any such action would require the approval of City Council and the Mayor. Accordingly the City would expect to enact a balanced budget for 2004.

The City's cash balances are currently projected to be sufficient to meet the City's debt service and other obligations through the end of 2003, and the City has no plans at this time to seek relief under Chapter 9 of the Federal Bankruptcy Code. However, if the City should fail to receive additional taxing authority from the Commonwealth and subsequently fail to receive the necessary approval from City Council for tax increases and/or service cuts, the City would then consider a number of options, including those available under Chapter 9 of the Federal Bankruptcy Code and the Pennsylvania Municipalities Financial Recovery Act.

The Authority and its Capital Lease and Cooperation Agreement with the City should not be adversely affected by any bankruptcy filing by the City. The Authority is financially self-sufficient.

APPENDIX B
SUMMARY OF INDENTURE

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APPENDIX B

SUMMARY OF INDENTURE

The Water and Sewer System Revenue Refunding Bonds, Series of 2003 (the "2003 Bonds") are being issued and secured under the Trust Indenture dated as of October 15, 1993 (the "Original Indenture"), as amended and supplemented by the First Supplemental Indenture, dated as of July 15, 1995, the Second Supplemental Indenture, dated as of March 1, 1998, the Third Supplemental Indenture, dated as of March 1, 2002, and a Fourth Supplemental Indenture, dated as of September 15, 2003 (collectively, the "First Lien Indenture"). All bonds issued under the First Lien Indenture are hereinafter referred to as "Bonds."

This summary of the First Lien Indenture is qualified in all respects by specific reference to the First Lien Indenture. A copy of the First Lien Indenture may be reviewed at the offices of the Authority or the Trustee. Capitalized terms and phrases, not otherwise defined herein, shall have the meanings ascribed to them in the First Lien Indenture.

Defined Terms.

Current Expenses

The term "Current Expenses" shall mean the reasonable, proper and necessary costs of operation, maintenance and repair of the Water and Sewer System and Capital Additions and shall include, but without limiting the generality of the foregoing, administrative, engineering, legal, auditing and insurance expenses, liquidity facility fees and expenses, fees and expenses of the Trustee, any paying agent, and authorized depositaries, an allowance for depreciation, any payments to pension or retirement funds and taxes.

Receipts and Revenues

The term "Receipts and Revenues" shall mean any and all rates, fees, rents and charges established or to be established, levied and collected in connection with, and all other payments, receipts and revenues of whatever kind or character arising from, the operation or ownership of any property of the Authority or any part thereof (except tap or connection fees and charges to the extent such fees or charges are pledged in accordance with the Act as a refund to such person who has paid for the construction of any extension of the Water and Sewer System or assessment revenues which are subject to the lien of assessment bonds then outstanding), any income earned on the moneys or investments on deposit in the Debt Service Fund, Debt Service Reserve Fund, Construction Fund, Revenue Fund, Operation and Maintenance Fund and any sinking, purchase or analogous fund created under the First Lien Indenture.

Pledge and Security.

Pursuant to the First Lien Indenture, the Receipts and Revenues after payment of the Authority's Current Expenses, together with all cash and investments from time to time held in any fund (other than the Rebate Fund) by the Trustee, is pledged by the Authority to the Trustee, its successors and assigns, to secure the payment of principal and interest on all Bonds issued under the First Lien Indenture, the observance and performance of all the terms, provisions and conditions of the First Lien Indenture, and for the equal and ratable benefit and security of all and singular the present and future holders of the Bonds, without preference, priority or distinction as to lien or otherwise, except as otherwise provided in the First Lien Indenture, of any one Bond over any other Bond by reason of priority in the issue, sale or authentication thereof or otherwise. The municipal bond insurance policy with respect to the 1993 Bonds is for the sole benefit and security of the holders of the 1993 Bonds. The municipal bond insurance policy issued with respect to the 1998 Bonds is for the sole benefit and security of the holders of the 1998 Bonds. The municipal bond insurance policy issued with respect to the 2002 Bonds is for the sole benefit and security of the holders of the 2002 Bonds and the Municipal Bond Insurance Policy issued with respect to the 2003 Bonds is for the sole benefit and security of the holders of the 2003 Bonds.

Additional Bonds.

The Authority may issue additional Bonds, on a parity with the 2003 Bonds, the 2002 Bonds, the 1998 Bonds and the 1993 Bonds, for the purpose of financing the cost of acquiring or constructing capital additions or improvements, or for the purpose of refunding outstanding Bonds upon the conditions and terms set forth in the First Lien Indenture. In addition to the foregoing, the Authority may incur or assume additional debt provided that the security for such debt is subordinate to the lien of and security interests granted by the First Lien Indenture.

Revenue Fund.

All Receipts and Revenues and all other amounts received by the Authority from any source (except as otherwise provided in the First Lien Indenture) shall be deposited in the Revenue Fund established by the Authority with one or more Authorized Depositaries.

Operation and Maintenance Fund.

On or before the first day of each month, the Authority shall transfer from the Revenue Fund to the Operation and Maintenance Fund an amount equal to the amount budgeted by the Authority for that month for payment of the Current Expenses as the same become due. The Authority shall pay out of the Operation and Maintenance Fund its Current Expenses as the same shall become due. There is a special account within the Operation and Maintenance Fund called the "Operating Reserve Account." There shall be maintained in the Operating Reserve Account one-sixth of the amount equal to the Authority's budgeted Current Expenses for the current Fiscal Year. Amounts in the Operating Reserve Account shall be applied to pay the Current Expenses of the Authority to the extent that the amounts on deposit in the Operation and Maintenance Fund are insufficient.

Debt Service Fund.

On or before each interest payment date, the Authority will transfer from the Revenue Fund for deposit in the Debt Service Fund an amount equal to the amount of interest accrued and payable to date, and on or before the first day of each month, the Authority shall transfer from the Revenue Fund to the Trustee for deposit in the Debt Service Fund an amount equal to 1/12th of the principal due on the Bonds on the next following principal payment date.

Debt Service Reserve Fund.

There shall be maintained in the Debt Service Reserve Fund an amount equal to the maximum annual debt service requirements on the Bonds, subject to restrictions of federal tax laws. The amount required to be maintained in the Debt Service Reserve Fund may be in the form of cash, a letter of credit or other credit instrument, a surety bond, or a combination thereof.

Redemption Fund.

The Authority may transfer to the Trustee for deposit to the credit of the Redemption Fund such amounts as it may elect for the purchase or redemption of Bonds at the option of the Authority and the Trustee shall apply such moneys to the purchase or redemption of Bonds in the amounts directed by the Authority. Upon any such purchase or redemption, the Trustee shall transfer from the Debt Service Fund to the Redemption Fund any amount deposited to the Debt Service Fund with respect to interest on the Bonds being redeemed and shall pay the interest due on the redemption date out of such moneys.

Renewal and Replacement Fund.

On the dates and in the amounts set forth in the consulting engineer's report, money is transferred to the Renewal and Replacement Fund. The moneys at any time on deposit to the credit of the Renewal and Replacement Fund may be used by the Authority for extraordinary maintenance and repair of the Water and Sewer System or to pay the cost of capital additions or construction, or, to the extent of any insufficiency therein, to the Debt Service Fund or to any sinking, purchase or analogous fund.

Rebate Fund.

Separate and apart from the pledge of the First Lien Indenture is a Rebate Fund. Within the Rebate Fund there is a 1993 Bonds Rebate Account, a 1998 Bonds Rebate Account, a 2002 Bonds Rebate Account and a 2003 Bonds Rebate Account. Deposits, transfers and payments from the Rebate Accounts shall be made in accordance with tax regulatory agreements entered into with respect to the respective series of Bonds.

Authorized Investments.

The funds of the First Lien Indenture may be invested in the following:

(a) Direct obligations of the United States of America and securities fully and unconditionally guaranteed as to the timely payment of principal and interest by the United States of America, provided, that the full faith and credit of the United States of America must be pledged to any such direct obligation or guarantee ("Direct Obligations").

(b) Direct obligations and fully guaranteed certificates of beneficial interest of the Export-Import Bank of the United States; consolidated debt obligations and letter of credit-backed issues of the Federal Home Loan Banks; participation certificates and senior debt obligations of the Federal Home Loan Mortgage Corporation ("FHLMCs"); debentures of the Federal Housing Administration; mortgage-backed securities (except stripped mortgage securities which are valued greater than par on the portion of unpaid principal) and senior debt obligations of the Federal National Mortgage Association ("FNMA's"); participation certificates of the General Services Administration; guaranteed mortgage-backed securities and guaranteed participation certificates of the Government National Mortgage Association ("GNMA's"); guaranteed participation certificates and guaranteed pool certificates of the Small Business Administration; debt obligations and letter of credit-backed issues of the Student Loan Marketing Association; local authority bonds of the U.S. Department of Housing and Urban Development; guaranteed Title XI financings of the U.S. Maritime Administration; guaranteed transit bonds of the Washington Metropolitan Area Transit Authority; Resolution Funding Corporation securities.

(c) Direct obligations of any state of the United States of America or any subdivision or agency thereof whose unsecured, uninsured and unguaranteed general obligation debt is rated, at the time of purchase, "A" or better by Moody's and "A" or better by S&P, or any obligation fully and unconditionally guaranteed by any state, subdivision or agency whose unsecured, uninsured and unguaranteed general obligation debt is rated, at the time of purchase, "A" or better by Moody's and "A" or better by S&P.

(d) Commercial paper (having original maturities of not more than 270 days) rated, at the time of purchase, "P-1" by Moody's and "A-1" or better by S&P

(e) Federal funds, unsecured certificates of deposit, time deposits or bankers acceptances (in each case having maturities of not more than 365 days) of any domestic bank including a branch office of a foreign bank which branch office is located in the United States, provided legal opinions are received to the effect that full and timely payment of such deposit or similar obligation is enforceable against the principal office or any branch of such bank, which, at the time of purchase, has a short-term "Bank Deposit" rating of "P-1" by Moody's and a "Short-Term CD" rating of "A-1" or better by S&P.

(f) Deposits of any bank or savings and loan association which has combined capital, surplus and undivided profits of not less than \$3 million, provided such deposits are continuously and fully insured by the Bank Insurance Fund or the Saving Association Insurance Fund of the Federal Deposit Insurance Corporation ("FDIC").

(g) Investments in money-market funds rated "AAAm" or "AAAm-G" by S&P.

(h) Repurchase agreements collateralized by Direct Obligations, GNMMAs, FNMMAs or FHLMMCs with any registered broker/dealer subject to the Securities Investors' Protection Corporation jurisdiction or any commercial bank insured by the FDIC, if such broker/dealer or bank has an uninsured, unsecured and unguaranteed obligation rated "P-1" or "A3" or better by Moody's and "A-1" or "A-" or better by S&P, provided:

(i) a master repurchase agreement or specific written repurchase agreement governs the transactions; and

(ii) the securities are held free and clear of any lien by the Trustee or an independent third party acting solely as agent ("Agent") for the Trustee, and such third party is (i) a Federal Reserve Bank, (ii) a bank which is a member of the Federal Deposit Insurance Corporation and which has combined capital, surplus and undivided profits of not less than \$50 million, or (iii) a bank approved in writing for such purpose by the Bond insurers, and the Trustee shall have received written confirmation from such third party that it holds such securities, free and clear of any lien, as agent for the Trustee; and

(iii) a perfected first security interest under the Uniform Commercial Code, or book entry procedures prescribed at 31 C.F.R. 306.1 et seq. or 31 C.F.R. 350.0 et seq. in such securities is created for the benefit of the Trustee; and

(iv) the repurchase agreement has a term of 180 days or less, and the Trustee or the agent will value the collateral securities no less frequently than weekly and will liquidate the collateral securities if any deficiency in the required collateral percentage is not restored within two Business Days of such valuation; and

(v) the fair market value of the securities in relation to the amount of the repurchase obligation, including principal and interest, is equal to at least 103%.

(vi) Investment agreements approved by the Bond insurers.

Rate Covenant.

The Authority covenants that it will comply with (1) or (2) below in any fiscal year:

(1) The Authority will maintain, charge and collect, so long as any Bonds are outstanding, reasonable rates, rentals and other charges for the use of the facilities of the Water and Sewer System which (after making due and reasonable allowances for contingencies and a margin of error in the estimates) together with other Receipts and Revenues, including any unrestricted cash and investments accumulated in the Revenue Fund at the beginning of each Fiscal Year, shall be at all times at least sufficient to provide annually:

(a) Amounts sufficient to pay all of the Current Expenses of the Authority; and

(b) An amount equal to 120% of the debt service requirements with respect to the Bonds and other Authority Long Term Indebtedness during the then current fiscal year of the Authority.

(2) The Authority will maintain, charge and collect, so long as any Bonds are outstanding, reasonable rates, rentals and other charges for the use of the facilities of the Water and Sewer System which

(after making due and reasonable allowances for contingencies and a margin of error in the estimates), together with other Receipts and Revenues, for the then current fiscal year (exclusive of interest income earned by the Authority on funds other than the Debt Service Reserve Fund; provided, however, that earnings on the construction/acquisition funds may also be included during any construction period, but only to the extent such earnings are expressly required to be either retained in the construction/acquisition funds and may be used to pay debt service on the Bonds or other Authority Long Term Indebtedness or are applied directly to payment of debt service on the Bonds or other Authority Long Term Indebtedness), shall be at all times at least sufficient to provide annually:

- (a) Funds to pay all of the Current Expenses of the Authority; and
- (b) An amount equal to 100% of the debt service requirements with respect to the Bonds and other Authority Long Term Indebtedness during the then current fiscal year of the Authority.

Calculation of compliance with the covenant shall be made on the following basis: (a) operating revenue, construction/acquisition fund income, earnings on the Debt Service Reserve Fund, expenses, required deposits to replenish any withdrawals from the Debt Service Reserve Fund and the Renewal and Replacement Fund which have not been capitalized shall be accounted for on the accrual basis; (b) costs of issuance of the Authority Bonds and other Authority Long Term Indebtedness may be treated as if such amounts are amortized over the life of the Authority Bonds and other Authority Long Term Indebtedness irrespective of any shorter period over which such costs are actually amortized; and (c) depreciation is specifically excluded from the calculation. In the event that any Policy Costs are due and owing at the time of the calculation of the rate covenant, Gross Revenues of the Authority shall be reduced by the amount of any Policy Costs then due and owing.

The Authority also covenants with the holders of the Bonds that if at any time the revenues collected shall not be sufficient to enable the Authority to comply with the provisions set forth above, it will promptly revise its water or sewer rates, rents and other charges so that the Authority will be in compliance and so that any deficiencies in transfers of funds required to be made pursuant to the First Lien Indenture will be remedied before the end of the next ensuing fiscal year. In addition, with respect to the 2003 Bonds, (a) failure by the Authority to meet at least one of the requirements set forth in (1) and (2) above will constitute a breach requiring the Authority to engage a consultant within 60 days of the determination that such breach has occurred, and failure to engage and follow the recommendations of the consultant in a prompt manner will constitute an Event of Default as to the 2003 Bonds, and (b) failure to meet the test contained in (1) above when substituting "100%" for "120%" in (1) (b) will constitute an Event of Default as to the 2003 Bonds.

Insurance of Water and Sewer System.

The Authority will at all times cause all the property of the Water and Sewer System which is of a character usually insured by persons operating properties of a similar nature to be properly insured and kept insured by a reputable insurance company or companies against loss or damage by fire or other hazards to the extent that such properties are usually insured by persons operating properties of a similar nature in the same or similar localities. Such policies of insurance shall be for the benefit of the Trustee and the Authority, as their respective interests may appear. All claims in excess of \$500,000 shall be made payable to the Trustee and shall be held by the Trustee as additional security until paid out by it as provided therein. All claims of \$500,000 or less shall be paid to the Authority.

Employment of Independent Accountant; Annual Financial Report.

The Authority covenants to employ an independent auditor to perform such duties as are imposed on the independent auditor by the First Lien Indenture, including preparation of an audit report for the preceding fiscal year.

Events of Default.

Each of the following events is hereby declared an "Event of Default" for any Bond issued under the First Lien Indenture:

- (a) failure by the Authority to pay the principal of, or the premium (if any) payable upon the redemption of, any Bond when due and payable either at maturity, declaration, or by proceedings for redemption, or otherwise (no effect being given to payments made under the Bond insurance policy); or
- (b) failure by the Authority to pay any installment of interest on any Bond when due and payable (no effect being given to payments made under the Bond insurance policies); or
- (c) the entry of an order or decree appointing a receiver or receivers of the Water and Sewer System or of the Receipts and Revenues with the consent or acquiescence of the Authority, or, if such order or decree shall have been entered without the acquiescence or consent of the Authority, the failure of the Authority to cause such order or decree to be vacated or discharged or stayed on appeal within 90 days after entry; or
- (d) the institution of any proceeding with the consent or acquiescence of the Authority for the purpose of effecting a composition between the Authority and its creditors, or for the purpose of adjusting the claims of such creditors pursuant to any Federal or State statute now or hereafter enacted, if the claims of such creditors are under any circumstances payable out of the Receipts and Revenues, or if such proceeding shall have been instituted without the consent or acquiescence of the Authority, the failure of the Authority to have such proceeding withdrawn, or any order entered therein vacated or discharged, within 90 days after the institution of such proceeding or the entry of such order; or
- (e) the entry of a final judgment against the Authority, which judgment constitutes or could result in a lien or charge upon the Water and Sewer System or the Receipts and Revenues, or which materially and adversely affects the ownership, control or operation of the Water and Sewer System, if such judgment shall not be discharged within 90 days from the entry thereof, or if an appeal shall not be taken therefrom, or from the order, decree or process upon which or pursuant to which such judgment was granted or entered, in such manner as to conclusively set aside the execution or levy under such judgment, order, decree or process, or the enforcement thereof; or
- (f) the failure of the Authority to repair or replace, with reasonable dispatch, any part of the Water and Sewer System necessary for its efficient operation which shall have been destroyed or damaged (whether such failure promptly to repair or replace the same be due to the impracticability of such repair or replacement or the lack of funds therefor or for any other reason); or
- (g) the failure or refusal of the Authority to comply with any provisions of the Municipality Authorities Act, as amended and supplemented, or the rendering of the Authority, for any reason, incapable of fulfilling its obligations thereunder or under the First Lien Indenture; or
- (h) the failure of the Authority to observe any other covenant, condition or agreement of the Authority contained in the Bonds or in the First Lien Indenture and the continuation of such failure for a period of 60 days after written notice of such failure from the Trustee, which may give such notice in its discretion and shall give such notice at the written request of the holders of not less than 25% in aggregate principal amount of the Bonds then outstanding, provided that the failure of the Authority to meet the rate covenant shall not constitute an event of default thereunder, and provided further that if such failure is not capable of being remedied within 60 days after such notice, no Event of Default shall exist if the Authority commences the actions

necessary for the cure of such failure within such 60 day period and diligently pursues such actions thereafter; or

- (i) failure by the Authority to pay principal of, or premium (if any) payable upon the redemption of any Subordinate Bond when due and payable either at maturity or otherwise or to pay any installment of interest on any such Subordinate Bond when due and payable (no effect being given to payments made under a bond insurance policy) or any default under the Subordinate Indenture.

Acceleration of Principal. Upon the occurrence and continuance of any Event of Default, the Trustee may, and at the written request of Bondholders of not less than 25% in principal amount of the Bonds then outstanding shall, by written notice to the Authority, declare the Bonds to be immediately due and payable, whereupon they shall, without further action, become and be immediately due and payable. In addition, the Trustee shall be entitled to exercise any or all of the remedies granted to a trustee or under the Bond insurance policy or the Municipality Authorities Act. In no event, so long as the insurance policy is in effect and the bond insurer is not in default thereunder, shall the Trustee accelerate the payment of the Bonds without the written consent of each bond insurer with respect to the series of Bonds it insures.

The above provision, however, is subject to the condition that if, after the principal of said Bonds shall have been so declared to be due and payable, all arrears of interest, if any, upon the Bonds and interest on overdue installments of interest at the rate of interest specified therein, and the principal of all Bonds which have matured other than by reason of such declaration, shall have been paid by the Authority, and the Authority shall also have performed all other things in respect to which it may have been in default hereunder, and shall have paid the reasonable charges of the Trustee and its counsel and of the holders of said Bonds, including reasonable attorneys' fees paid or incurred, then, and in every such case, the holders of not less than a majority in aggregate principal amount of the Bonds then outstanding, by written notice to the Authority and to the Trustee, may waive such default and its consequences and such waiver shall be binding upon the Trustee and upon all holders of Bonds; but no such waiver shall extend to or affect any subsequent default or impair any rights or remedy consequent thereon. In no event, so long as an insurance policy is in effect and the Bond insurer is not in default thereunder, shall the Trustee waive a default without the prior written consent of the bond insurer with respect to the series of Bonds it insures.

Remedies of Trustee and Bondholders; Right of Entry. Subject to the acceleration of principal provision above, upon the happening and during the continuance of any event of default, the Trustee may and, upon written request of the holders of not less than 25% in aggregate principal amount of the Bonds then outstanding, shall enter into and upon and take possession of the Water and Sewer System and each and every part thereof as for a condition broken and may exclude the Authority, its agents and employees and all persons claiming under them wholly therefrom and have, hold, use, operate, manage and control the same and each and every part thereof, and in the name of the Authority or otherwise as the Trustee shall deem best, conduct the business thereof and exercise all the rights and powers of the Authority with respect to the Water and Sewer System and use all its then existing property, assets and franchises for that purpose and out of the Receipts and Revenues, maintain, restore, insure and keep insured, the Water and Sewer System against such hazards as are ordinarily insured against by a person operating a water and sewer system similar to the Water and Sewer System and from time to time may make all such necessary or proper repairs as to it may seem expedient, and establish, levy, maintain and collect such rates, rents and charges in connection with the Water and Sewer System as it may deem necessary, proper, desirable and reasonable, and collect and receive Receipts and Revenues, and after deducting therefrom the expenses of operation, maintenance and repair and all expenses incurred thereunder and all other proper outlays herein authorized and all such payments which may be made for insurance and other proper charges, including just and reasonable compensation for its own services, and for the services of such attorneys, agents and employees as it may, in the exercise of its discretion, employ for any of the purposes aforesaid, the Trustee shall apply the rest and residue of the moneys received by it, as well as all cash and investments held by the Trustee in any fund hereunder, subject to the provisions hereof with respect to claims for principal and interest, to the payment of the principal and interest on the Bonds. Whenever all that is due upon such Bonds and installments of interest and under any of the terms of the First Lien Indenture have been paid or deposited with the Trustee and all defaults made good, the Trustee in possession shall surrender possession to the Authority, its successors or assigns. However, the same right of entry shall exist upon any subsequent default or defaults. For purposes of this section, the bond insurer

shall, so long as no default has occurred under its respective insurance policy, be deemed to be the owner of the series of Bonds which it insures.

Judicial Action. In case of the breach of any of the covenants or conditions of the First Lien Indenture, the Trustee shall have the right and power to take appropriate judicial proceedings for the enforcement of its rights and the rights of the Bondholders thereunder. Upon the happening of an Event of Default, the Trustee may either after entry, or without entry, proceed by suit or suits, actions or special proceedings at law or in equity to enforce its rights and the rights of the Bondholders under the First Lien Indenture, and it will be obligatory upon the Trustee to take action to that end, either by such proceedings or by the exercise of its powers with respect to entry or otherwise, as it may determine, upon being requested to do so by the holders of 25% in aggregate principal amount of the Bonds then outstanding and upon being indemnified. For purposes of this provision, each Bond insurer shall, so long as no event of default has occurred under its respective insurance policy, be deemed to be the owner of the Bonds it has insured.

So long as the insurance policy is in effect and the Bond insurer is not in default thereunder, the Bond insurer may direct the Trustee with respect to the taking of each remedy and the Trustee may not take any action directed by the respective series of the Bondholders without the prior written consent of the Bond insurer.

Limitations on Bondholders.

No holder of any Bonds shall have any right to institute any suit, action, or proceeding in equity or at law for the enforcement of the First Lien Indenture or for the execution of any trust thereof or for the appointment of a receiver or to exercise any other remedy thereunder, unless such holder shall have previously given to the Trustee written notice of an event of default and of the continuance thereof nor unless also the holders of at least 25% in aggregate principal amount of the Bonds shall have made written request of the Trustee and shall have offered it reasonable opportunity either to proceed to exercise the powers hereinbefore granted or to institute such action, suit or proceeding in its own name nor unless also they shall have offered to the Trustee adequate security and indemnity against the costs, expenses and liability to be incurred therein or thereby; and such notification, request and offer of indemnity are, at the option of the Trustee, conditions precedent to the execution of the powers and trusts of the First Lien Indenture or for the appointment of a receiver or for any other remedy thereunder; no one or more holders or registered owners of Bonds, however, have any right to affect, disturb or prejudice the lien of the First Lien Indenture by their action or to enforce any right thereunder except in the manner therein provided.

Subject to the following paragraph, nothing shall affect or impair the right of any Bondholder, which is absolute and unconditional, to enforce the payment of the principal of and interest on its Bonds, or the obligation of the Authority, which is also absolute and unconditional, to pay the principal of and interest on the Bonds to the respective holders or registered owners thereof at the time and place in said Bonds expressed.

So long as any insurance policy is in effect and the Bond insurer is not in default thereunder, the Bond insurer may direct the Trustee with respect to the series of Bonds which it insures with respect to the taking of each remedy and the Trustee may not take any action directed by such Bondholders without the prior written consent of the Bond insurer.

Waivers and Supplemental Indentures Not Requiring Consent of Bondholders.

In addition to any supplemental indenture otherwise authorized by the First Lien Indenture, the Authority (with the prior written consent of the Bond insurer), and the Trustee may, from time to time and at any time, enter into such indentures or agreements supplemental to the First Lien Indenture as shall not be inconsistent with the terms and provisions thereof and which shall not adversely affect the rights of the holders of the Bonds (which supplemental indentures or agreements shall thereafter form a part thereof) for the following purposes:

- (a) to cure any ambiguity, formal defect or omission in the First Lien Indenture or any supplemental indenture;

- (b) to grant or confer upon the Trustee for the benefit of the Bondholders any additional rights, remedies, powers, authority or security that may lawfully be granted to or conferred upon the Bondholders or the Trustee;
- (c) to add to the covenants and agreements of the Authority in the First Lien Indenture other covenants and agreements thereafter to be observed, or to surrender any right or power therein reserved to or conferred upon the Authority;
- (d) to modify any of the provisions of the First Lien Indenture or to relieve the Authority of any of the obligations, conditions or restrictions contained in the First Lien Indenture, provided that such modification or relief shall not, by the express terms of the particular supplemental indenture, become effective until all Bonds outstanding on the date of the execution and delivery of such supplemental indenture shall no longer be outstanding;
- (e) to make such provision in regard to matters or questions arising under the First Lien Indenture as may be necessary or desirable and not inconsistent with the First Lien Indenture; or
- (f) to close the First Lien Indenture against, or to restrict, in addition to the limitations and restrictions therein contained, the issue of additional bonds thereunder, by imposing additional conditions and restrictions to be thereafter observed, whether applicable in respect of all Bonds issued and to be issued thereunder or in respect of one or more series of Bonds, or otherwise.

Supplemental Indentures Requiring Consent of Bondholders.

With the consent of the holders of not less than 66-2/3% in aggregate principal amount of the Bonds then outstanding or, in the case one or more but less than all of the series of the Bonds then outstanding are affected, then, in addition, with the consent of the holders of not less than 66-2/3% of the principal amount of the Bonds of each series so affected then outstanding, and with the consent of any guarantor of principal of and interest on any series of Bonds, the Authority and the Trustee may from time to time and at any time enter into an indenture or indentures supplemental to the First Lien Indenture for the purpose of eliminating any of the provisions of the First Lien Indenture or of any supplemental indenture or of modifying in any manner the rights of the holders of the Bonds so affected; provided, however, that no such supplemental indenture shall (i) extend the fixed maturity date of any Bond, or reduce the principal amount thereof, or reduce the rate or extend the time of payment of interest thereon, or reduce any premium payable upon the redemption thereof, without the consent of the holder of each Bond so affected, or (ii) permit the creation by the Authority of any lien prior to the lien of the First Lien Indenture upon any part of the Receipts and Revenues, or reduce the aforesaid percentage of Bonds, the holders of which are required to consent to any such supplemental indenture, without the consent of the holders of all Bonds then outstanding; provided, however, that in no event shall the provisions on Authorized Investments be amended. No supplemental indenture shall be effective unless it has been consented to in writing by the Bond insurers.

Discharge of First Lien Indenture.

If the Authority, its successors or assigns, shall pay or cause to be paid unto the holders of all Bonds outstanding the principal and interest to become due thereon and the premium thereon, if any, then the First Lien Indenture and the estate and rights therein granted shall cease, determine and be void, and the Trustee shall, upon the request of the Authority, deliver to the Authority such instruments as shall be requisite to satisfy the lien thereof, and reconvey to the Authority the estate and title thereby conveyed, and assign and deliver to the Authority any property at the time subject to the lien of the First Lien Indenture which may then be in the possession of the Trustee.

Bonds for the payment or redemption of which there shall have been deposited with the Trustee cash or direct non-callable obligations of the United States of America and securities fully and unconditionally guaranteed as to the timely payment of principal and interest by the United States of America, to which direct obligation or guarantee the full faith and credit of the United States of America has been pledged, Refcorp interest strips, CATS, TIGRS, STRPS, or defeased municipal bonds rated "AAA" by S&P or "Aaa" by Moody's, any combination thereof

or any other security approved by the Bond insurer), the principal of and interest on which when due will, without reinvestment of principal or interest, provide sufficient moneys to pay the Bonds in full at maturity or the date fixed for redemption, shall be deemed to be paid. In the event of an advance refunding, the Authority shall cause to be delivered a verification report of an independent nationally recognized certified public accountant.

Removal of Trustee.

The Trustee may be removed at any time by an instrument in writing signed by not less than a majority in aggregate principal amount of Bonds outstanding and filed with the Authority. No such removal shall become effective until a successor trustee is appointed and has accepted the duties of Trustee.

APPENDIX C
AUTHORITY FINANCIAL STATEMENTS

PITTSBURGH WATER AND SEWER AUTHORITY

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Independent Auditors' Report

The Board of Directors
Pittsburgh Water and Sewer Authority:

We have audited the accompanying financial statements of the Pittsburgh Water and Sewer Authority (the Authority), a component unit of the City of Pittsburgh (the City), Pennsylvania, as of and for the years ended December 31, 2002 and 2001 as listed in the accompanying table of contents. 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 of America. 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 Authority as of December 31, 2002 and 2001 and the changes in net assets and cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

As described in notes 2 and 12, the Authority adopted the provisions of the Governmental Accounting Standards Board (GASB) Statement No. 34, *Basic Financial Statements – and Management's Discussion and Analysis – For State and Local Governments*, GASB Statement No. 37, *Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments: Omnibus*, and GASB Statement No. 38, *Certain Financial Statement Note Disclosures*, as of January 1, 2001.



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a member of KPMG International, a Swiss association.



The Management's Discussion and Analysis on pages 3 through 9 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 this information and express no opinion thereon. The other supplementary information on schedules 1 and 2 is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly stated, in all material respects, in relation to the basic financial statement taken as a whole.

KPMG LLP

Pittsburgh, Pennsylvania
March 21, 2003

PITTSBURGH WATER AND SEWER AUTHORITY

Management's Discussion and Analysis

December 31, 2002 and 2001

The Pittsburgh Water and Sewer Authority (the Authority) comparative 2002 and 2001 fiscal year financial statements enclosed have been conformed to meet the new requirements of Governmental Accounting Standards Board (GASB) 34, *Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments*. The financial statements incorporate three basic statements: the Statements of Net Assets, formally the balance sheets, the Statements of Revenues, Expenses, and Changes in Net Assets, formally the Statements of Income and Changes in Retained Earnings (Accumulated Deficit) and Statements of Cash Flows.

This Management's Discussion and Analysis (MD&A) is based upon facts, decisions and conditions known as of the date of the audit report. Please note that the historical information provided in the financial statements and MD&A reflect the results of past operations and is not necessarily indicative of results of future operations. Future operations will be affected by various factors, including, but not limited to, regulatory mandates, rate changes, weather, labor contracts, population changes, business environment and other matters, the nature, and effect which cannot now be determined.

Using This Financial Report – Overview of Reporting Changes

The Statements of Net Assets present information about the resources which are available to the Authority and claims against these resources. Both assets and liabilities are classified in a format which segregates current from long-term. In addition assets available for special purposes – labeled "restricted assets" are segregated from those assets available for operations. The Authority's restricted assets represent money on deposit with the bond trustee to meet indenture, debt service, and construction program requirements. Liabilities have a similar classification segregating claims on restricted assets from claims on assets available for operations. The net assets are classified as invested in capital assets, restricted and unrestricted.

The Statement of Revenues, Expenses, and Changes in Net Assets summarizes operating and nonoperating activity for the fiscal years and the resulting impact on the Authority's net assets.

The Statements of Cash Flows have been prepared using the direct method. The statements provide an analysis of the Authority's cash by operating, investing and capital and related financing activities over the respective fiscal years.

Financial Highlights

Operating revenues in 2002 increased 5.8% to \$63.9 million from \$60.4 million in 2001. Operating revenues were positively influenced by two factors:

- In January 2002, the Authority's board of directors approved an across the board two-year rate increase. The first increase, 9.8%, was effective February 1, 2002. The second increase, 7.0%, was effective on January 1, 2003.
- In 2002 consumption increased 1.35% to 12.6 billion gallons from 12.4 billion gallons in 2001.

Total operating expenses increased 1.4% to \$49.8 million from \$49.1 million in 2001. Operating expenses were impacted by the following factors:

- Payroll expense was up 9.0% or approximately \$800,000, which was offset by accrual changes to the compensated absences. There was an approximately 3% salary increase for employees for 2002, and the Authority filled vacant positions primarily in customer service, administration, and distribution. The

PITTSBURGH WATER AND SEWER AUTHORITY

Management's Discussion and Analysis

December 31, 2002 and 2001

majority of Authority employees are represented by one of three labor unions. The Pittsburgh Joint Collective Bargaining Committee (PJCBC) represents blue-collar employees, The American Federation of State, County, and Municipal Employees (AFSCME), Local 2719 represents white-collar employees and Local 2037 represents foreman. In early 2002 the Authority reached four-year agreements with both AFSCME Locals. The PJCBC agreement was to expire at the end of 2002. The Authority has reached a five-year agreement with PJCBC.

- In January 2002, to enhance collection efforts the Authority engaged a collection agency to focus on delinquent sewage accounts. The Authority incurred \$700,000 in collection agency expense in 2002.
- In July 2002, the Authority extended the United Water (formally U.S. Water) executive management contract from June 30, 2002 for an additional three year period. The Authority entered into an agreement with United Water in mid 2001. After conducting a series of system audits and review of the Authority's functions and activities in December 2001, United Water submitted a five year business plan. The United Water agreement has been extended to facilitate the implementation of key elements of their recommendations and to assist with additional strategic initiatives. In 2002, consulting and legal fees increased 59%, or approximately \$500,000.
- Fines, claims, and professional service expense decreased 61% or approximately \$500,000 from 2001. Pennsylvania's Department of Environmental Protection Regulations required all finished drinking water reservoirs to be covered. In order that Highland Reservoir #1 remain uncovered for environmental and limited recreational considerations a 20 million gallon a day Microfiltration Facility was designed. The penalties the Authority was incurring as a result of noncompliance were eliminated when the Microfiltration Facility came on line in July 2002. In addition professional service fees decreased as temporary help was replaced with permanent staff positions and total claim payments were down in 2002.
- In 2002 the accounts receivable reserves adjustment decreased by 50% or \$2 million from 2001. In 2001 the Authority took a one time adjustment increasing its water accounts receivable reserves by \$4 million. The \$2 million 2002 reserve adjustment for water and sewage accounts receivable included a one-time net \$300,000 write-off of off-system delinquent sewage accounts receivable transferred from the City of Pittsburgh in 1997. Collections on these accounts will be recorded as miscellaneous revenue on a going forward basis.
- Nonsalary operation expenses were up 5.7% or approximately \$500,000 in 2002. The increase was due to increased chemical expense and increased expenditures in sewer repairs and maintenance.
- As a result of the 2002 review of the Authority's capitalization policy and reporting procedures, the Authority transferred over \$70 million of completed projects from construction in progress to utility assets. This transfer increased depreciation expense which was up over 2001 by approximately \$1.7 million.

Nonoperating expenses increased 13.3% to \$24.9 million from \$21.9 million in 2001. Nonoperating expenses were impacted by the following two factors:

- In March 2002 the Authority issued \$107.5 million in First Lien Revenue Bonds (2002 Revenue Bonds) with an average yield of 5.14%. The debt issuance was issued to fund a two-year \$90 million capital improvement program. The difference between \$107.5 million and \$90 million represents capitalized interest (cash to cover interest expense for 2002 and 2003) and the debt service reserve fund. The \$90 million will be used for various projects – approximately \$36 million for the water system, \$23 million for

PITTSBURGH WATER AND SEWER AUTHORITY

Management's Discussion and Analysis

December 31, 2002 and 2001

the sewer system, \$21 million for city related projects, and \$10 million for engineering, construction management, and other. Additional details of the proposed construction program can be found in the 2002 offering statement. The issuance of these bonds increased the Authority's 2002 interest expense and bond issue costs by \$4.2 million.

- Interest expense was decreased by \$1.2 million from 2001 due to the increase in capitalized interest resulting from the issuance of the 2002 Revenue Bonds.

Additional operating highlights include the following:

- Effective January 2002 the Authority became self-insured for general liability claims.
- In February 2002, the Authority entered into an insurance agreement to replace the \$10 million 1998 debt service reserve fund. The \$10 million was transferred to the 1998 capital project fund and used to finance on-going construction projects.
- In connection with the 2002 bond issuance – unrestricted operating funds received approximately \$5 million in bond proceeds for reimbursement of advances made to or on behalf of the capital improvement program for construction projects in 2001.
- In an effort to preserve cash a portion of the 2002 bond proceeds was placed in restricted funds to cover the 2002 and 2003 interest on the new 2002 series bond.
- As part of the executive management contract United Water completed a comprehensive review of the Authority's information technology infrastructure in June 2002. Based on United Water recommendations the Authority approved and is proceeding with replacement of the existing customer service and finance systems. The new system is expected to be in place by the end of March 2003. In connection with the system replacement, the Authority outsourced its payroll system effective January 2003.
- In late 2001, the Authority established an in-house security committee which meets on a regularly scheduled basis to make recommendations for enhancement of the safety and security of the water and sewer systems. In July 2002, The Authority was awarded a \$115,000 grant from the United States Environmental Protection Agency to offset costs associated with an vulnerability assessment report mandate due in March 2003 and associated corrective actions. This effort will supplement those of the committee to secure the water and sewer systems.
- Debt service coverage in 2002 and 2001 was 1.64 and 2.11 respectively. These coverage factors exceed the 1.2 coverage factor required by bond covenant. The decrease in 2002 from 2001 was due to a decrease in unrestricted cash balances and increased interest expense.
- In November 2002 the Internal Revenue Service made a preliminary adverse determination that the interest on the 1998 Series A and C is not excludable from gross income for federal income tax purposes. The IRS believes the cost of liquidation options should not have been included in the calculation of bond yield. This is not a final determination. The Authority does not agree with the IRS determination and will work to resolve the matter with the IRS without subjecting bondholders to tax. At this stage, management can predict neither the outcome of this matter nor its effect on the Authority. See note 11 Commitments and Contingencies for additional details.
- The City of Pittsburgh is the largest of the 83 municipalities that convey raw sewage to the Allegheny County Sanitary Authority (ALCOSAN) for treatment. In early February 2002, three regulatory agencies,

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the United States Environmental Protection Agency (USEPA), Pennsylvania Department of Environmental Protection (PADEP), and Allegheny County Health Department (ACHD), have issued draft Administrative Consent Orders (ACO's) to the municipalities and operating authorities of sewer systems that convey wastewater to the ALCOSAN system. The intent of the ACO's is to develop a regional Long Term Control Plan to address Combined Sewer Overflows (CSO), Sanitary Sewer Overflows (SSO) and ultimately improve water quality. The regulatory agencies have taken the position that operators share responsibility for addressing the CSO issues relating to their particular sewer systems.

The Authority has developed what it believes to be a rational and financially responsible strategy to address the CSO and SSO issues and achieve regulatory compliance. We have been coordinating our efforts in conjunction with ALCOSAN and the 3 Rivers Wet Weather Demonstration Program. This alternative strategy has been presented to the regulators and to officials, engineers and attorneys of the 23 adjoining municipalities. The alternative strategy was well received and was integrated into the response to the draft Administrative Consent Orders which were forwarded to the regulators in August 2002.

The current proposed consent order and agreement does not contain fines or penalties for past noncompliance, but does propose binding obligations for work on a going forward basis. Entities that choose not to negotiate a consent order with PADEP will face enforcement actions by USEPA and PADEP.

PITTSBURGH WATER AND SEWER AUTHORITY

Management's Discussion and Analysis

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Condensed Summary of Net Assets
(Dollars expressed in thousands)

	December 31,		Variance	
	2002	2001	Dollars	%
Net assets:			Increase (decrease)	
Capital assets:				
Producing assets	\$ 395,752	337,104	58,648	17.4%
Construction in progress	14,783	42,163	(27,380)	(64.9)%
Restricted assets	91,489	29,467	62,022	210.5%
Current assets and bond costs	51,633	49,359	2,274	4.6%
Total assets	\$ 553,657	458,093	95,564	20.9%
Liabilities:				
Current liabilities	\$ 30,306	28,771	1,535	5.3%
Noncurrent liabilities	540,357	435,534	104,823	24.1%
Total liabilities	570,663	464,305	106,358	22.9%
Net assets:				
Invested in capital assets	(34,974)	(20,178)	(14,796)	73.3%
Restricted for capital activity and debt service	7,273	7,412	(139)	(1.9)%
Unrestricted	10,695	6,554	4,141	63.2%
Total net assets	(17,006)	(6,212)	(10,794)	173.8%
Total liabilities and net assets	\$ 553,657	458,093	95,564	20.9%

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Management's Discussion and Analysis

December 31, 2002 and 2001

Condensed Summary of Revenues, Expenses, and Changes in Net Assets
(Dollars expressed in thousands)

	Year ended December 31		Variance	
	2002	2001	Dollars	%
			Increase (decrease)	
Operating revenues	\$ 63,916	60,401	3,515	5.8%
Operating expenses:				
Direct operating	26,367	27,364	(997)	(3.6)%
Cooperation agreement	7,150	7,150	—	0.0%
Subsidy of noncustomer city residents	3,886	3,864	22	0.6%
Depreciation and amortization	12,431	10,755	1,676	15.6%
Total operating expenses	49,834	49,133	701	1.4%
Operating income	14,082	11,268	2,814	25.0%
Nonoperating revenue (expense):				
Interest revenue	1,564	1,770	(206)	(11.6)%
Interest expense and other	(26,440)	(23,726)	(2,714)	11.4%
Total nonoperating expense	(24,876)	(21,956)	(2,920)	13.3%
Decrease in net assets	\$ (10,794)	(10,688)	(106)	1.0%

Financial Condition

The Authority's financial condition remains a challenge for management and the Board of Directors. Expense continues to exceed revenue growth. With consumption relatively flat, the 2002 rate increase sufficiently covered the increased cost of debt service related to the new 2002 bond issue. However, the 2002 rate increase did little toward reducing the growing deficit position. The 2003 rate increase will serve to assist in the deficit reduction if the Authority can manage its costs. However with relatively fixed costs such as debt service, depreciation, municipal obligations, subsidy payments and delinquent ALCOSAN receivable purchases, representing over 66% of the Authority's cost structure, additional action is required.

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The Authority has taken action and continues to address these financial issues as part of its ongoing strategic plan. In 2002 the Authority focused on improving collections by enhancing the customer service staff and utilizing a collection agency. Also the Authority focused on implementing a new customer service and financial system for enhanced functionality, accountability, responsibility, and reporting. With improved management information reporting systems and the assistance of United Water, the Authority is moving forward with implementing and updating the five-year business plan. Business plan actions include: developing and formalizing a commercial strategy – including rate review and long term rate management, marketing and sales analysis and initiatives and key account management, and an asset management plan – including medium and long term capital maintenance and improvement plans, operational management strategy and initiatives, and operational levels of service and asset performance trends. In addition, the Authority will continue to examine all work practices in every area of the organization in order to find more effective and efficient methods of service delivery in order to improve its financial condition.

PITTSBURGH WATER AND SEWER AUTHORITY

Statements of Net Assets

December 31, 2002 and 2001

(Dollars expressed in thousands)

Assets	2002	2001
Current assets:		
Cash and cash equivalents (unrestricted) (note 9)	\$ 31,643	29,889
Accounts receivable, net:		
Water:		
Billed	6,693	6,974
Unbilled	<u>4,017</u>	<u>3,852</u>
Total water accounts receivable, net	<u>10,710</u>	<u>10,826</u>
Wastewater treatment:		
Billed	3,524	3,413
Unbilled	<u>128</u>	<u>185</u>
Total wastewater treatment accounts receivable, net	<u>3,652</u>	<u>3,598</u>
Other receivables	<u>347</u>	<u>603</u>
Total accounts receivable, net	14,709	15,027
Inventory	<u>1,495</u>	<u>1,538</u>
Total current assets	<u>47,847</u>	<u>46,454</u>
Noncurrent assets:		
Restricted assets (note 8):		
Accrued interest receivable	420	240
Cash and cash equivalents	3,833	13,851
Investments	<u>87,236</u>	<u>15,376</u>
Total restricted assets	91,489	29,467
Capital assets, net (note 5)	410,535	379,267
Bond issue costs, net	<u>3,786</u>	<u>2,905</u>
Total noncurrent assets	<u>505,810</u>	<u>411,639</u>
Total assets	\$ <u><u>553,657</u></u>	<u><u>458,093</u></u>

PITTSBURGH WATER AND SEWER AUTHORITY

Statements of Net Assets

December 31, 2002 and 2001

(Dollars expressed in thousands)

Liabilities and Net Assets	2002	2001
Current liabilities:		
Bonds and loans payable, current portion (note 8)	\$ 10,704	10,065
Accrued payroll and related obligations (note 6)	783	1,565
Accounts payable wastewater treatment	8,040	5,237
Accounts payable and other accrued expenses	3,248	4,671
Accrued interest payable	7,531	7,233
Total current liabilities	<u>30,306</u>	<u>18,706</u>
Noncurrent liabilities:		
Deferred revenue	703	855
Accrued payroll and related obligations (note 6)	1,264	1,767
Bonds and loans payable, net of current portion (note 8)	538,390	432,912
Total noncurrent liabilities	<u>540,357</u>	<u>435,534</u>
Total liabilities	<u>570,663</u>	<u>454,240</u>
Net assets (note 10):		
Invested in capital assets, net of related liabilities	(34,974)	(20,178)
Restricted for capital activity and debt service	7,273	7,412
Unrestricted	10,695	6,554
Total net asset deficit	<u>(17,006)</u>	<u>(6,212)</u>
Total liabilities and net asset deficit	\$ <u>553,657</u>	<u>448,028</u>

See accompanying notes to financial statements.

PITTSBURGH WATER AND SEWER AUTHORITY
Statements of Revenues, Expenses, and Changes in Net Assets
Years ended December 31, 2002 and 2001
(Dollars expressed in thousands)

	<u>2002</u>	<u>2001</u>
Operating revenues:		
Residential, commercial, and industrial water sales	\$ 62,236	58,892
Other	1,680	1,509
Total operating revenues	<u>63,916</u>	<u>60,401</u>
Operating expenses:		
Direct operating expenses	26,367	27,364
Cooperation agreement operating expenses:		
Indirect cost allocation – wastewater	3,000	3,000
Indirect cost allocation – water	4,150	4,150
Expense of water provided by other entities:		
Subsidy of customers located in the City	3,886	3,864
Depreciation	9,877	8,201
Amortization of capitalized lease assets	2,554	2,554
Total operating expenses	<u>49,834</u>	<u>49,133</u>
Operating income	<u>14,082</u>	<u>11,268</u>
Nonoperating revenues (expenses):		
Interest revenue	1,564	1,770
Interest expense – bonds	(25,912)	(23,459)
Interest expense – other	(32)	—
Amortization of bond issue costs	(496)	(267)
Total nonoperating expenses	<u>(24,876)</u>	<u>(21,956)</u>
Decrease in net assets	(10,794)	(10,688)
Net asset deficit, beginning of year, as restated (note 12)	<u>(6,212)</u>	4,476
Net asset deficit, end of year	<u>\$ (17,006)</u>	<u>(6,212)</u>

See accompanying notes to financial statements.

PITTSBURGH WATER AND SEWER AUTHORITY

Statements of Cash Flows

Years ended December 31, 2002 and 2001

(Dollars expressed in thousands)

	<u>2002</u>	<u>2001</u>
Cash flows from operating activities:		
Cash received from customers	\$ 63,076	59,343
Cash received from delinquent sewage receivables	4,757	2,601
Cash paid to suppliers and employees	(26,049)	(22,680)
Cash paid to City of Pittsburgh under the Cooperation Agreement	(7,150)	(7,150)
Cash paid to other water companies for subsidy of customers located in the City of Pittsburgh	(3,793)	(4,189)
Cash paid to ALCOSAN for delinquent sewage receivables	(3,726)	(8,797)
Net cash provided by operating activities	<u>27,115</u>	<u>19,128</u>
Cash flows from investing activities:		
Purchase of investment securities	(258,820)	(83,256)
Proceeds from sale and maturities of investment securities	194,321	129,961
Interest income	2,423	5,506
Net cash (used) provided by investing activities	<u>(62,076)</u>	<u>52,211</u>
Cash flows from capital and related financing activities:		
Purchase/construction of property, plant, and equipment	(43,153)	(41,890)
Proceeds from issuance of long term debt	107,205	—
Principal payment on debt	(10,065)	(9,635)
Interest paid on borrowings	(25,364)	(22,123)
Payment of bond issuance costs	(1,926)	—
Net cash (used) provided by capital and related financing activities	<u>26,697</u>	<u>(73,648)</u>
Decrease in cash and cash equivalents	(8,264)	(2,309)
Cash and cash equivalents at beginning of year	<u>43,740</u>	<u>46,049</u>
Cash and cash equivalents at end of year	\$ <u><u>35,476</u></u>	\$ <u><u>43,740</u></u>
Consists of:		
Restricted cash and cash equivalents	\$ 3,833	13,851
Unrestricted cash and cash equivalents	31,643	29,889
	\$ <u><u>35,476</u></u>	\$ <u><u>43,740</u></u>
Reconciliation of operating income to net cash provided by operating activities:		
Operating income (loss)	\$ 14,082	11,268
Adjustments:		
Depreciation and amortization	12,431	10,755
Changes in assets and liabilities:		
Decrease (increase) in accounts receivable	62	3,038
Increase (decrease) in:		
Wastewater accounts payable	1,929	(6,261)
Accounts payable and other accrued expenses	(1,423)	2,630
Accounts payable restricted assets	874	(1,072)
Other	(840)	(1,230)
	\$ <u><u>27,115</u></u>	\$ <u><u>19,128</u></u>

See accompanying notes to financial statements.

PITTSBURGH WATER AND SEWER AUTHORITY

Notes to Financial Statements

December 31, 2002 and 2001

(Dollars expressed in thousands unless otherwise indicated)

(1) Organization

The Pittsburgh Water and Sewer Authority (the Authority) provides water to approximately 83,000 residential, commercial, and industrial customers located in the City of Pittsburgh (the City) and collects wastewater throughout the City.

A board appointed by the Mayor of the City governs the Authority.

The Authority is a body politic and corporate organized and existing under the Pennsylvania Municipalities Authorities Act. The Authority was established by the City in 1984 to assume responsibility from the City for management, operation, maintenance, and improvement of virtually the entire City water supply, distribution, and wastewater collection systems (the Water and Wastewater System or System). At inception, the City contributed \$5.3 million to the Authority in the form of customer accounts receivable.

The Authority has the right to establish water user fees and charges without being subject to the approval of any department, board, or agency of Pennsylvania or the City. The Authority is also authorized to issue bonds and notes payable solely from the Authority's revenues.

(2) Summary of Significant Accounting Policies

(a) Reporting Entity

These financial statements present the statements of net assets, revenues and expenses and changes in net assets and cash flows of the Authority. The Authority is a component unit of the City as defined in Governmental Accounting Standards Board (GASB) Statement No. 14. The Authority's financial statements are not intended to present the financial position or results of operations of the City taken as a whole.

(b) Basis of Presentation and Accounting

The accompanying financial statements have been prepared using the economic resources measurement focus and the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America, as prescribed by the Governmental Accounting Standards Board (GASB). Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. The Authority applies only the Financial Accounting Standards Board pronouncements issued before November 30, 1989.

The Authority functions as a Business Type Activity, as defined by the GASB. The significant GASB standards followed by the Authority are described as follows:

In June 1999, GASB issued Statement No. 34, *Basic Financial Statements – and Management's Discussion and Analysis – For State and Local Governments*. This statement establishes new financial reporting requirements. It establishes that the basic financial statements and required supplementary information (RSI) for general purpose governments should consist of: management's discussion and analysis, basic financial statements, and required supplementary information. In accordance with this statement, the Authority presents a statement of net assets; statement of

PITTSBURGH WATER AND SEWER AUTHORITY

Notes to Financial Statements

December 31, 2002 and 2001

(Dollars expressed in thousands unless otherwise indicated)

revenues, expenses, and changes in net assets; and a statement of cash flows prepared under the direct method. The objective of this statement is to enhance the understandability and usefulness of the external financial reports issued by government entities.

In June 2001, GASB issued Statement No. 37, *Basic Financial Statements – and Management’s Discussion and Analysis – for State and Local Governments: Omnibus*. This statement will be implemented simultaneously with Statement No. 34.

In June 2001, GASB issued Statement No. 38, *Certain Financial Statement Note Disclosures*. This statement will be implemented simultaneously with Statement No. 34.

The Authority adopted GASB Statements 34, 37, and 38 as of January 1, 2001.

(c) *Net Assets*

GASB Statement No. 34 requires that resources be classified for accounting purposes into the following net asset categories:

Invested in capital assets, net of related liabilities – This represents the Authority’s total investment in capital assets, net of outstanding debt obligations related to those capital assets. To the extent debt has been incurred but not yet expended for capital assets, such amounts are included as a component of invested in capital assets, net of related debt.

Restricted for capital activity and debt service – Restricted expendable net assets include resources in which the Authority is legally or contractually obligated to spend resources in accordance with restrictions imposed by external third parties for capital activity and debt service.

Unrestricted – Unrestricted net assets represent resources derived from water and sewage. These resources can be used at the discretion of the Authority to meet current expenses for any purpose.

When an expense is incurred that can be paid using either restricted or unrestricted resources, the Authority’s policy is to first apply the expense towards restricted resources, and then towards unrestricted resources.

(d) *Deferred Interest*

Earnings on funds restricted for the purpose of capital improvements, net of related interest expense, are deferred and allocated to the cost of capital assets. Accordingly, during 2002 and 2001 the Authority capitalized interest expense of \$4,600 and \$3,394, respectively, net of deferred interest earnings of \$1,275 and \$2,307, respectively.

Earnings on forward float agreements have been recorded as deferred revenue and recognized as interest revenue ratably over the life of each agreement.

(e) *Cash and Cash Equivalents*

Cash and cash equivalents include all highly liquid investments, both restricted and unrestricted, with maturity of three months or less at date of purchase.

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(Dollars expressed in thousands unless otherwise indicated)

(f) Bond Issue Costs, Premiums, and Discounts

Bond issue costs are deferred and amortized over the life of the related bonds using the effective interest method. The unamortized balance is an asset on the statement of net assets.

Original issue bond premiums and discounts are amortized over the life of the related bonds using the effective interest method of amortization. The unamortized balance of premiums and discounts is presented net on the balance sheets as a decrease to bonds payable.

(g) Deferred Refunding Loss

In accordance with GASB Statement No. 23, *Accounting and Reporting for Refunding of Debt by Proprietary Activities*, the excess of the reacquisition price over the net carrying amount of debt refunded with proceeds from the Series 1993 and 1998 Bonds were recorded as deferred refunding losses. The deferred refunding losses are being amortized using the effective interest method over the originally scheduled life of the defeased issues that extend to 2013 and 2025, respectively. The unamortized balances are reflected as a reduction of bonds payable.

(h) Capital Assets

Capital assets owned by the Authority are recorded at cost including that portion of deferred interest that is ultimately capitalized. Depreciation of capital assets owned by the Authority is provided on the straight-line method based on the estimated useful lives of the various classes of assets. Utility assets have estimated useful lives ranging from 30 to 40 years. Nonutility assets have estimated useful lives ranging from 5 to 10 years.

The Water and Sewer system represents the assets leased from the City of Pittsburgh. Amortization of these assets is provided on the straight-line basis applying an estimated average remaining useful life of forty years from the inception of the lease.

Maintenance and repairs are charged to expense as incurred.

(i) Classification of Revenues

The Authority has classified its revenues as either operating or nonoperating revenues according to the following criteria:

Operating revenues – Operating revenues include activities that have the characteristics of exchange transactions, such as residential, commercial, and industrial water sales.

Nonoperating revenues – Nonoperating revenues include activities that have the characteristics of nonexchange transactions, such as interest income and expense, and other revenue sources that are defined as nonoperating revenues by GASB No. 9, *Reporting Cash Flows of Proprietary and Nonexpendable Trust Funds and Governmental Entities That Use Proprietary Fund Accounting and GASB No. 34*.

PITTSBURGH WATER AND SEWER AUTHORITY

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December 31, 2002 and 2001

(Dollars expressed in thousands unless otherwise indicated)

(j) *Compensated Absences*

A liability for vacation, personal, and sick days is accrued when related benefits are attributable to services rendered and to the extent it is probable that the Authority will ultimately compensate employees.

(k) *Inventory*

Inventory is stated at cost, on a first-in, first-out basis.

(l) *Use of Estimates*

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

(m) *Reclassifications*

Certain 2001 amounts have been reclassified to conform with 2002 presentation.

(3) *Transactions With the City of Pittsburgh*

In 1984, pursuant to a Lease and Management Agreement, the Authority leased the System from the City and assumed responsibility for establishing and collecting user fees and charges and for maintaining and improving the System. The Lease and Management Agreement provided for the City to operate and maintain the System for the Authority subject to the general supervision of the Authority.

The City and the Authority agreed to terminate the Lease and Management Agreement in July 1995 and concurrently entered into a Capital Lease Agreement and a Cooperation Agreement (collectively referred to as the Agreements).

(a) *Cooperation Agreement*

Under the terms of the Cooperation Agreement (forty-year term effective January 1, 1995), City water department employees became employees of the Authority. As a result, the Authority assumed various personnel related obligations from the City's water department. Other direct costs of the System's water operations are now generally paid directly by the Authority under the Cooperation Agreement, rather than paid by the City and reimbursed by the Authority. The City provides the Authority with various services in accordance with the Cooperation Agreement and the Authority reimburses the City for direct and indirect costs attributed by the City to the operation and maintenance of the System.

Under the Agreements, the Authority provides up to 600 million gallons of water annually for the City's use without charge. Also, the Authority reimburses the City for the cost of subsidizing water service to residents of the City situated beyond the Authority's service area so that those water users pay charges that mirror the rates of the Authority.

PITTSBURGH WATER AND SEWER AUTHORITY

Notes to Financial Statements

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(Dollars expressed in thousands unless otherwise indicated)

(b) System Leases

The Capital Lease Agreement stipulates minimum lease payments of approximately \$101 million, all of which were satisfied during the initial three years of the capital lease.

The Capital Lease Agreement has a term of thirty years and provides the Authority with the option to purchase the System for one dollar in 2025.

(c) Pension

Employees of the Authority participate in the City's Municipal Pension Fund Plan (the Plan).

Employees who became members of the Plan prior to January 1, 1988, are required to contribute 5% of pre-tax pay. Those joining thereafter are required to contribute 4%. Substantially all of the Authority's 2002 and 2001 payroll of \$8,868 and \$8,697, respectively, was covered by the Plan. Employee contributions for the years ended December 31, 2002 and 2001 amounted to approximately \$325 and \$321, respectively.

The City's obligations relative to the Municipal Pension are determined in accordance with various Pennsylvania Statutes. The extent of the Authority's participation in such obligations with respect to those former City employees whose membership continued upon becoming employees of the Authority is determined by the shared interpretation of the City and Authority of the intent of the Cooperation Agreement. The City determined the Authority's associated contribution requirement for 2002 that the Authority recognized as an expense.

The January 1, 2002 Actuarial Valuation Report for the City's Municipal Pension Plan indicated a 2002 normal cost of \$289 associated with those former City employees whose participation continued upon becoming employees of the Authority as provided by the Cooperation Agreement. The Authority estimates that the normal cost for 2002 together with other elements of expense for employee service during 2002 would not exceed the sum of the 2002 contributions made by the Authority and its employees.

Uncertainty exists about the future obligation of the Authority and its employees to make contributions to the Plan. Such contributions are contingent upon the continuing eligibility of the Authority's employees to participate in the City's Plan. Eligibility for ongoing employee participation in the City's Plan could end if the Authority were to introduce another pension plan. At this time, the Authority and City have no definite plans to establish another pension plan for the Authority, other than an agreement in principle that the Authority should have its own plan in the future. Future obligations of the Authority to make contributions to the Plan may also be subject to other amendments of the existing arrangement agreed-upon by the Authority and the City.

Normal retirement benefits are available upon attainment of age sixty and completion of twenty service years. Early retirement benefits are available upon attainment of age fifty and completion of eight service years. Early retirement benefits may be deferred until age sixty or may be obtained upon retirement at a reduced level. A member who terminates employment after attaining age forty and completing eight service years can sustain eligibility for benefits by continuing contributions

PITTSBURGH WATER AND SEWER AUTHORITY

Notes to Financial Statements

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(Dollars expressed in thousands unless otherwise indicated)

through age fifty. A member who terminates employment after attaining fifteen service years, but has been a member since before January 1, 1975 can be vested by continuing contributions through age fifty.

Retirement benefits for employees who were members of the Plan are based upon a percentage of either three-year or four-year average pay, depending on date of hire, subject to certain specified minimum monthly benefit amounts. Special membership and benefit rules apply to those experiencing disability.

The "pension benefit obligation," which is an actuarial present value of credited projected benefits, is a standardized measure for financial statement disclosure of the present value of pension benefits, adjusted for the effects of projected salary increases, estimated to be payable in the future by the Plan as a result of members' service to date. The measure is intended to help users assess the Plan's funding status on a going concern basis, assess progress made in accumulating sufficient assets to pay benefits when due and make comparisons among public employee retirement systems. The Plan has not reported or attributed measurements of assets or the pension benefit obligation on the basis of the group of members who are Authority employees.

Additional information about the Plan and ten-year historical trend information showing the Plan's progress in accumulating sufficient assets to pay benefits when due is presented in the City's comprehensive annual financial report.

(4) Revenue and Accounts Receivable

(a) *Water*

Water sales revenue is recognized as earned during the period when water is supplied to customers. Customers are billed using a monthly billing cycle based on actual or estimated meter readings. The Authority recognizes unbilled accounts receivable for water service provided prior to year-end that is billed during the following year.

Water accounts receivable are presented net of a reserve for uncollectible amounts. This reserve, based upon historical experience and aging of the accounts, is recognized coincident with recognition of revenue. At December 31, 2002 and 2001, the reserve for uncollectible water accounts was approximately \$7.7 and \$6.9 million, respectively. The Authority has rights to utilize collection agencies, service terminations, liens, and real property sales to protect its interest, limit further losses, and motivate payments from delinquent customers.

(b) *Wastewater Treatment*

Although the Authority does not provide wastewater treatment, it assumed responsibility for certain wastewater treatment receivables beginning in 1996. Pursuant to a 1955 agreement, the City is responsible for paying the Allegheny County Sanitary Authority (Alcosan) the face amounts for delinquent wastewater treatment receivables. Until 1996, the City undertook to bill and collect these delinquent accounts directly. In 1996, the City and the Authority entered into a memorandum of understanding (MOU) whereby the Authority received assets including rights to wastewater

PITTSBURGH WATER AND SEWER AUTHORITY

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December 31, 2002 and 2001

(Dollars expressed in thousands unless otherwise indicated)

treatment receivables assigned by the City and assumed the City's obligation to pay Alcosan for delinquencies. Related assets and liabilities appear on the balance sheet. At December 31, 2002 and 2001, the reserve for uncollectible wastewater accounts was approximately \$8.5 million and \$8.4 million, respectively.

(5) Capital Assets

Capital assets consisted of the following at December 31, 2002 and 2001:

	Balance December 31, 2001	Additions	Deletions	Transfers	Balance December 31, 2002
Capital assets not being depreciated:					
Construction in progress	\$ 42,163	43,153	—	(70,533)	14,783
Capital assets being depreciated:					
Water & Sewer System	102,167	—	—	—	102,167
Utility assets	304,857	70,533	—	—	375,390
Nonutility assets	9,979	546	—	—	10,525
Total capital assets being depreciated	417,003	71,079	—	—	488,082
Total capital assets	459,166	114,232	—	(70,533)	502,865
Accumulated depreciation	(79,899)	(12,431)	—	—	(92,330)
Capital assets, net	\$ 379,267	101,801	—	(70,533)	410,535
	Balance December 31, 2000	Additions	Deletions	Transfers	Balance December 31, 2001
Capital assets not being depreciated:					
Construction in progress	39,457	41,890	—	(39,184)	42,163
Capital assets being depreciated:					
Water & Sewer System	\$ 102,167	—	—	—	102,167
Utility assets	266,088	38,769	—	—	304,857
Nonutility assets	9,768	211	—	—	9,979
Total capital assets being depreciated	378,023	38,980	—	—	417,003
Total capital assets	417,480	80,870	—	(39,184)	459,166
Accumulated depreciation	(69,144)	(10,755)	—	—	(79,899)
Capital assets, net	\$ 348,336	70,115	—	(39,184)	379,267

Interest expense, net of applicable interest income, was capitalized in the amounts of \$3,157 and \$912 during 2002 and 2001 respectively.

PITTSBURGH WATER AND SEWER AUTHORITY

Notes to Financial Statements

December 31, 2002 and 2001

(Dollars expressed in thousands unless otherwise indicated)

(6) Payroll and Related Obligations

Payroll and related obligations presented on the statements of net assets comprise:

	Balance December 31, 2001	Additions	Reductions	Balance December 31, 2002	Current portion
Compensated balances	\$ 1,807	—	(942)	865	99
Workers compensation	848	—	(184)	664	206
Early retirement incentives	131	—	(62)	69	29
Payroll, withholdings, and taxes	546	—	(97)	449	449
Total	\$ 3,332	—	(1,285)	2,047	783

	Balance December 31, 2000	Additions	Reductions	Balance December 31, 2001	Current portion
Compensated balances	\$ 1,835	—	(28)	1,807	694
Workers compensation	918	—	(70)	848	263
Early retirement incentives	145	—	(14)	131	62
Payroll, withholdings, and taxes	561	—	(15)	546	546
Total	\$ 3,459	—	(127)	3,332	1,565

(7) Revenue Bonds

To finance its initial capital improvement program, the Authority issued Daily Adjustable Demand Water and Wastewater System Revenue Bonds of \$93,600 in 1984 (1984 Bonds). In 1985, the Authority issued Water and Wastewater System Adjustable Rate Tender Revenue Bonds (1985 Bonds) that accomplished an advance refunding which defeased the 1984 Bonds. In 1986, the Authority issued \$134,700 Water and Wastewater System Adjustable Rate Tender Revenue Bonds (1986 Bonds) to finance the next phase of its capital improvement program. In July 1991, the Authority issued \$248,329 Water and Wastewater System Revenue Refunding Bonds, Series A of 1991 (1991 Bonds) which currently refunded all outstanding 1985 and 1986 Bonds. The principal of defeased 1986 Bonds still outstanding at December 31, 2002 and 2001 was \$198,080 and \$206,055, respectively.

In November 1993, the Authority issued \$278,970, Series A Refunding Bonds, (Series A-1993 Bonds) and \$10,785 Series B Revenue Bonds (Series B-1993 Bonds) to finance additional capital improvements. Series A-1993 Bond proceeds of \$276,613 (net of \$3,402 in underwriting fees, FGIC insurance, and other issuance costs) defeased the 1991 Bonds through an advance refunding. The principal value of defeased 1991 Bonds still outstanding at December 31, 2002 and 2001 was \$77,630.

The Series A-1993 and Series B-1993 Bonds bear interest at fixed rates ranging from 3.4% to 6.5%, payable semiannually at March 1 and September 1. The average effective interest rate on the 1993 Bonds, including amortization of original issue premium and excluding the 1991 refunding loss was approximately 5.1% for 2002 and 2001, respectively.

PITTSBURGH WATER AND SEWER AUTHORITY

Notes to Financial Statements

December 31, 2002 and 2001

(Dollars expressed in thousands unless otherwise indicated)

Fair value of the 1993 Bonds at December 31, 2002 and 2001 based on quoted market prices, is approximately \$218 and \$228 million, respectively.

In July 1995, the Authority issued \$89,850, Series A Bonds (1995 Series A Bonds), the proceeds of which are dedicated to a capital improvement program for the System and \$103,020, Series B Bonds (1995 Series B Bonds) to fund certain obligations of the Authority to the City under the Capital Lease Agreement for the System.

In March 1998, the Authority issued \$93,355, Series A First Lien Revenue Bonds (1998 Series A Bonds), the proceeds of which were used to defease through an advance refunding the entire balance of 1995 Series A Bonds outstanding (\$89,850), \$36,440 Series B First Lien Revenue Bonds (1998 Series B Bonds), the proceeds of which are dedicated to a capital improvements program, and \$101,970 Series C Subordinate Revenue Bonds (1998 Series C Bonds), the proceeds of which were used to defease through an advance refunding the entire balance of the 1995 Series B Bonds outstanding (\$98,410). In connection with the advance refunding, a portion of the proceeds of the 1998 Bonds was deposited into an irrevocable trust with an escrow agent to provide for the future debt payments. The advance refunding resulted in an economic gain to the Authority of approximately \$7.5 million and an increase to the debt service payments of approximately \$66 million. At December 31, 2002 and 2001, the remaining unamortized deferred refunding loss was \$4,333 and \$4,665, respectively, on the transaction and is shown as a reduction of the long-term debt and will be amortized through 2028. At December 31, 2002 and 2001, the principal of the defeased 1995 Bonds outstanding was \$165,615 and \$170,395, respectively.

Fair value of the 1998 Bonds at December 31, 2002 and 2001 based on quoted market prices, is approximately \$242 and \$240 million, respectively.

The 1998 Series A Bonds and 1998 Series C Bonds bear interest at fixed rates ranging from 5.0% to 5.25%, payable semiannually at March 1 and September 1. The average effective interest rate on the 1998 Bonds, including amortization of original issue discount and excluding the amortization of the 1995 refunding loss is approximately 5.1%. The 1998 Series B Bonds are capital appreciation bonds with an original issuance amount of \$36,440. The 1998 Series B Bonds have maturity values of \$2.3 million to \$31.8 million from 2017 to 2030. The bonds were issued to yield rates from 5.18% to 5.3%. The 1998 Series B Bonds accrue and compound interest on a semiannual basis and are carried at cost plus accrued interest. Total maturity value of the 1998 Series B Bonds is \$166.1 million.

A portion of the 1993 Bonds are subject to optional and mandatory redemption in various face amounts beginning September 1, 2003. A portion of the 1998 Bonds are subject to optional redemption in various face amounts beginning March 1, 2008.

In March 2002, the Authority issued \$107,500 in Water and Sewer First Lien Revenue Bonds. The net proceeds of the bond issuance (approximately \$90 million) will be used to fund additional capital improvements. Principal begins maturing December 2004, and continues through December 2031. Approximately \$8 million was funded to the capitalized interest account to cover authority debt service for 2002 and 2003. Another \$7.3 million was funded to the debt service reserve account. Bond issuance costs included \$668 in underwriting fees, \$500 insurance, and \$532 in other issuance costs.

PITTSBURGH WATER AND SEWER AUTHORITY

Notes to Financial Statements

December 31, 2002 and 2001

(Dollars expressed in thousands unless otherwise indicated)

(8) Bond and Loans Payable

Bonds, and state loans payable (Pennvest), consisted of the following at December 31, 2002 and 2001:

	<u>Balance December 31, 2001</u>	<u>Additions</u>	<u>Reductions</u>	<u>Balance December 31, 2002</u>	<u>Current portion</u>
Bonds and loans payable:					
Revenue bonds	\$ 464,236	109,875	(10,065)	564,046	7,150
Restricted bonds payable	3,355	—	—	3,355	3,355
State loans (Pennvest)	135	4,384	(31)	4,488	199
	<u>467,726</u>	<u>114,259</u>	<u>(10,096)</u>	<u>571,889</u>	<u>10,704</u>
Less: deferred refunding loss	(21,974)	—	2,115	(19,859)	—
Unamortized bond discount	<u>(2,775)</u>	<u>193</u>	<u>(354)</u>	<u>(2,936)</u>	<u>—</u>
Total bonds and loans	\$ <u>442,977</u>	<u>114,452</u>	<u>(8,335)</u>	<u>549,094</u>	<u>10,704</u>

	<u>Balance December 31, 2000</u>	<u>Additions</u>	<u>Reductions</u>	<u>Balance December 31, 2001</u>	<u>Current portion</u>
Bonds and loans payable:					
Revenue bonds	\$ 471,617	2,254	(9,635)	464,236	6,710
Restricted bonds payable	3,355	—	—	3,355	3,355
State loans (Pennvest)	—	135	—	135	—
	<u>474,972</u>	<u>2,389</u>	<u>(9,635)</u>	<u>467,726</u>	<u>10,065</u>
Less: deferred refunding loss	(24,232)	—	2,258	(21,974)	—
Unamortized bond discount	<u>(2,959)</u>	<u>184</u>	<u>—</u>	<u>(2,775)</u>	<u>—</u>
Total bonds and loans	\$ <u>447,781</u>	<u>2,573</u>	<u>(7,377)</u>	<u>442,977</u>	<u>10,065</u>

Remaining debt service payments of the 1993, 1998, and 2002 Bonds (including the effect of refunding of the 1995 Bonds indicated above) at December 31, 2002, are as follows:

	Revenue bonds		State loans		Total	
	<u>Principal</u>	<u>Interest</u>	<u>Principal</u>	<u>Interest</u>	<u>Principal</u>	<u>Interest</u>
2003	\$ 10,505	26,631	199	48	10,704	26,679
2004	12,910	26,148	234	57	13,144	26,205
2005	13,505	25,555	236	56	13,741	25,611
2006	14,130	24,928	239	56	14,369	24,984
2007	14,790	24,266	239	61	15,029	24,327
2008 – 2031	<u>501,561</u>	<u>397,287</u>	<u>3,341</u>	<u>489</u>	<u>504,902</u>	<u>397,776</u>
	\$ <u>567,401</u>	<u>524,815</u>	<u>4,488</u>	<u>767</u>	<u>571,889</u>	<u>525,582</u>

PITTSBURGH WATER AND SEWER AUTHORITY

Notes to Financial Statements

December 31, 2002 and 2001

(Dollars expressed in thousands unless otherwise indicated)

Interest incurred for the years ended December 31, 2002 and 2001 on bonds payable, exclusive of capitalized interest and amortization of refunding losses was approximately \$28.0 and \$24.2 million, respectively. Included in interest costs for 2002 and 2001 were amortization of the 1991 and 1995 refunding losses of \$2.1 and \$2.6 million, respectively, net of capitalized interest of \$4.6 and \$3.4 million.

In accordance with the provisions of the trust indentures for the 1993, 1998 and 2002 Bonds, the Authority has created a number of funds that are restricted for specific purposes. The complement of these restricted funds, collectively referred to on the balance sheet as "Restricted Funds" at December 31, 2002 and 2001 was:

	<u>2002</u>	<u>2001</u>
Capital project funds	\$ 60,795	1,421
Debt service and reserve funds	23,241	20,634
Operating reserve account	7,083	6,969
Other funds	370	443
	<u>\$ 91,489</u>	<u>29,467</u>

Among the Authority's debt covenants is one which requires that rates charged by the Authority will be sufficient to satisfy a formula which is intended to ensure that the Authority will be able to satisfy debt service requirements. The trust indenture also requires that revenue collections be deposited into a Revenue Fund and disbursed therefrom as provided for in the trust indenture. This Revenue Fund constitutes the vast majority of unrestricted funds cash and cash equivalents.

(9) Investments and Deposits with Financial Institutions

The Authority is authorized to invest in: obligations of the U.S. Government and government-sponsored agencies and instrumentalities; fully insured or collateralized certificates of deposits; commercial paper of the highest rating; repurchase agreements collateralized by government obligations or securities; highly rated bank promissory notes or investment funds or trusts; and, as to trustee assets, as otherwise permitted by the trust indenture as supplemented and amended in 1998. Throughout the years ended December 31, 2002 and 2001, the Authority invested its funds in such authorized investments.

The following is a summary of the Authority's cash deposits which were insured by the Federal Depository Insurance Company (Category 1) and cash and deposits which were not insured or collateralized in the Authority's name, but were collateralized in accordance with the requirements of Act 72 of the Commonwealth of Pennsylvania that the depository institution pool collateral for all governmental deposits and have the collateral held by an approved custodian in the institution's name (Category 3).

	<u>Total category 1</u>	<u>Total category 3</u>	<u>Bank balance</u>	<u>Carrying amount</u>
\$	345	35,476	35,821	35,476

PITTSBURGH WATER AND SEWER AUTHORITY

Notes to Financial Statements

December 31, 2002 and 2001

(Dollars expressed in thousands unless otherwise indicated)

The GASB requires disclosure of investments (including certain amounts qualifying for classification as "cash and cash equivalents" for purposes of the balance sheet and statement of cash flows) delineated in prescribed categories intended to give some indication of the level of risk assumed by the Authority.

At December 31, 2002 and 2001, all Authority investments (summarized below) met the criteria for "Category 3," which includes uninsured or unregistered investments for which the securities are held by the broker or dealer, or by its trust department or agent, but not in the Authority's name. (Category 1 would include investments that are insured or registered or for which securities are held by the Authority or its agent in the Authority's name. Category 2 would include uninsured and unregistered investments for which the securities are held by the broker's or dealer's trust department or agent in the Authority's name).

	<u>Fair value</u>	<u>Fair value</u>
Categorized investments:		
Repurchase agreements	\$ 1,269	10,857
U.S. government securities	5,420	5,404
Local government securities	7,829	7,495
Uncategorized investments:		
Money market funds	2,564	2,994
Investment agreements	<u>73,987</u>	<u>2,477</u>
Total investments	<u>\$ 91,069</u>	<u>29,227</u>

PITTSBURGH WATER AND SEWER AUTHORITY

Notes to Financial Statements

December 31, 2002 and 2001

(Dollars expressed in thousands unless otherwise indicated)

(10) Net Assets

Net assets represent the difference between assets and liabilities. An analysis of net asset amounts is as follows:

	<u>June 30</u>	
	<u>2002</u>	<u>2001</u>
Invested in capital assets, net of related liabilities:		
Net property, plant, and equipment in service	\$ 410,535	379,267
Less: Debt as disclosed in footnote no. 8	(549,094)	(442,977)
Deferred amount on refunding	19,859	21,974
Bonds/loans issuance costs and discounts, net	3,786	2,905
Accounts payable for capital items	(4,276)	(3,402)
Add: Funded debt from restricted assets:		
Unspent debt proceeds:		
Capital projects	60,975	1,421
Debt service and reserve funds	23,241	20,634
	<u>(34,974)</u>	<u>(20,178)</u>
Restricted for capital activity and debt service:		
Restricted cash and cash equivalents	3,833	13,851
Restricted investments	87,236	15,376
Restricted receivables	420	240
Less: Liabilities payable from restricted assets:		
Unspent debt proceeds:		
Capital projects	(60,975)	(1,421)
Debt service and reserve funds	(23,241)	(20,634)
	<u>7,273</u>	<u>7,412</u>
Unrestricted	<u>10,695</u>	<u>6,554</u>
Total net assets	<u>\$ (17,006)</u>	<u>(6,212)</u>

(11) Commitments and Contingencies

The Authority is proceeding with a capital improvement program, which the Authority's independent engineer has estimated will entail expenditure of the existing construction funds and potential future bond issues. As of December 31, 2002, \$8.6 million of the program is complete and \$57.6 million is under active contract.

To achieve complete compliance with current drinking water regulations promulgated by the Pennsylvania Safe Drinking Water Act (Act), the Authority has negotiated a consent decree with the Pennsylvania Department of Environmental Protection, which establishes a timetable for completing agreed-upon steps

PITTSBURGH WATER AND SEWER AUTHORITY

Notes to Financial Statements

December 31, 2002 and 2001

(Dollars expressed in thousands unless otherwise indicated)

through the close of the year 2000. During 2002, the Authority brought the Highland Park microfiltration Plant on-line, which brought the system into compliance.

The Authority has also negotiated a consent decree with the Pennsylvania Department of Environmental Protection, which established a timetable for improvements to the sewer system in the Nine Mile Run. These improvements are expected to be funded with the existing capital funds.

The Authority is subject to federal regulation under the Clean Water Act (1977) and regulations adopted under that Act. Among the specific requirements applicable to the Authority's system are those imposed by the United States Environmental Protection Agency's Combined Sewer Overflow (CSO) Policy (1994). The Authority's sewer system, the largest of 83 municipalities, conveys city wastewater to ALCOSAN's wastewater treatment facility. The sewer system operates satisfactorily and has adequate capacity for the dry weather wastewater flows; however, during wet weather, the sewer system is often taxed beyond its capacity, resulting in overflows, bypassing, and flooding. A regional long term control plan must be developed for the elimination of sewer overflows. The time and costs required for full implementation have not yet been determined. The Authority has developed what it believes is a financially responsible plan to address its sewer overflow issue and achieve compliance with the Clean Water Act and is currently awaiting a response. This plan is reflected in the capital improvement program and will be funded by proceeds from potential future bond issues.

The Internal Revenue Service is conducting an examination of the Water and Sewer System Revenue Bonds, Series A, B, and C of 1998. The Internal Revenue Service advised the Authority in April 2000 that the certain bonds were selected for examination as part of a program announced in 1993 to examine whether municipal bonds complied with the requirements of the Internal Revenue Code for tax exemption of bond interest. The IRS opened the examination in order to determine the effect of put options on the yield of defeasance escrows funded with bonds. The Authority received a bond counsel opinion to the effect that interest on the bonds was exempt from federal income tax, and the opinion has not been revoked. In November 2002, the IRS made a preliminary adverse determination that the interest on the 1998 Series A and C Bonds is not excludable from gross income for federal income tax purposes. The IRS believes the cost of liquidation options should not have been included in the calculation of bond yield, which is not the final determination. The current legal counsel believes the reliance was reasonable, and the conclusion of the original opinion would ultimately be accepted by a court.

In addition to the matters discussed previously, various other claims and lawsuits are pending against the Authority. The ultimate outcome of these claims and lawsuits cannot presently be determined and, accordingly, no provision for amounts arising from settlements has been made in these financial statements. In the opinion of management, the effect on the financial statements of potential losses associated with any such claim and/or lawsuit should not be material.

The Authority was insured for general liability coverage through 2001; however, effective January 1, 2002 became self-insured. In previous years, the Authority established a fund to pay for deductibles, small claims and other litigation costs. This fund is grouped with the "Restricted Assets" on the statements of net assets. During 2002 and 2001, the Authority paid \$0 from this fund for claims, and there is nothing accrued as of December 31, 2002.

PITTSBURGH WATER AND SEWER AUTHORITY

Notes to Financial Statements

December 31, 2002 and 2001

(Dollars expressed in thousands unless otherwise indicated)

(12) Reconciliation of Beginning of Net Assets

The provisions of Statement No. 34 have been applied to the beginning net assets. The following is a reconciliation of total fund balances as of January 1, 2001, to the total net asset balances:

Total fund balance at January 1, 2001	\$	(801)
Capital contributions		<u>5,277</u>
Total net assets at January 1, 2001	\$	<u><u>4,476</u></u>

(13) Subsequent Events

Water usage rates increased by 7.0%, effective January 1, 2003.

PITTSBURGH WATER AND SEWER AUTHORITY
 Schedule of Restricted Assets Activity
 Year ended December 31, 2002
 (Dollars expressed in thousands)

	Series 1983 bonds		Series 1995 bonds		Series 1998 bonds		Series 2002 bonds		Total	
	Debt service fund	Operating reserve accounts	Self-insured escrow accounts	Capital projects fund	Debt service reserve fund	Debt service fund	Capital projects fund	Capitalized interest fund		Debt service fund
Increase	409	114	—	12	52	58	—	242	158	2,202
Interest	409	114	—	12	52	58	—	242	158	2,202
Net bond issue	—	—	—	—	—	—	—	—	—	107,205
Decrease:										
Capital Projects	—	—	—	—	—	—	—	—	—	34,988
Interest	11,789	—	—	—	4,725	5,185	—	—	4,039	25,738
Bond Principal	10,065	—	—	—	—	—	—	—	—	10,065
Other	67	—	—	—	—	178	—	—	—	12,036
Total decrease	21,921	—	—	—	4,725	5,185	—	—	4,039	82,827
Interfund transfers:										
Nontrusteed Accounts	19,323	—	—	—	4,278	4,695	—	—	—	35,442
1993 Debt Service Fund	2,228	—	—	—	—	—	—	—	—	2,228
1995 Capital Projects	—	—	—	(411)	—	—	—	—	—	(411)
1998 Capital Projects	—	—	—	—	9,942	—	—	—	—	9,942
1993 Cleaning Fund	—	—	—	—	(2,653)	—	—	—	—	(2,653)
1993 Debt Service Reserve Fund	—	—	—	—	394	—	—	—	—	394
1998 C Debt Service Fund	—	—	—	—	—	432	—	—	—	432
1998 Debt Service Reserve Fund	—	—	—	—	—	—	(9,845)	—	—	(9,845)
2000 Cleaning Fund	—	—	—	—	—	—	—	—	—	(106,388)
2002 Capital Interest	—	—	—	—	—	—	—	4,455	—	4,455
2002 Capital Project Fund	—	—	—	—	—	—	—	—	—	90,504
2002 Debt Service Fund	—	—	—	—	—	—	—	—	—	4,038
2000 Debt Service Reserve Fund	—	—	—	—	—	—	—	—	—	7,304
Total inter-fund transfers	21,551	—	—	(411)	4,672	5,127	(9,845)	4,455	4,038	35,442
Net activity	39	114	—	(399)	(1)	(10,952)	26	6,697	311	62,022
Balance										
Beginning of year	7,226	6,969	345	1,071	1,599	10,032	—	—	—	29,467
End of year	7,265	7,083	345	672	1,598	—	26	4,697	311	91,489

See accompanying independent auditors' report.

PITTSBURGH WATER AND SEWER AUTHORITY

Schedule of Restricted Assets Composition

December 31, 2002

(Dollars expressed in thousands)

	Total	Unrealized gain/(loss)	Accrued interest receivable	Cash and cash equivalents		Common-wealth of PA revenue bonds	Investments			AIG investments note (3)
				Cash	Tri-party repurchase agreement		U.S. treasury note (1)	Morgan Stanley note (2)		
Capital project and construction fund:										
1995 Capital Projects Fund	\$ 672	—	1	—	—	671	—	—	—	—
2002 Capital Project Fund	60,123	—	87	—	321	—	—	—	—	59,715
	60,795	—	88	—	321	671	—	—	—	59,715
Debt service funds:										
1993 Debt Service Fund	7,265	(67)	82	1,825	2	3	5,420	—	—	—
1998 C Debt Service Fund	1,757	—	28	—	432	—	—	—	—	1,297
1998 Debt Service Fund	1,598	—	22	394	—	—	—	—	—	1,182
2002 Debt Service Fund	311	—	—	—	311	—	—	—	—	—
2002 Capitalized Interest Fund	4,697	—	158	—	44	—	—	—	—	4,495
2002 Debt Service Reserve Fund	7,613	151	33	—	131	—	—	7,298	—	—
	23,241	84	323	2,219	920	3	5,420	7,298	—	6,974
1993 Operating Reserve Fund	7,083	—	9	—	2	7,072	—	—	—	—
Self-Insured Escrow Fund	345	—	—	345	—	—	—	—	—	—
1998 and 2002 Clearing Fund	25	—	—	—	26	—	—	—	—	—
	91,489	84	420	2,564	1,269	7,746	5,420	7,298	—	66,689
	\$									

(1) \$919 at 5.5%, due 2/28/03, \$1,846 at 4.625%, due 02/28/03; \$2,532 @ 3.625% due 8/31/03.

(2) \$7,298 @ 5.15% investment agreement

(3) \$55,218 @ 1.72 % due 3/31/04; \$1,296 @ 5.581% due 9/1/04; \$1,182 @ 5.581% due 9/1/04; \$4,146 @ 1.72% due 3/31/04

See accompanying independent auditors' report.

APPENDIX D

CITY OF PITTSBURGH

**Certain Demographic and Economic Information
Pertaining to the City of Pittsburgh**

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ECONOMIC CONDITION AND OUTLOOK

Located at the confluence of the Ohio, Monongahela, and Allegheny Rivers, The City of Pittsburgh serves as the seat for Allegheny County. Pittsburgh is the largest of the County's 130 municipalities. Downtown Pittsburgh is commonly known as the Golden Triangle and serves as the regional center of Southwestern Pennsylvania, Eastern Ohio and Northern West Virginia. According to the 2000 Census, the City's population is approximately 340,000.

Economic Background

Pittsburgh has consistently been a leader in developing and capitalizing on new industries. In the mid-1800s, Pittsburgh gained notoriety for developing its glass, iron, and steel industries and emerged as the world's steel-producing capital by the end of the century. In recent years, the City of Pittsburgh's economy has been transformed. Though heavy manufacturing continues to play a role in the City's economic growth, it is no longer the region's sole driving force. Instead, Pittsburgh has reestablished itself as a leader in technological innovation. The same entrepreneurial spirit that forged Pittsburgh's growth in the past has been reborn, producing a diverse economy consisting of high technology, finance, healthcare, retail, law, and education sectors. Pittsburgh's economy is now fueled in great part by information technology and biotechnology firms that grew out of the region's strong universities.

Economic Condition and Outlook

The City of Pittsburgh continues to build and strengthen its economy not only by expanding existing businesses, but also by working to attract new businesses and industries to the region. The primary goal is to assist businesses both small and large in developing and enhancing working relationships between economic development practitioners throughout the state. By supporting the growth of the existing business core and marketing its competitive advantages to attract new businesses, the City of Pittsburgh has modernized its economy.

Initiatives such as *one-stop service providers* allow firms doing business in Pittsburgh to assign a project coordinator who will serve as a single point of contact throughout the development process. Tax Credits granted by both the federal government and the Commonwealth of Pennsylvania provides financial incentives for companies to hire new employees. The City of Pittsburgh also contains three State Enterprise Zones, which enable businesses located within those designated areas to enjoy more favorable interest rates and additional tax incentives. The City of Pittsburgh now has several sites available with the Commonwealth's Keystone Opportunity Zones, which exempt a majority of state and local taxes.

Over the past several years Pittsburgh has focused on the revitalization of its downtown core, making aesthetic improvements to reestablish it as a regional destination point. With the formation of a Business Improvement District in 1996, the Pittsburgh Downtown Partnership spearheaded improvements in maintenance, safety, and marketing. Currently, the downtown retail district is in the midst of a planning effort to enhance downtown retailing.

Pittsburgh is also working to make downtown the region's chief entertainment destination. The expansion of the convention center and the construction of two new sports facilities are attracting visitors from the surrounding region and all over the world. The downtown office climate is also getting a boost with recent office construction, expansion and occupation by firms such as PNC Bank and Mellon Bank, FreeMarkets, H.J. Heinz, Highmark Blue Cross/Blue Shield, GNC, ALCOA, and Kvaerner Metals.

The City of Pittsburgh has also implemented an aggressive strategy to reclaim the City's valuable riverfront property and reuse industrial sites left behind by the dismantling of the steel industry. Through the Urban Redevelopment Authority, the City of Pittsburgh has acquired land and prepared sites to lay the groundwork for economic development. A variety of technology companies and university researchers have located their operations at the Pittsburgh Technology Center. Through the Urban Redevelopment Authority, the City also purchased the 130-acre former LTV South Side Works site in late 1993. The site is currently being developed into a mixed-use development to include housing, office space, warehousing and light-industrial space. UPMC has finished building an 80,000-square-foot distribution center, and a 45,000-square foot office and laboratory facility called the Pittsburgh Life Sciences Center is under construction. Over 500,000 square feet of office space is either under construction or in the planning stages. The Mon Con/Hot Metal Bridge that once carried molten steel has been renovated to allow cars and pedestrians to travel between the South Side Works and the Pittsburgh Technology

Center. In addition, residential and commercial developments completed on Washington's Landing prove the strategy of land acquisition and site preparation can be used very effectively as an economic development strategy.

Pittsburgh is also strengthening and revitalizing its neighborhoods, encouraging new housing developments like Crawford Square, Aliquippa Terrace and Bedford Dwellings which are mixed-income-housing units in the Hill District. The idea is to provide both new and existing residents of the City with a higher quality of life. The City is also partnering with developers to attract new stores and restaurants back into the neighborhoods, such as a new Shop 'N Save at the Lawrenceville Shopping Center development and a Home Depot and Whole Foods in East Liberty.

But the most dramatic development in Pittsburgh is its rebirth as a hub for the technology industry. The University of Pittsburgh and Carnegie Mellon University lead the way in research of biotechnology, bioengineering, robotics, and information technology. Increases in university research and development (R&D), spending are a significant sign that the City's universities are working to commercialize technology developments. This R&D spending will spin off new companies, new jobs and new wealth. During the past 15 years, Pittsburgh has more than doubled its number of technology-driven firms, creating over 1,200 new enterprises. Today, nearly 2,400 high technology firms employ over 90,000 individuals, accounting for roughly nine percent of the total workforce in Greater Pittsburgh. In fact, the Pittsburgh region now ranks in the top ten in the nation in the total employment of computer software professionals. Pittsburgh is also the third-largest environmental technology hub in the country. In aggregate, technology companies have produced over 30,000 new jobs since 1980, sharply offsetting job losses from other industries in the region.

MAJOR INITIATIVES

The major initiatives from 1994 to the present of the City can be classified into four development objectives: Downtown Development, Industrial Site Re-use Development, Neighborhood Development and Riverfront Development. To date those investments have exceeded \$5 billion in activity.

The following is a summary of selected projects within each initiative.

Downtown Development

Theater Square Development-Mixed-use development including cabaret theater, box office, retail space on the ground level and 800 car parking facility.

Total cost: \$ 26.5 million

David Lawrence Convention Center-Construction of new convention center in the heart of the City.

Total cost: \$325 million

Renaissance Fulton Marriott- The renovation of the former Fulton Building into a new 300 room hotel.

Total cost: \$47 million.

First Avenue Parking Garage - The construction of a 1200 space public parking facility serving the central business district and the new PNC Operations Center, and a stop for the Port Authority Light Rail System.

Total cost: \$18 million.

The Penn Garrison - The renovation of 911-921 Penn Ave into an upscale 117 apartment building located within the City's Cultural District.

Total cost: \$21.5 million.

O'Reilly Theater – The construction of an intimate 650 seat theater for use by the Pittsburgh Public Theater.

Total cost: \$19.5 million.

Industrial Site Re-use Development

South Side Works-FBI Regional Headquarters - The construction of new headquarters for Pittsburgh headquarters.

Total cost: \$20 million.

Pittsburgh Technology Center-Bridgeside Point - The construction of 160,000 square foot building to become the home of Cellomics, a Pittsburgh based biotech company.

Total cost: \$21 million.

Hot Metal Bridge - The conversion of the former "hot metal" bridge that connects Second Avenue to the South Side into a vehicle and pedestrian bridge.

Total cost: \$7.5 million

Somerset at Frick Park - Redevelopment of a 238-acre former industrial site into a traditional neighborhood

Total Cost: \$57 million

URA Parking Garage - The construction of a 750 car parking garage located next to the Quantum Building at the South Side Works.

Total cost: \$12 million.

Neighborhood Development

The Rubicon- The renovation of a building located in Shadyside that is home to Sony's Research and Design facility.

Total Cost: \$1.5 million.

Bedford Dwelling - The conversion of the former Bedford Dwelling public housing community into a mixed-income development to contain 880 townhouses and apartments.

Total cost: \$86 million

New Pennley Place - The redevelopment of the Pennley Park public housing community into a mixed-income development to include the construction of 81 townhouses and the renovation of 197 apartments.

Total cost: \$25 million

Williams Square - Construction of a 15,000-sq. ft. multi-tenant office building located in the Hill District.

Total Cost: \$14 million.

Schenley Center - The construction of a 176-room Residence Inn by Marriott, 156-room Brighten Garden assisted living center and a 273-space parking garage on Bigelow Boulevard.

Total cost: \$42 million

Aliquippa Terrace - The conversion of the former Terrace Village public housing community into a mixed-income development to contain 1,227 townhouses and apartments.

Total cost: \$109 million

Riverfront Development

Station Square-Bessemer Court - The expansion of mixed use Station Square property including the development of a Hard Rock Café.

Total cost: \$71 million.

South Shore Place - The construction by Signature Homes of 120 townhouses located on the Monongahela River between South 17th and South 19th Streets.

Total cost: \$21.4 million

North Shore Parking Garage - The construction of a 900-car parking garage serving new North Shore development.

Total cost: \$7.8 million.

Heinz Field and PNC Park - The construction completion of 68,000 seat stadium for the Pittsburgh Steelers and construction completion of 38,000 seat ballpark for the Pittsburgh Pirates.

Total cost: \$540 million.

Building Activity

The Table D-1 below sets forth the number and dollar value of residential and commercial building permits issued in the City in the years 1990 – 2002:

**TABLE D-1
CITY OF PITTSBURGH
NUMBER AND VALUE OF BUILDING PERMITS, 1990 - 2002**

<u>Year</u>	<u>Number of Permits Issued</u>	<u>Dollar Value (In thousands)</u>
1990	3,099	140,748
1991	3,500	146,969
1992	3,368	213,314
1993	3,363	212,451
1994	3,148	201,982
1995	3,019	158,575
1996	2,793	250,315
1997	2,490	193,471
1998	2,405	388,570
1999	2,271	414,860
2000	2,283	827,765
2001	2,239	531,731
2002	2,216	344,223

Source: City of Pittsburgh, Bureau of Building Inspection

**TABLE D-2
CITY OF PITTSBURGH
25 LARGEST PITTSBURGH AREA EMPLOYERS - 2001**

	<u>No. of Employees</u>
UPMC Health System.....	24,500
United States Government	20,400
Commonwealth of Pennsylvania	15,900
US Airways, Inc.....	12,194
West Penn Allegheny Health System (1).....	9,036
University of Pittsburgh	8,732
Mellon Bank Financial Corp.....	8,404
PNC Financial Services Group, Inc.	6,959
Allegheny County	6,695
USX Corporation	6,300
Eat' N Park Restaurants, Inc.....	5,195
Pittsburgh Board of Education	5,160
Highmark Blue Cross and Blue Shield	4,826
Giant Eagle, Inc.	4,641
Allegheny Technologies, Inc.	4,600
Verizon Communications, Inc.	4,450
City of Pittsburgh.....	4,156
Wal-Mart Stores, Inc.....	4,000
PPG Industries	3,600
AT&T Corporation	3,500
Carnegie Mellon University.....	3,309
Port Authority of Allegheny County.....	3,204
Sony Technology Center – Pittsburgh	3,200
Pittsburgh Mercy Health System	2,870
Heritage Valley Health Systems	2,809

Source: Pittsburgh Business Times

Notes: (1) Figure represents a combined West Penn Health Care System, Allegheny General Hospital and Allegheny University Medical Centers.

**TABLE D-3
CITY OF PITTSBURGH
ESTIMATED NUMBER OF JOBS IN THE CITY
1989 – 2001**

1989.....	307,200
1990.....	319,600
1991.....	327,600
1992.....	318,404
1993.....	314,758
1994.....	314,525
1995.....	311,101
1996.....	310,000
1997.....	305,427
1998.....	319,004
1999.....	323,600
2000.....	325,318
2001.....	310,950

Source: City of Pittsburgh Tax Files. Estimated based on Occupational Privilege Tax Receipts.

**TABLE D-4
RESIDENT CIVILIAN LABOR FORCE DATA
CITY, PITTSBURGH MSA, COMMONWEALTH, U.S.
1996 - 2001**

	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>
<u>Labor Force</u>						
City of Pittsburgh	163,700	163,300	161,700	159,400	159,900	160,600
Pittsburgh MSA ⁽¹⁾	1,146,800	1,157,700	1,151,300	1,153,400	1,144,000	1,167,600
Pennsylvania	5,903,000	5,984,000	5,936,300	5,996,000	5,980,000	6,061,000
U.S.	132,450,000	136,297,000	137,673,000	139,368,000	140,893,000	141,912,000
<u>Employment</u>						
City	155,100	155,000	154,200	154,000	153,800	154,600
Pittsburgh MSA ⁽¹⁾	1,089,500	1,100,300	1,098,700	1,103,300	1,100,000	1,118,100
Pennsylvania	5,590,000	5,673,000	5,661,200	5,507,000	5,753,000	5,786,000
U.S.	124,900,000	129,558,000	131,464,000	133,488,000	135,771,000	134,235,000
<u>Unemployed</u>						
City	8,700	8,300	7,500	5,400	6,000	6,000
Pittsburgh MSA ⁽¹⁾	57,300	57,400	52,700	50,100	43,900	49,600
Pennsylvania	313,000	311,000	275,100	262,000	226,000	275,000
U.S.	7,404,000	6,739,000	6,210,000	5,880,000	5,122,000	7,678,000
<u>Unemployment Rate (%)</u>						
City	5.3%	5.1%	4.6%	3.4%	3.8%	3.8%
Pittsburgh MSA ⁽¹⁾	5.0%	5.0%	4.6%	4.3%	3.8%	4.2%
Pennsylvania	5.3%	5.2%	4.6%	4.4%	3.8%	4.5%
U.S.	5.6%	4.9%	4.5%	4.2%	3.6%	5.4%

(1) Includes the counties of Allegheny, Beaver, Butler, Fayette, Washington and Westmoreland.

Source: Pennsylvania Department of Labor and Industry, Bureau of Research and Statistics.

**TABLE D-5
CITY OF PITTSBURGH
COMMERCIAL BANKS
RANKED BY TOTAL ASSETS**

	Total Assets as of <u>September 27, 2001</u>
PNC Bank, N.A.	\$64,698,993,000
Mellon Financial Corp.....	\$38,842,896,000
National City Bank of Pennsylvania.....	\$12,702,125,000
Dollar Bank, FSB	\$3,955,183,000
Great American Federal.....	\$860,875,000
Fidelity Savings Bank.....	\$548,648,000
Northside Bank.....	\$462,928,000
Pittsburgh Savings Bank.....	\$427,026,000

Source: Federal Deposit Insurance Corporation, www.fdic.gov

Education

Colleges and Universities

The major colleges and universities located in the Pittsburgh area are shown in Table D-6.

The enrollment figures below are as of August 24, 2001

**TABLE D-6
TEN LARGEST PITTSBURGH AREA
COLLEGES AND UNIVERSITIES**

	<u>Undergraduate Enrollment</u>	
	<u>full-time</u>	<u>part-time</u>
University of Pittsburgh (main campus).....	14,929	2,495
Community College of Allegheny County (all campuses).....	11,923	30,877
Indiana University of Pennsylvania.....	10,973	762
Slippery Rock University	5,726	568
Clarion University of Pennsylvania.....	5,215	472
Duquesne University	5,021	478
Carnegie Mellon University	5,000	DND*
California University of Pennsylvania.....	4,413	591
Penn State Altoona	3,349	416
University of Pittsburgh at Johnstown.....	2,703	301

Source: Pittsburgh Business Times

*DND – Did not disclose.

Vocational-Technical Schools

In addition, vocational-technical schools in the area provide a broad array of training in a variety of fields. Vocational-technical training is offered by both proprietary schools and by the public school systems. There are approximately 20 proprietary vocational schools and approximately 12 public vocational schools in the City and surrounding areas.

TRANSPORTATION

Air Transportation

Pittsburgh International Airport ("PIA") serves the tri-state region of western Pennsylvania, eastern Ohio and northern West Virginia and is located in the County, approximately 17 miles west of the City of Pittsburgh on the Southern Expressway. The primary airport service region is considered to be Allegheny County, Armstrong County, Beaver County, Butler County, Washington County and Westmoreland County.

The state-of-the-art user friendly terminal complex located between the runways opened October 1, 1992, replacing the 40-year old Main Terminal Building. It has 75 jet gates and 25 commuter gates. Built with the latest technologies and designed for incremental expansion to meet forecasted growth, the entire complex is able to expand with relative ease.

Passenger conveniences include an underground people mover system, moving walkways, easy-to-read signs and direct access to 17,420 parking spaces and rental car facilities. The X-shaped airside terminal allows connecting passengers access to all 75 jet gates without changing levels or terminals.

PIA was one of the first airports in the country to adopt a shopping mall-type approach for its various retail activities. In general, the airport attempts to provide the atmosphere and selection of a shopping mall, including various brand-name outlets, while maintaining "street" pricing.

The trend in passenger volume at PIA from 1989 through 2001 is set forth in Table D-7 below.

**TABLE D-7
CITY OF PITTSBURGH
PASSENGER VOLUME TREND
PITTSBURGH INTERNATIONAL AIRPORT**

Passenger Enplanements							
Year	Scheduled Domestic Airlines ⁽¹⁾	Foreign Flag Airlines	Computer/ Regional Carriers	Non- Scheduled	Total	Percent increase (decrease)	Annual aircraft Landings ⁽²⁾
1989	7,949,333	55,137	529,485	45,297	8,579,252	(4.8%)	162,806
1990	7,908,215	52,203	574,039	53,971	8,588,428	0.1%	167,514
1991	7,680,202	38,947	601,799	60,006	8,380,954	(2.4%)	168,422
1992	8,546,535	39,696	738,569	73,419	9,398,219	12.1%	188,751
1993	8,331,309	39,744	783,909	86,514	9,241,476	(1.7%)	179,727
1994	8,800,926	50,987	803,586	92,435	9,747,934	5.5%	189,035
1995	8,929,085	59,890	915,190	99,178	10,003,343	2.6%	188,015
1996	8,974,053	63,060	1,141,442	88,320	10,266,875	2.6%	189,685
1997	8,963,748	57,142	1,276,412	75,974	10,373,276	1.0%	200,075
1998	8,645,661	69,844	1,478,671	75,536	10,269,712	(1.0%)	197,496
1999	7,707,274	65,403	1,519,141	96,731	9,388,549	(8.6%)	192,647
2000	8,312,296	24,697	1,484,849	78,119	9,899,961	5.4%	197,364
2001	8,141,519	16,790	1,739,099	70,622	9,968,030	0.7%	202,067

(1) Major and national air carriers as classified by the U.S. Department of Transportation ("DOT"). The DOT classifies a "major" air carrier as one with annual operating revenues of greater than \$1 billion and a "national" air carrier as one with annual operating revenues between \$100 million and \$1 billion.

(2) 1989-1996 figures represent landings reported for Signatory Airlines only.

Source: Allegheny County Airport Authority.

Air Service at the Airport

The Airport is currently served by the scheduled passenger flights of eight scheduled domestic airlines, eleven commuter airlines and one foreign flag airline. According to the December 2001 edition of the Official Airline Guide, such airlines provide over 567 flights per day to over 111 cities. The Airport is also served by seven all-cargo carriers and by various charter airlines. The airlines serving the Airport other than the charter airlines, are listed below.

Scheduled Domestic Airlines

American Airlines ⁽¹⁾
 Continental Airlines ⁽¹⁾
 Delta Air Lines ⁽¹⁾
 Northwest Airlines ⁽¹⁾
 United Airlines ⁽¹⁾
 US Airways ⁽¹⁾
 Vanguard Airlines
 AirTran ⁽⁴⁾

Commuter/Regional Airlines

US Airways Express ⁽²⁾
 Air Midwest ⁽¹⁾
 Allegheny Airlines ⁽¹⁾
 Chautauqua Airlines ⁽¹⁾
 Colgan Air ⁽¹⁾
 Mesa Airlines ⁽¹⁾
 Piedmont Airlines ⁽¹⁾
 Potomac Air
 PSA Airlines ⁽¹⁾
 Trans States Airlines ⁽¹⁾
 American Eagle
 Comair (Delta Connection)
 Continental Express
 Mesaba Airlines (Northwest-Airlink)
 Skyway Airlines
 United Express
 Atlantic Southeast (Delta Connection) ⁽⁵⁾
 Express 1 (Northwest Airlink) ⁽³⁾

Foreign Flag Airlines

Air Canada

Cargo Carriers

Airborne Express
 Federal Express
 Pioneer Air Cargo
 United Parcel Service
 Wiggins Airways
 Air Ta_ma
 Ameriflight

⁽¹⁾ Signatory to an Airline Operating Agreement.

⁽²⁾ All of the US Airways Express commuter airlines are affiliated with US Airways. Allegheny Airlines, Piedmont Airlines and PSA Airlines are wholly owned subsidiaries of the US Airways Group, Inc., the parent of US Airways, Inc.

⁽³⁾ Effective October 29, 2000.

⁽⁴⁾ Effective December 12, 2000.

⁽⁵⁾ Effective March 1, 2001.

Source: Allegheny County Airport Authority.

The Allegheny County Airport, located approximately nine miles southeast of downtown Pittsburgh, serves as the FAA designated reliever airport for PIA. A number of private aircraft, including corporate jets, are based at the Allegheny County Airport. There is no scheduled commercial air service at the Allegheny County Airport.

Water Transportation

The Port of Pittsburgh marks the origin of the 9,000-mile inland waterway system which reaches markets in 24 states as far south as New Orleans and as far west as Sioux City. With its three major waterways, the Allegheny, Monongahela and Ohio Rivers, the Port of Pittsburgh is the largest inland port in the United States, moving more than 50 million tons of waterborne cargo each year.

Providing efficient, reliable service, Pittsburgh is the origin or destination of more tons of raw materials than any other inland port in the world. Over 24 for-hire terminals exist within the Port of Pittsburgh specializing in the handling of bulk, break-bulk and project cargo. The port complex is served by Conrail, CSX and the Norfolk Southern railroads, and a number of shortline and switching railroads.

Pittsburgh's southwestern Pennsylvania location is key to interstate shipping. Easily accessible, Pittsburgh is an overnight truck delivery away from half the nation's markets.

Rail Service

Ten percent of the total rail freight in the nation travels through southwestern Pennsylvania. Rail services are available to markets throughout the United States, Canada, and Mexico. On-line trunk railroads serving the SMSA include:

- Amtrak
- CSX
- Norfolk and Southern Railroad

Motor Freight Service

The area is served by over 250 interstate and local trucking firms, 26 freight forwarders, and 81 household goods movers. The City is a strategically located transportation center, with overnight access by motor freight to the major markets of the Northeast and Midwest.

Mass Transit

The Port Authority of Allegheny County (PAT) is the regional transit agency serving the metropolitan area of the City of Pittsburgh, Pennsylvania, is one of the largest public transit operators in the United States and provides public transportation services to nearly 245,000 riders daily and more than 72 million riders annually.

The Pittsburgh area has a strong history of transit use, and the ridership and scale of PAT's operations exceed those of transit systems with service areas of comparable size and population. PAT has a large bus and light-rail fleet and maintains a modern system of exclusive bus roadways. PAT also provides ACCESS, a coordinated, shared-ride paratransit system offering door-to-door, advanced reservation transportation for elderly and handicapped persons.

Passenger Bus Service

Greyhound Bus Lines provides regularly scheduled interstate bus service to the City. The Port Authority of Allegheny County provides local bus and rail service. In addition, a variety of local bus companies provide intrastate, commuting, and charter services.

UTILITIES

Electricity

The City relies primarily upon coal as an energy source and is not heavily dependent upon oil and gas for the production of electricity. Some nuclear energy is used. In the region, the currently installed electric power generation capacity is 80% coal, 15% nuclear and 5% oil, the latter used mostly for peak capacity.

The electric power requirements of residential, commercial and industrial users in the City are provided primarily by the Duquesne Light Company which serves more than 584,000 customers in Allegheny and Beaver Counties. The company completed the sale of its seven power generating facilities to Orion Power Midwest, L.P., a subsidiary of Orion Power Holdings, Inc. in April of 2000. The Company is subject to regulation by the Pennsylvania Public Utilities Commission. However, recent legislation provided for the deregulation of some aspects of the electric utility business.

Natural Gas

The City's suppliers of natural gas are the Equitable Gas Company, Dominion People's Gas Company, and Columbia Gas of Pennsylvania. Together they serve 1,020,000 residential, commercial and industrial customers in Southwestern Pennsylvania and neighboring states.

Water and Sewer

The Pittsburgh Water and Sewer Authority provides water service to the majority of water customers within the City and sewage collection service to the entire City. The climate and river valleys within the City region provide abundant water at reasonable cost.

Sewage treatment service is provided by ALCOSAN. Its service area includes the City, 82 neighboring municipalities in the County and parts of communities in Washington and Westmoreland Counties. ALCOSAN serves an area of 225 square miles with a population of about 1,015,000.

DEMOGRAPHIC DATA

Population

Table D-8 shows the population trends for the City and the County from 1970 to 2000.

**TABLE D-8
POPULATION
1970 - 2000**

	<u>City of Pittsburgh</u>		<u>Allegheny County</u> ⁽¹⁾	
	<u>Population</u>	<u>Percentage Change</u>	<u>Population</u>	<u>Percentage Change</u>
1970	520,089		1,085,044	
1980	423,938	(18.5%)	1,026,147	(5.4%)
1990	369,879	(12.8%)	966,570	(5.8%)
2000	334,563	(9.5%)	947,103	(2.0%)

(1) Population of the County, excluding residents of the City
Source: U. S. Census Bureau.

Housing

Housing in Pittsburgh is very affordable when compared to the nation. According to the U.S. Census, Pittsburgh has the third most affordable housing in the nation.

Detached single family housing continues to dominate residential construction in the County, although in Pittsburgh, apartment and townhouse construction predominates.

Because Pittsburgh was almost completely built up by 1950, more than 75% of the housing stock in the City is over forty years old and 50% is over sixty years old. The housing stock of the City, County, PMSA and Commonwealth is characterized as follows:

**TABLE D-9
CITY, COUNTY, PMSA, AND COMMONWEALTH
CHARACTERISTICS OF HOUSING UNITS COMPARISON**

	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>
Total Housing Units:				
City of Pittsburgh	189,840	179,191	170,159	163,366
County of Allegheny	533,520	570,970	580,738	537,150
Pittsburgh PMSA.....	789,771	874,050	879,811	1,046,094
Pennsylvania.....	3,924,757	4,597,412	4,938,140	5,249,750
Percent Owner-Occupied:				
City of Pittsburgh	50.3%	51.2%	52.3%	52.1%
County of Allegheny	64.8%	61.9%	66.2%	67%
Pittsburgh PMSA.....	67.8%	69.0%	72.6%	71.3%
Pennsylvania.....	68.0%	64.2%	70.6%	71.3%
Median Value of Owner-Occupied Housing:				
City of Pittsburgh	\$12,500	\$31,500	\$41,200	NA
County of Allegheny	16,000	43,300	57,100	NA
Pittsburgh PMSA.....	15,300	42,800	51,800	NA
Pennsylvania.....	13,600	39,100	69,700	NA
Number of Persons per Housing Unit:				
City of Pittsburgh	2.8	2.4	2.5	NA
Total County Housing Units:				
Percent of City of Pittsburgh	35.5%	31.4%	29.3%	NA

Source: U. S. Census of Housing

***NA items are not currently available at this time.**

From 1960 to 1990 the number of housing units in the County increased by 15.5%, while the number of housing units in the City decreased by 9.7%. Over the same period, the number of persons per housing unit in the City decreased 19% and the population declined by 27.1%

TABLE D-10
COUNTY OF ALLEGHENY
AVERAGE SALE PRICE OF RESIDENTIAL PROPERTY
1985 TO 2002
(MARKET TRANSACTIONS)

<u>Year</u>	<u>Average</u>
1985	\$ 65,052
1986	69,002
1987	74,298
1988	78,609
1989	82,247
1990	88,623
1991	99,818
1992	102,742
1993	105,538
1994	105,399
1995	105,515
1996	106,785
1997	111,831
1998	116,064
1999	124,716
2000.....	125,525
2001.....	129,525
2002.....	134,463

Source: City of Pittsburgh, Department of City Planning
West Penn Multi-List

The Redevelopment Authority provides low-cost home improvement loans to low and moderate-income families utilizing Community Development Block Grant ("CDBG"), HOME, Commonwealth and local funds, and has issued its bonds for this purpose. The Redevelopment Authority also uses CDBG funds to subsidize the interest rate on rehabilitation loans made by private lenders to owners of residential properties and on property rehabilitation loans made by private lenders to businesses in designated neighborhood retail districts. The Redevelopment Authority has functioned as a loan originator under U.S. Department of Housing and Urban Development programs in which capacity the Redevelopment Authority contracts with HUD to originate twenty-year housing rehabilitation loans or rehabilitation grants funded by HUD.

The Redevelopment Authority currently has in various stages of execution redevelopment projects funded in part by the federal government, the Commonwealth and the City.

Income

The data in Table D-11 shows the trend in per capita income for the Pittsburgh PMSA, Allegheny County and Commonwealth.

**TABLE D-11
PITTSBURGH PMSA, COUNTY AND COMMONWEALTH
PER CAPITA INCOME**

	<u>1978</u>	<u>1988</u>	<u>1999</u>	<u>% Change 1978 - 1998</u>
Pittsburgh PMSA.....	\$8,601	\$17,201	\$29,587	+63.6%
Allegheny County.....	9,265	19,127	33,474	+65.6%
Pennsylvania.....	8,305	17,323	27,859	+58.6%

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APPENDIX E

FORM OF OPINION OF BOND COUNSEL

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APPENDIX E
[FORM OF BOND COUNSEL OPINION]

September ____, 2003

The Pittsburgh Water and Sewer Authority
441 Smithfield Street, Third Floor
Pittsburgh, PA 15222

Re: \$167,390,000 The Pittsburgh Water and Sewer
 Authority Water and Sewer System Revenue Refunding
 Bonds, Series of 2003

Ladies and Gentlemen:

We have served as Bond Counsel to The Pittsburgh Water and Sewer Authority (the “Authority”) in connection with the issuance by the Authority of \$\$167,390,000 principal amount of its Water and Sewer System Revenue Refunding Bonds, Series of 2003 (the “Bonds”) pursuant to the provisions of the Pennsylvania Municipality Authorities Act, 53 Pennsylvania Consolidated Statutes Annotated § 5601 *et. seq.* (the “Act”). The Bonds are being issued under a Trust Indenture dated as of October 15, 1993, as amended and supplemented by a First Supplemental Indenture dated as of July 15, 1995, a Second Supplemental Indenture dated as of March 1, 1998, a Third Supplemental Indenture dated as of March 1, 2002, and a Fourth Supplemental Indenture dated as of September 15, 2003 (the “Indenture”), between the Authority and J. P. Morgan Trust Company, National Association, successor trustee by merger to Chase Manhattan Trust Company, National Association, successor trustee to PNC Bank, National Association, as Trustee (the “Trustee”), for the purpose of (i) providing funds to currently refund the Authority’s Water and Sewer System Revenue Refunding Bonds, Series A of 1993, maturing September 1, 2004 through September 1, 2010 and September 1, 2016 and its Water and Sewer System Revenue Bonds, Series B of 1993 (the “Refunding Project”) and (ii) paying certain costs of issuance of the Bonds.

In our capacity as Bond Counsel, we have examined applicable sections of the Internal Revenue Code of 1986, as amended (the “Code”), and the regulations promulgated thereunder, the Act and such documents, certificates, opinions and other instruments as we have deemed necessary to enable us to express the opinions set forth below, including original counterparts or certified copies of the Indenture and the Tax Regulatory Certificate of the Authority.

In the examination of such documents, we have assumed the genuineness of all signatures and the authenticity of all documents submitted to us as originals and the conformity to the original documents submitted to us as certified or photostatic copies, and we have relied upon the aforesaid documents with respect to the accuracy of material factual matters contained therein.

Based on such examination and the certifications and representations of fact contained in the proceedings relating to the issuance of the Bonds, we are of the opinion, as of the date hereof and under existing law, as follows:

1. The Authority is a public instrumentality of the Commonwealth of Pennsylvania (the “Commonwealth”) and a body corporate and politic, organized and existing under Pennsylvania law, with full power and authority under the Act to undertake the financing of the Refunding Project, to execute, deliver and perform its obligations under the Indenture, and to issue and sell the Bonds.

2. The Indenture has been duly authorized, executed and delivered by the Authority and, assuming due authorization, execution and delivery by the Trustee, constitutes the legal, valid and binding obligation of the Authority enforceable in accordance with its terms, except as enforcement may be limited by bankruptcy, insolvency, reorganization, moratorium or other laws or equitable principles affecting the enforcement of creditors’ rights, and enforcement may also be subject to the exercise of judicial discretion in appropriate cases.

3. The issuance and sale of the Bonds have been duly authorized by the Authority and the Bonds are legal, valid and binding obligations of the Authority enforceable in accordance with their terms, except as the rights created thereunder and enforcement may be limited by bankruptcy, insolvency, reorganization, moratorium or other laws or equitable principles affecting the enforcement of creditors’ rights, and enforcement may also be subject to the exercise of judicial discretion in appropriate cases.

4. Under existing law, the interest on and accruals of original issue discount with respect to the Bonds (a) are excluded from gross income for federal income tax purposes and (b) are not items of tax preference within the meaning of Section 57 of the Code, for purposes of the alternative minimum tax imposed by Section 55 of the Code on individuals and corporations; however, with respect to corporations (as defined for federal income tax purposes), such interest and accruals are taken into account in determining adjusted current earnings for the purpose of computing the alternative minimum tax imposed by Section 55 of the Code on such corporations. Accruals of the original issue discount with respect to a Bond allocable to an owner of a Bond under a constant yield method of accrual (a) are not included in gross income for federal income tax purposes, and (b) are added to such owner’s tax basis in the Bond for the purpose of determining gain or loss for federal income tax purposes upon sale, exchange, redemption or other disposition of the Bond. The opinions set forth in the preceding two sentences are subject to the condition that the Authority comply with all the requirements of the Code that must be satisfied subsequent to the issuance of the Bonds in order that interest on and accruals of original issue discount with respect to the Bonds be (or continue to be) excluded from gross income for federal income tax purposes. Failure to comply with such requirements could cause the interest on and accruals of original issue discount with respect to the Bonds to be included in gross income retroactively to the date of issuance of the Bonds. The Authority has covenanted to comply with all such requirements.

5. Under the laws of the Commonwealth as enacted and construed on the date hereof, interest on the Bonds is exempt from Pennsylvania personal income tax and corporate net income tax, and the Bonds are exempt from personal property taxes in Pennsylvania.

Ownership of the Bonds may result in collateral federal income tax consequences to certain taxpayers, including, without limitation, financial institutions, property and casualty insurance companies, individual recipients of social security or railroad retirement benefits, certain S corporations with “excess net passive income” and taxpayers who may be deemed to have incurred or continued indebtedness to purchase or carry the Bonds. We express no opinion as to such collateral income tax consequences. Prospective purchasers of the Bonds should consult their own tax advisors as to such consequences.

We express no opinion with respect to the adequacy or accuracy of any offering document or other information pertaining to the offering or sale of the Bonds. No opinion may be inferred or implied beyond the matters expressly stated herein, and our opinions expressed herein must be read in conjunction with the assumptions, limitations, exceptions and qualifications set forth herein. The law covered by the opinions expressed herein is limited to the laws of the Commonwealth and the federal law of the United States of America.

We undertake no responsibility to supplement or update our opinions to inform any person of events or actions occurring or taken (or not occurring or not taken) subsequent to the date hereof, including but not limited to those which may affect the tax status of the Bonds.

We call your attention to the fact that the Bonds do not pledge the credit or taxing power of the City of Pittsburgh or the Commonwealth of Pennsylvania or any political subdivision thereof. The Authority has no taxing power.

Very truly yours,

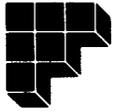
KLETT ROONEY LIEBER & SCHORLING,
a Professional Corporation

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APPENDIX F

FORM OF MUNICIPAL BOND INSURANCE POLICY

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**FINANCIAL
SECURITY
ASSURANCE®**

MUNICIPAL BOND INSURANCE POLICY

ISSUER:

Policy No.: -N

BONDS:

Effective Date:

Premium:

FINANCIAL SECURITY ASSURANCE INC. ("Financial Security"), for consideration received, hereby UNCONDITIONALLY AND IRREVOCABLY agrees to pay to the trustee (the "Trustee") or paying agent (the "Paying Agent") (as set forth in the documentation providing for the issuance of and securing the Bonds) for the Bonds, for the benefit of the Owners or, at the election of Financial Security, directly to each Owner, subject only to the terms of this Policy (which includes each endorsement hereto), that portion of the principal of and interest on the Bonds that shall become Due for Payment but shall be unpaid by reason of Nonpayment by the Issuer.

On the later of the day on which such principal and interest becomes Due for Payment or the Business Day next following the Business Day on which Financial Security shall have received Notice of Nonpayment, Financial Security will disburse to or for the benefit of each Owner of a Bond the face amount of principal of and interest on the Bond that is then Due for Payment but is then unpaid by reason of Nonpayment by the Issuer, but only upon receipt by Financial Security, in a form reasonably satisfactory to it, of (a) evidence of the Owner's right to receive payment of the principal or interest then Due for Payment and (b) evidence, including any appropriate instruments of assignment, that all of the Owner's rights with respect to payment of such principal or interest that is Due for Payment shall thereupon vest in Financial Security. A Notice of Nonpayment will be deemed received on a given Business Day if it is received prior to 1:00 p.m. (New York time) on such Business Day; otherwise it will be deemed received on the next Business Day. If any Notice of Nonpayment received by Financial Security is incomplete, it shall be deemed not to have been received by Financial Security for purposes of the preceding sentence and Financial Security shall promptly so advise the Trustee, Paying Agent or Owner, as appropriate, who may submit an amended Notice of Nonpayment. Upon disbursement in respect of a Bond, Financial Security shall become the owner of the Bond, any appurtenant coupon to the Bond or right to receipt of payment of principal of or interest on the Bond and shall be fully subrogated to the rights of the Owner, including the Owner's right to receive payments under the Bond, to the extent of any payment by Financial Security hereunder. Payment by Financial Security to the Trustee or Paying Agent for the benefit of the Owners shall, to the extent thereof, discharge the obligation of Financial Security under this Policy.

Except to the extent expressly modified by an endorsement hereto, the following terms shall have the meanings specified for all purposes of this Policy. "Business Day" means any day other than (a) a Saturday or Sunday or (b) a day on which banking institutions in the State of New York or the Insurer's Fiscal Agent are authorized or required by law or executive order to remain closed. "Due for Payment" means (a) when referring to the principal of a Bond, payable on the stated maturity date thereof or the date on which the same shall have been duly called for mandatory sinking fund redemption and does not refer to any earlier date on which payment is due by reason of call for redemption (other than by mandatory sinking fund redemption), acceleration or other advancement of maturity unless Financial Security shall elect, in its sole discretion, to pay such principal due upon such acceleration together with any accrued interest to the date of acceleration and (b) when referring to interest on a Bond, payable on the stated date for payment of interest. "Nonpayment" means, in respect of a Bond, the failure of the Issuer to have provided sufficient funds to the Trustee or, if there is no Trustee, to the Paying Agent for payment in full of all principal and interest that is Due for Payment on such Bond. "Nonpayment" shall also include, in respect of a Bond, any payment of principal or interest that is Due for Payment made to an Owner by or on behalf of the Issuer which has been recovered from such Owner pursuant to the

United States Bankruptcy Code by a trustee in bankruptcy in accordance with a final, nonappealable order of a court having competent jurisdiction. "Notice" means telephonic or telecopied notice, subsequently confirmed in a signed writing, or written notice by registered or certified mail, from an Owner, the Trustee or the Paying Agent to Financial Security which notice shall specify (a) the person or entity making the claim, (b) the Policy Number, (c) the claimed amount and (d) the date such claimed amount became Due for Payment. "Owner" means, in respect of a Bond, the person or entity who, at the time of Nonpayment, is entitled under the terms of such Bond to payment thereof, except that "Owner" shall not include the Issuer or any person or entity whose direct or indirect obligation constitutes the underlying security for the Bonds.

Financial Security may appoint a fiscal agent (the "Insurer's Fiscal Agent") for purposes of this Policy by giving written notice to the Trustee and the Paying Agent specifying the name and notice address of the Insurer's Fiscal Agent. From and after the date of receipt of such notice by the Trustee and the Paying Agent, (a) copies of all notices required to be delivered to Financial Security pursuant to this Policy shall be simultaneously delivered to the Insurer's Fiscal Agent and to Financial Security and shall not be deemed received until received by both and (b) all payments required to be made by Financial Security under this Policy may be made directly by Financial Security or by the Insurer's Fiscal Agent on behalf of Financial Security. The Insurer's Fiscal Agent is the agent of Financial Security only and the Insurer's Fiscal Agent shall in no event be liable to any Owner for any act of the Insurer's Fiscal Agent or any failure of Financial Security to deposit or cause to be deposited sufficient funds to make payments due under this Policy.

To the fullest extent permitted by applicable law, Financial Security agrees not to assert, and hereby waives, only for the benefit of each Owner, all rights (whether by counterclaim, setoff or otherwise) and defenses (including, without limitation, the defense of fraud, whether acquired by subrogation, assignment or otherwise, to the extent that such rights and defenses may be available to Financial Security to avoid payment of its obligations under this Policy in accordance with the express provisions of this Policy.

This Policy sets forth in full the undertaking of Financial Security, and shall not be modified, altered or affected by any other agreement or instrument, including any modification or amendment thereto. Except to the extent expressly modified by an endorsement hereto, (a) any premium paid in respect of this Policy is nonrefundable for any reason whatsoever, including payment, or provision being made for payment, of the Bonds prior to maturity and (b) this Policy may not be canceled or revoked. THIS POLICY IS NOT COVERED BY THE PROPERTY CASUALTY INSURANCE SECURITY FUND SPECIFIED IN ARTICLE 76 OF THE NEW YORK INSURANCE LAW.

In witness whereof, FINANCIAL SECURITY ASSURANCE INC. has caused this Policy to be executed on its behalf by its Authorized Officer.

[Countersignature]

FINANCIAL SECURITY ASSURANCE INC.

By _____

By _____
Authorized Officer

A subsidiary of Financial Security Assurance Holdings Ltd.
350 Park Avenue, New York, N.Y. 10022-6022

(212) 826-0100

Form 500NY (5/90)