DAC Bond

REOFFERING CIRCULAR Book-Entry Only **RATINGS: See "Ratings of the Reoffered Bonds" herein**

At the time of original issuance and delivery of the Reoffered Bonds, Bond Counsel delivered its opinion (the "Original Opinion") to the effect that, as of the date of issuance of the Reoffered Bonds, under then existing law, and assuming compliance with certain requirements of the Internal Revenue Code of 1986, as amended (the "Code") and covenants regarding the use, expenditure and investment of proceeds of the Reoffered Bonds, interest on the Reoffered Bonds would be excluded from gross interest of the owners of the Reoffered Bonds for federal income tax purposes. The Original Opinion has not been updated or reissued in connection with the remarketing of the Reoffered Bonds. On September 1, 2010, Bond Counsel will deliver an opinion to the effect that the remarketing of the Reoffered Bonds will not in and of itself adversely affect the exclusion of interest on the Reoffered Bonds from gross income for purposes of federal income taxation. Bond Counsel will not express an opinion regarding the current status of such interest for federal income tax purposes. See "Tax Matters" herein.

$25,000,000

THE PITTSBURGH WATER AND SEWER AUTHORITY

$10,000,000 Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1A of 2008 (Term Mode)
(CUSIP 725304 RH4) Price: 100% Term Rate: 0.45%

$10,000,000 Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1B of 2008 (Term Mode)
(CUSIP 725304 RJ0) Price: 100% Term Rate: 0.45%

$5,000,000 Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1C of 2008 (Term Mode)
(CUSIP 725304 RK7) Price: 100% Term Rate: 0.45%

Dated: Date of Original Issuance Mandatory Tender Date: September 1, 2011 Due: September 1, 2035

The Pittsburgh Water and Sewer Authority (the "Authority" or "PWSA") is reoffering its (Variable Rate Demand) Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1 of 2008 (Term Mode) (the "Series 2008C-1 Bonds"). A portion of the Series 2008C-1 Bonds will be reoffered in three sub-series consisting of $10,000,000 Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1A of 2008 (Term Mode) (the "Series 2008C-1A Bonds"), $10,000,000 Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1B of 2008 (Term Mode) (the "Series 2008C-1B Bonds") and $5,000,000 Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1C of 2008 (Term Mode) (the "Series 2008C-1C Bonds" and together with the Series 2008C-1A Bonds and the Series 2008C-1B Bonds, the "Reoffered Bonds"). **See "REMARKETING PLAN."**

The Reoffered Bonds are dated as of the date of the original issuance, June 12, 2008 ("Date of Original Issuance") and were originally issued pursuant to the Subordinate Trust Indenture, dated as of July 15, 1995, as amended and supplemented (the "Subordinate Indenture"), by and between the Authority and The Bank of New York Mellon Trust Company, N.A., as Trustee (in such capacity, the "Trustee"). The Reoffered Bonds will be issued in book-entry form registered in the name of Cede & Co., the nominee of The Depository Trust Company, New York, New York ("DTC"). The payment of the principal of and premium, if any, and interest on the Reoffered Bonds will be made by the Trustee directly to Cede & Co., as nominee for DTC, a registered owner of the Reoffered Bonds, to be subsequently disbursed to DTC Participants and thereafter to beneficial owners of the Reoffered Bonds, all as described herein. Purchasers of the Reoffered Bonds will not receive physical delivery of certificates representing their ownership interest in the Reoffered Bonds. See "BOOK-ENTRY ONLY SYSTEM". The Reoffered Bonds will initially be issued in fully registered form in minimum denominations of $5,000.

The Reoffered Bonds will be reoffered in the Term Mode and are subject to mandatory tender on September 1, 2011 (the "Term Mode Date"). The Reoffered Bonds will bear interest at the applicable Term Rates established by the Remarketing Agent, payable on March 1, 2011 and on each September 1 and March 1 thereafter. This Reoffering Circular describes the terms and provisions of the Reoffered Bonds while in the Term Mode only.

The Reoffered Bonds are limited obligations of the Authority payable from the Receipts and Revenues (as defined in the Subordinate Indenture) pledged thereto and subordinate to the pledge thereon securing the First Lien Bonds issued pursuant to the provisions of the First Lien Indenture, as described herein and on a parity with the other Subordinate Bonds issued pursuant to the provisions of the Subordinate Indenture, as described herein.

Each sub-series of Reoffered Bonds as specified below is also payable from funds drawn by the Trustee under separate irrevocable direct pay letters of credit (collectively, the "Letters of Credit") issued by:

NORTHWEST SAVINGS BANK	**ESB BANK**	**WASHINGTON FINANCIAL BANK** *(formerly Washington Federal Savings Bank)*
(Series 2008C-1A Bonds)	(Series 2008C-1B Bonds)	(Series 2008C-1C Bonds)

The Letters of Credit will each be confirmed by irrevocable confirming letters of credit (the "Confirming Letters of Credit") issued by

FEDERAL HOME LOAN BANK OF PITTSBURGH

The Letters of Credit and the Confirming Letters of Credit will expire on November 9, 2011.

The scheduled payment of principal of and interest on the Reoffered Bonds when due is guaranteed under a municipal bond insurance policy originally delivered on June 12, 2008 by ASSURED GUARANTY MUNICIPAL CORP. (FORMERLY KNOWN AS FINANCIAL SECURITY ASSURANCE INC.) See "BOND INSURANCE".

ASSURED GUARANTY MUNICIPAL

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

The Reoffered Bonds are reoffered subject to the receipt of the approving legal opinion of Pepper Hamilton LLP, Bond Counsel. Certain legal matters will be passed upon for the Authority by Thorp, Reed & Armstrong, LLP. The Authority expects that delivery of the Reoffered Bonds in definitive form will be made in New York, New York, on or about September 1, 2010.

BOENNING & SCATTERGOOD, INC.

Dated: August 27, 2010

THE PITTSBURGH WATER AND SEWER AUTHORITY
Dan Deasy, Chairman
Robert P. Jablonowski, Vice Chairman
Scott Kunka, Treasurer
Henry C. Blum, Secretary
Margaret L. Lanier, Assistant Secretary/Assistant Treasurer
Patrick Dowd, Member

Michael P. Kenney, Executive Director

AUTHORITY COUNSEL
Thorp, Reed & Armstrong, LLP
Pittsburgh, Pennsylvania

AUTHORITY CONSULTING ENGINEER
Chester Engineers
Pittsburgh, Pennsylvania

FINANCIAL ADVISOR
PNC Capital Markets LLC
Pittsburgh, Pennsylvania

BOND COUNSEL
Pepper Hamilton LLP
Pittsburgh, Pennsylvania

REMARKETING AGENT
Boenning & Scattergood, Inc.
Pittsburgh, Pennsylvania

TRUSTEE AND PAYING AGENT
The Bank of New York Mellon Trust Company, N.A.
Pittsburgh, Pennsylvania

LETTER OF CREDIT PROVIDERS

For the Series 2008C-1A Bonds:	For the Series 2008C-1B Bonds:	For the Series 2008C-1C Bonds:
Northwest Savings Bank	ESB Bank	Washington Financial Bank *(Formerly Washington Federal Savings Bank)*

COUNSEL TO LETTER OF CREDIT PROVIDERS
Cohen & Grigsby, P.C.
Pittsburgh, Pennsylvania

CONFIRMING LETTER OF CREDIT PROVIDER
Federal Home Loan Bank of Pittsburgh

BOND INSURER
Assured Guaranty Municipal Corp. (formerly known as "Financial Security Assurance Inc.")

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 Reoffered Bonds or the matters described herein, other than those contained in this Reoffering Circular, 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 Reoffering Circular does not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of the Reoffered 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 Reoffering Circular is not to be construed as a contract or agreement between the Authority and the purchasers or holders of any of the Reoffered Bonds. Any statements made in this Reoffering Circular involving matters of opinion, whether or not expressly so stated, are intended merely as opinion and not as representations of fact. The order and placement of materials in this Reoffering Circular, including the Appendices, are not to be deemed to be a determination of relevance, materiality or importance, and this Reoffering Circular, including the Appendices, must be considered in its entirety.

The Authority has deemed this Reoffering Circular to be final for the purposes of Securities and Exchange Commission Rule 15c2-12(b)(3) promulgated under the Securities Exchange Act.

Assured Guaranty Municipal Corp. (formerly known as Financial Security Assurance Inc.) ("AGM") makes no representation regarding the Reoffered Bonds or the advisability of investing in the Reoffered Bonds. In addition, AGM has not independently verified, makes no representation regarding, and does not accept any responsibility for the accuracy or completeness of this Reoffering Circular or any information or disclosure contained herein, or omitted herefrom, other than with respect to the accuracy of the information regarding AGM supplied by AGM and presented under the heading "Bond Insurance" and "Appendix F –Form of Municipal Bond Insurance Policy."

The Remarketing Agent has reviewed the information in this Reoffering Circular in accordance with, and as a part of, its responsibilities to investors under federal securities law, as applied to the facts and circumstances of this transaction, but the Remarketing Agent does not guarantee the accuracy or completeness of such information.

THE REOFFERED BONDS HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, NOR HAS THE SUBORDINATE INDENTURE BEEN QUALIFIED UNDER THE TRUST INDENTURE ACT OF 1939, IN RELIANCE UPON EXEMPTIONS CONTAINED IN SUCH ACTS. THE REGISTRATION OR QUALIFICATION OF THE REOFFERED BONDS IN ACCORDANCE WITH APPLICABLE PROVISIONS OF THE SECURITIES LAWS OF THE STATES, IF ANY, IN WHICH THE REOFFERED 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 REOFFERED BONDS OR THE ACCURACY OR COMPLETENESS OF THIS REOFFERING CIRCULAR. 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 REOFFERING CIRCULAR AND OFFERING OF THE REOFFERED BONDS TO THE POTENTIAL PURCHASERS IS MADE ONLY BY MEANS OF THIS REOFFERING CIRCULAR. NO PERSON IS AUTHORIZED TO DETACH THIS SUMMARY FROM THE REOFFERING CIRCULAR OR OTHERWISE TO USE THE SAME WITHOUT THE ENTIRE REOFFERING CIRCULAR.

Authority.....	The Pittsburgh Water and Sewer Authority (the "Authority" or "PWSA").
Reoffered Term Mode Bonds.....	$10,000,000 Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1A of 2008 $10,000,000 Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1B of 2008 $5,000,000 Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1C of 2008
Date of Bonds	Date of Original Issuance
Denomination	$5,000 and integral multiples of $5,000 in excess thereof.
Maturity	September 1, 2035.
Interest	Payable on March 1, 2011 and each September 1 and March 1 thereafter.
Security.....	The Reoffered Bonds are secured (along with all other bonds issued pursuant to the Subordinate Indenture, certain Periodic Payments due under Qualified Interest Rate Swap Agreements and obligations due under the Reimbursement Agreements (as defined herein)) by a subordinate lien on the Receipts and Revenues of the Authority after payment of the Current Expenses, payment of principal and interest or the First Lien Bonds (as defined herein), and the function of certain reserves together with certain funds held by the Trustee under the Subordinate Indenture as provided therein. (See "SECURITY FOR THE REOFFERED BONDS – Pledge of Subordinate Receipts and Revenues" herein.)
Letters of Credit.....	Concurrently with the remarketing of the Reoffered Bonds on November 10, 2009, the Authority caused to be delivered to the Trustee the Series 2008C-1A Letter of Credit, the Series 2008C-1B Letter of Credit and the Series 2008C-1C Letter of Credit as described herein. The Trustee will be entitled under each respective Letter of Credit to (a) draw up to the principal amount of the applicable sub-series of Reoffered Bonds to enable the Trustee to pay the principal amount of such sub-series of Reoffered Bonds when due by reason of maturity, redemption or acceleration, plus (b) an amount equal to interest on the applicable sub-series of Reoffered Bonds for up to 195 days (computed at the Maximum Interest Rate), for payment of interest on the Reoffered Bonds when due, or to pay the Purchase Price of such sub-series of Reoffered Bonds tendered to it and, if applicable, not remarketed by the Remarketing Agent. (See "LETTERS OF CREDIT").
Confirming Letters of Credit.....	Concurrently with the remarketing of the Reoffered Bonds on November 10, 2009, the Authority caused the Confirming Letters of Credit to be delivered to the Trustee. If any of the Letter of Credit Banks fail to honor a properly presented draw on, or repudiates, the Letters of Credit, the Trustee will be entitled to draw under the Confirming Letters of Credit in an aggregate amount of $26,625,000.00 which consists of (a) up to $25,000,000 which amount equals the principal amount of the Reoffered Bonds, in order to pay the principal on the Reoffered Bonds when due or upon redemption or acceleration or to pay the portion of the purchase price thereof corresponding to the principal amount under certain tenders to Holders, plus (b) $1,625,000.00 initially, and for so long as the Reoffered Bonds bear interest in the Term Mode Rate which amount will not exceed 195 days' interest on the principal amount of the Reoffered Bonds computed at 12% per annum. The Confirming Letters of Credit expire on November 9, 2011, unless earlier terminated or extended pursuant to their terms. (See "SECURITY FOR THE REOFFERED BONDS – Confirming Letters of Credit").
Bond Insurance	The scheduled payment of the principal of and interest on the Reoffered Bonds when due is insured by a municipal insurance policy originally issued on June 12, 2008 by Assured Guaranty Municipal Corp. (formerly known as Financial Security Assurance Inc.) (See "BOND INSURANCE").
Use of Proceeds	The proceeds of the Reoffered Bonds will be used to pay the Purchase Price of the Reoffered Bonds.

Redemption.....	The Reoffered Bonds are subject to mandatory tender on September 1, 2011. (See "THE REOFFERED BONDS — Redemption Prior to Maturity" herein.)
Bond Ratings	The following rating on the Reoffered Bonds are based solely upon the creditworthiness of the Confirming Bank:
	Standard & Poor's: "A-1+"
Trustee & Paying Agent	The Bank of New York Mellon Trust Company, N.A.

$25,000,000

THE PITTSBURGH WATER AND SEWER AUTHORITY

Water and Sewer System Subordinate Revenue Refunding Bonds,
Series of 2008C-1
consisting of:

$10,000,000 Water and Sewer System Subordinate Revenue Refunding Bonds,
Series C-1A of 2008 (Term Mode)

$10,000,000 Water and Sewer System Subordinate Revenue Refunding Bonds,
Series C-1B of 2008 (Term Mode)

and

$5,000,000 Water and Sewer System Subordinate Revenue Refunding Bonds,
Series C-1C of 2008 (Term Mode)

INTRODUCTION

The purpose of this Reoffering Circular, which includes this introductory statement, the cover page, the summary information 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 the reoffering by the Authority of its $10,000,000 Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1A of 2008 (Term Mode) (the "Series 2008C-1A Bonds"); $10,000,000 Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1B of 2008 (Term Mode) (the "Series 2008C-1B Bonds"); and $5,000,000 Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1C of 2008 (Term Mode) (the "Series 2008C-1C Bonds, and together with the Series 2008C-1A Bonds and the Series 2008C-1B Bonds, the "Reoffered Bonds").

The Reoffered Bonds are being reoffered pursuant to the Subordinate Trust Indenture, dated as of July 15, 1995 (the "Original Subordinate Indenture"), as amended and supplemented by a First Supplemental Subordinate Indenture, dated as of March 1, 1998 (the "First Supplemental Subordinate Indenture"), and a Second Supplemental Subordinate Indenture, dated as of June 1, 2008 (the "Second Supplemental Subordinate Indenture, and an Amending Supplement to the Initial and Second Supplemental Indenture dated as of November 1, 2009 (the "Amending Supplement"), and, together with the Original Subordinate Indenture and the First Supplemental Subordinate Indenture, the "Subordinate Indenture"), by and between the Authority and The Bank of New York Mellon Trust Company, N.A., as Trustee (the "Trustee"). The Reoffered Bonds, together with any other bonds issued under the terms of the Subordinate Indenture are referred to herein as the "Subordinate Bonds".

The Reoffered Bonds are limited obligations of the Authority payable from the Subordinate Receipts and Revenues (as defined herein) pledged thereto (i) subordinate to the pledge thereon securing the first lien bonds (the "First Lien Bonds") issued pursuant to the provisions of the 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, a Fourth Supplemental Indenture dated as of September 15, 2003, a Fifth Supplemental Indenture dated as of June 1, 2005, a Sixth Supplemental Indenture dated as of March 1, 2007 and a Seventh Supplemental Indenture dated as of June 1, 2008, as amended, including as amended by the Amending Supplement to the Initial First Lien Indenture and the Seventh Supplemental Indenture, dated as of October 15, 2009 and a Second Amendment to the Seventh Supplemental Indenture, dated as of August 1, 2010 (collectively, the "First Lien Indenture") by and between the Authority and the Trustee and (ii) on a parity with the other Subordinate Bonds issued pursuant to the provisions of the Subordinate Indenture, as described herein.

The Reoffered Bonds will initially be reoffered in the Term Mode as more fully described herein. The Indenture provides for conversion of the Reoffered Bonds to a Weekly Mode or a Fixed Mode. If converted from the Term Mode to the Weekly Mode or the Fixed Mode, the Reoffered Bonds will be purchased from the existing Bondholders pursuant to the mandatory tender provisions of the Indenture on the conversion date. **This Reoffering Circular provides information with respect to the Reoffered Bonds in the Term Mode**.

All capitalized terms not otherwise defined herein shall have the same meanings ascribed to them in the definitions set forth in APPENDIX B — "SUMMARY OF THE SUBORDINATE INDENTURE - Definitions of Certain Terms." All references herein to the Act, the Reoffered Bonds, the Subordinate Indenture, the First Lien Indenture, the Letters of Credit, the Confirming Letters of Credit, the Policy, the Reimbursement Agreements, the Remarketing Agreements and the Continuing Disclosure Agreement are qualified in their entirety by reference to the complete texts thereof. Copies of drafts of such documents may be obtained during the initial offering period from the principal offices of the Remarketing Agent and thereafter, executed copies may be obtained from the Trustee. All statements in this Reoffering Circular involving matters of opinion, estimates, forecasts, projections or the like, whether or not expressly so stated, are intended as such and not as representations of fact. No representation is made that any of such statements will be realized.

THIS REOFFERING CIRCULAR PROVIDES CERTAIN INFORMATION CONCERNING THE REOFFERED BONDS PRIOR TO THE TERM MODE DATE, THE DATE ON WHICH AN ALTERNATE LIQUIDITY FACILITY IS DELIVERED, THE DATE ON WHICH A LETTER OF CREDIT EXPIRES, OR A CONVERSION DATE ON WHICH THE RATE MODE IS CHANGED TO A WEEKLY MODE OR FIXED MODE. OWNERS AND PROSPECTIVE PURCHASERS OF THE REOFFERED BONDS SHOULD NOT RELY ON THIS REOFFERING CIRCULAR FOR INFORMATION CONCERNING THE REOFFERED BONDS ON AND AFTER ANY SUCH DATE, BUT SHOULD LOOK TO THE REVISIONS, AMENDMENTS, SUPPLEMENTS OR SUBSTITUTIONS THEREOF FOR INFORMATION CONCERNING THE REOFFERED BONDS ON OR AFTER ANY SUCH DATE.

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 (the "City"), duly enacted on February 6, 1984, approved by the Mayor on February 8, 1984, and effective February 16, 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. Articles of Amendment were approved and a Certificate of Amendment was issued by the Pennsylvania Department of State on May 9, 2008, to extend the term of existence of the Authority to May 21, 2045.

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.

The Authority was established in February 1984 by 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 was granted an option to acquire 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 APPENDIX A — "CERTAIN INFORMATION REGARDING THE AUTHORITY AND WATER AND SEWER SYSTEM — Capital Lease Agreement with the City of Pittsburgh".)

The Water and Sewer System provides water, wastewater collection and transmission service to approximately 250,000 customers. The Water and Sewer System does not include wastewater treatment facilities; such facilities are the responsibility of Allegheny County Sanitary Authority ("ALCOSAN"), 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. See APPENDIX A for a description of the Authority.

DEBT OF THE AUTHORITY

First Lien Debt

In addition to the Reoffered Bonds, the Authority previously issued under the First Lien Indenture seven (7) other series of bonds that have a parity claim to the Receipts and Revenues of the Authority, which together with any additional bonds which are hereafter issued under the First Lien Indenture are referred to herein collectively as the "First Lien Bonds". Upon issuance of the Reoffered Bonds, the Authority will have $661,230,000 aggregate principal amount of First Lien Bonds Outstanding.

Subordinated Debt

In addition to the Reoffered Bonds the Authority has outstanding five other series of subordinate revenue bonds issued ("Subordinate Bonds") pursuant to the Authority's Subordinate Trust Indenture, dated as of July 15, 1995, as supplemented and amended, by and between the Authority and The Bank of New York Mellon Trust Company, N.A., as successor trustee (the "Subordinate Lien Indenture") as of September 1, 2010, the Authority had $103,795,000 an aggregate principal amount of Subordinate Bonds Outstanding.

In connection with certain outstanding First Lien Bonds and Subordinate Bonds, the Authority has entered into letter of credit and standby purchase agreements, as more fully described under APPENDIX A. The Authority also has other obligations outstanding through the Pennsylvania Infrastructure Investment Authority ("PENNVEST"). See APPENDIX A — "Other Obligations".

PLAN OF FINANCE

Remarketing Plan For the Reoffered Bonds

The Authority is remarketing the Reoffered Bonds in the Term Mode. On November 10, 2009, (i) Northwest Savings Bank ("Northwest Bank"), issued its irrevocable direct-pay letter of credit providing liquidity and credit support for the Series 2008C-1A Bonds as described herein; (ii) ESB Bank ("ESB Bank"), issued its irrevocable direct-pay letter of credit providing liquidity and credit support for the Series 2008C-1B Bonds as described herein; (iii) Washington Financial Bank, formerly Washington Federal Savings Bank ("Washington Federal"), issued its irrevocable direct-pay letter of credit providing liquidity and credit support for the Series 2008C-1C Bonds as described herein; and (iv) Federal Home Loan Bank of Pittsburgh (the "Confirming Bank") issued its irrevocable confirming letters of credit.

Pursuant to a Remarketing Agreement, by and between the Authority and Boenning & Scattergood, Inc. (the "Remarketing Agreement"), Boenning & Scattergood, Inc. has been appointed Remarketing Agent for the Reoffered Bonds (the "Remarketing Agent").

Estimated Sources and Uses of Funds[1]

Sources of Funds:	
Remarketing Proceeds	$25,000,000
Uses of Funds:	
Deposit to Remarketing Proceeds Purchase Account	$25,000,000

[1] The Authority intends to pay costs related to the reoffering of the Reoffered Bonds from funds on hand. These costs include legal fees, financial advisory fees, ratings, letter of credit fees, printing, and remarketing agent fees.

Bond Insurance

The scheduled payment of the principal of and interest on the Reoffered Bonds when due is insured by a municipal bond insurance policy originally issued on June 12, 2008 by Assured Guaranty Municipal Corp. (formerly known as " Financial Security Assurance Inc.") ("AGM"). See "BOND INSURANCE."

THE REOFFERED BONDS

General

The Reoffered Bonds are dated as of the date of original issuance and will bear interest beginning September 1, 2010. The Reoffered Bonds will initially be issued in fully registered form in the denomination of $5,000 or any integral multiple of $5,000 above such amount. The Reoffered Bonds shall bear interest from the Interest Payment Date to which interest has been paid next preceding the date of authentication, unless the date of authentication (i) is an Interest Payment Date to which interest has been paid, in which event the Reoffered Bonds shall bear interest from the date of authentication, or (ii) is on or prior to the Regular Record Date for the first Interest Payment Date for the Reoffered Bonds, in which event such Reoffered Bonds shall bear interest from the Conversion Date, or (iii) is after a Regular Record Date and on or before the succeeding Interest Payment Date, in which event the Reoffered Bonds shall bear interest from the succeeding Interest Payment Date. Interest on the Reoffered Bonds shall be paid on each Interest Payment Date. Each Reoffered Bond shall bear interest on overdue principal at the rate of 6% per annum during the period such principal is overdue. Both principal and interest shall, however, be payable out of the Receipts and Revenues of the Authority derived from the Water and Sewer System and shall be payable at the designated corporate trust office of the Trustee in lawful money of the United States of America. Principal of and interest payable at Maturity will be payable to the owner of the Reoffered Bonds at the designated trust office of the Trustee upon the surrender for cancellation of the Reoffered Bonds.

Notwithstanding the foregoing, interest payable on the Reoffered Bonds on any Interest Payment Date shall accrue from and including the last interest Payment Date on which interest has been paid through and including the day next preceding the next Interest Payment Date. The foregoing notwithstanding, no interest shall accrue on any Reoffered Bonds prior to their date of initial reoffering and delivery or after the maturity thereof or after the redemption date for such Reoffered Bond (provided the redemption price is paid or provided for in accordance with the provisions of the Subordinate Indenture). The Bondholder of any Reoffered Bond purchased following the mandatory tender of such Reoffered Bond shall be entitled to interest on such Reoffered Bond accruing from such mandatory tender date.

See "REGISTRATION, TRANSFER AND EXCHANGE OF THE REOFFERED BONDS" and "BOOK-ENTRY ONLY SYSTEM" for a description of provisions relating to the registration, transfer and exchange of the Reoffered Bonds.

Rate Modes

The Reoffered Bonds shall bear interest at the Weekly Rate, the Fixed Rate or the Term Rate, as described below. The sub-series of the Reoffered Bonds shall initially be reoffered in the Term Mode and may be converted to a Weekly Mode or Fixed Mode, as provided in the Indenture.

This Reoffering Circular provides information with respect to the Reoffered Bonds while bearing interest at a Term Rate only.

Interest Payment Dates and Computation of Interest Accrual

Interest shall be payable in arrears, commencing on March 1, 2011 and on each September 1 and March 1 thereafter. Interest at the Term Rate shall be computed on the basis of a 360-day year of twelve 30 day months.

Record Date for Interest Payments

The interest payable on any Reoffered Bond on any Interest Payment Date will be paid to the person in whose name such Reoffered Bond is registered at the close of business on the Regular Record Date for such interest, which shall be the close of business on the 15th day of the calendar month immediately preceding the Interest Payment Date. Any interest not paid on the regular Interest Payment Date will cease to be payable to the registered Bondholder on such Regular Record Date and shall be paid to the person in whose name the Reoffered Bond is registered at the close of business on a Special Record Date for the payment of such defaulted interest to be fixed by the Trustee, notice of such Special Record Date being given to Bondholders of the Reoffered Bonds not less than 10 days prior to the Special Record Date.

Method of Payment

The Reoffered Bonds are available in book-entry form only. See "BOOK-ENTRY ONLY SYSTEM." So long as Cede & Co. is the registered owner of the Reoffered Bonds, as nominee of The Depository Trust Company, New York, New York ("DTC"), references herein to the owners of the Reoffered Bonds mean Cede & Co. and not the Beneficial Owners (as defined hereafter) of the Reoffered Bonds.

The principal of and interest on the Reoffered Bonds will be payable by the Trustee to Cede & Co.

Term Mode

The Reoffered Bonds will bear interest payable on March 1 and September 1 (each an "Interest Payment Date") of each year, commencing March 1, 2011, until the principal sum thereof is paid. Each Reoffered Bond shall be dated as of the date of their authentication and shall bear interest (computed on the basis of a 360 day year comprised of twelve months of 30 days) from the Interest Payment Date next preceding the date of authentication of such Reoffered Bond, unless: (a) such Reoffered Bond is authenticated as of an Interest Payment Date, in which event such Reoffered Bond shall bear interest from said Interest Payment Date; or (b) such Reoffered Bond is authenticated prior to March 1, 2011, in which event such Reoffered Bond shall bear interest from the Date of Delivery; or (c) such Reoffered Bond is authenticated after a Record Date (hereinafter defined) and before the next succeeding Interest Payment Date, in which event such Reoffered Bond shall bear interest from the next succeeding Interest Payment Date; or (d) as shown by the records of the Trustee, interest on such Reoffered Bond shall be in default, in which event such Reoffered Bond shall bear interest from the date on which interest was last paid on such respective Reoffered Bond.

Principal of the Reoffered Bonds will be paid to the registered owners thereof or assigns, when due, upon surrender of the Reoffered Bonds at the designated corporate trust office of the Trustee.

Interest on each Reoffered Bond is payable by check drawn on behalf of the Trustee, which shall be mailed to the registered owner whose name and address shall appear, at the close of business on the fifteenth (15th) day of the month, (whether or not a business day) next preceding each Interest Payment Date (the "Record Date"), on the registration books maintained by the Trustee, irrespective of any transfer or exchange of the Reoffered Bond subsequent to such Record Date and prior to such Interest Payment Date, unless the Authority shall be in default in payment of interest due on such interest payment date. In the event of any such default, such defaulted interest shall be payable to the person in whose name the Reoffered Bond is registered at the close of business on a special record date for the payment of such defaulted interest established by notice mailed by the Trustee to the registered owners of Reoffered Bonds not less than ten (10) days preceding such special record date. Such notice shall be mailed to the persons in whose names the Reoffered Bonds are registered at the close of business on the fifth (5th) day preceding the date of mailing. If the date for the payment of the principal of or interest on any Reoffered Bonds shall be a Saturday, Sunday, legal holiday or on a day on which banking institutions in the Commonwealth are required or authorized by law or executive order to close, then the date for payment of such principal or interest shall be the next succeeding day which is not a Saturday, Sunday, legal holiday or a day on which such banking institutions are required or authorized to close, and payment on such date shall have the same force and effect as if made on the nominal date established for such payment.

Mandatory Tenders

The Bondholder of each Reoffered Bond shall be required to tender such Reoffered Bond to the Trustee for purchase on the following dates (each such date being herein called a "Mandatory Tender Date"):

(1) the Term Mode Date with respect to such Reoffered Bond;

(2) on the day on which the interest rate mode on the Reoffered Bond is converted to a Weekly Mode or a Fixed Mode;

(3) on the second (2nd) Business Day preceding the expiration date of the Liquidity Facility then in effect for such Reoffered Bonds in the event the Trustee shall not have received from the provider thereof, at least 25 days prior to such expiration date, a written commitment to extend such Liquidity Facility, such extension to be effective on and as of such stated expiration date;

(4) the Interest Payment Date preceding the expiration date of the applicable Letter of Credit or the Confirming Letter of Credit in the event the Trustee shall not have received from the applicable Letter of Credit Bank or Confirming Bank, at least 25 days prior to such expiration date, a written commitment to extend the applicable Letter of Credit or Confirming Letter of Credit, effective on or before such stated expiration date;

(5) two Business Days after receipt by the Trustee of written direction by the LOC Banks to direct the Trustee to call the Reoffered Bonds for mandatory purchase after an Event of Default under the Liquidity Facility has occurred and is continuing; or

(6) the later of the fourth (4th) day or the third (3rd) Business Day after written notice that a Letter of Credit or Confirming Letter of Credit shall not be reinstated has been received by the Trustee from the applicable LOC Bank or Confirming Bank.

The Trustee shall promptly give notice of mandatory tender for purchase by first-class mail to the Bondholders of all Reoffered Bonds not less than 3 calendar days prior to the Mandatory Tender Date. Such notice of Mandatory Tender shall state that all Outstanding Bonds are subject to mandatory tender for purchase pursuant to the provisions thereof and the provisions of the Subordinate Indenture and will be purchased on the Mandatory Tender Date (which date shall be set forth in such notice) by payment of a Purchase Price equal to the principal amount thereof plus accrued interest.

Any Reoffered Bond subject to Mandatory Tender shall be tendered by the Bondholder thereof for purchase on the Mandatory Tender Date, by delivering such Reoffered Bond to the Delivery Office of the Trustee. Any such Reoffered Bond that is subject to purchase, but that is not so delivered to the Trustee on the Mandatory Tender Date ("Undelivered Reoffered Bond"), shall nevertheless be deemed to have been tendered for purchase by the Bondholder thereof on the Mandatory Tender Date.

On the Mandatory Tender Date with respect to any Reoffered Bond, the Trustee shall pay the Purchase Price to the Bondholder of such Reoffered Bond. Funds for payment of the Purchase Price of such Reoffered Bond shall be drawn by the Trustee from the Remarketing Proceeds Purchase Account or the Liquidity Facility Purchase Account, as applicable, as provided in the Subordinate Indenture. If sufficient funds are not available for the purchase of all tendered Reoffered Bonds, no purchase shall be consummated.

If the Trustee is in receipt of the Purchase Price of any Undelivered Reoffered Bond, such Undelivered Reoffered Bond shall be deemed to have been tendered for purchase and purchased from the Bondholder thereof on such Mandatory Tender Date and the Bondholder of such Undelivered Reoffered Bond shall not be entitled to receive interest on such Undelivered Reoffered Bond for any period on and after the Mandatory Tender Date. The Trustee shall, as to any tendered Reoffered Bonds which are Undelivered Reoffered Bonds, (i) promptly notify the Remarketing Agent of such non-delivery and (ii) place a stop transfer against such Reoffered Bonds until they are

delivered to the Trustee. Upon such delivery, the Trustee shall pay, or cause to be paid, the Purchase Price of such Undelivered Reoffered Bond to the Bondholder thereof and make any necessary adjustments to the Register.

Redemption Prior to Maturity

The Reoffered Bonds shall be subject to redemption prior to Maturity as follows:

Mandatory Sinking Fund Redemption

The Series 2008C-1A Bonds are subject to mandatory sinking fund redemption at a redemption price of 100% of the principal amount redeemed plus accrued interest to the redemption date, on the dates and in the principal amounts specified in the redemption schedule set forth below:

Redemption Date September 1	Principal Amount
2030	$ 285,000
2031	1,480,000
2032	2,460,000
2033	2,555,000
2034	2,665,000
2035 (final maturity)	555,000

The Series 2008C-1B Bonds are subject to mandatory sinking fund redemption at a redemption price of 100% of the principal amount redeemed plus accrued interest to the redemption date, on the dates and in the principal amounts specified in the redemption schedule set forth below:

Redemption Date September 1	Principal Amount
2030	$ 285,000
2031	1,480,000
2032	2,460,000
2033	2,555,000
2034	2,665,000
2035 (final maturity)	555,000

The Series 2008C-1C Bonds are subject to mandatory sinking fund redemption at a redemption price of 100% of the principal amount redeemed plus accrued interest to the redemption date, on the dates and in the principal amounts specified in the redemption schedule set forth below:

Redemption Date September 1	Principal Amount
2030	$ 145,000
2031	740,000
2032	1,230,000
2033	1,275,000
2034	1,335,000
2035 (final maturity)	275,000

Optional Redemption

While the Reoffered Bonds are in the Term Mode, the Reoffered Bonds are not subject to redemption at the option of the Authority prior to the Term Mode Date.

Extraordinary Optional Redemption

The Reoffered 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 all or a substantial portion 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.

Partial Redemption

If less than all Reoffered Bonds of a sub-series are to be redeemed, the particular Reoffered Bonds of a sub-series to be redeemed shall be selected by the Trustee by lot or by such other method as the Trustee shall deem fair and appropriate and which may provide for the selection for redemption of portions (in Authorized Denominations) of the principal of Reoffered Bonds in a denomination larger than the smallest Authorized Denomination.

Effect of Redemption

Reoffered Bonds (or portions thereof as aforesaid) for which redemption and payment provision is made in accordance with the Subordinate Indenture shall cease to bear interest from and after the date fixed for redemption.

Notice of Redemption

Any notice of redemption shall he given by registered or certified mail, mailed not less than 30 days prior to the redemption date, to each Bondholder of Reoffered Bonds to be redeemed, at his address appearing in the Register. So long as DTC is effecting book-entry transfers of the Reoffered Bonds, the Trustee shall provide the notices specified under this heading only to DTC. It is expected that DTC shall, in turn, notify its Participants and that the Participants, in turn, will notify or cause to be notified the beneficial owners. Any failure on the part of DTC or a Participant, or failure on the part of a nominee of a beneficial owner of a Reoffered Bond to notify the beneficial owner of the Reoffered Bond so affected, shall not affect the validity of the redemption of such Reoffered Bond.

REGISTRATION, TRANSFER AND EXCHANGE OF THE REOFFERED BONDS

The Trustee has been appointed bond registrar and as such shall keep the bond register at its designated office. The Person in whose name any Reoffered Bond shall be registered on the bond register shall be deemed and regarded as the absolute owner of such Reoffered Bond for all purposes, and payment of or on account of the principal of and redemption premium, if any, and interest on any such Reoffered Bond shall be made only to or upon the order of the Registered Owner thereof or his legal representative. All such payments shall be valid and effectual to satisfy, and discharge the liability upon such Reoffered Bond, including the interest thereon, to the extent of the sum or sums so paid.

Any Reoffered Bond may be transferred only upon the bond register upon surrender thereof to the Trustee duly endorsed for transfer or accompanied by an assignment duly executed by the Registered Owner or his attorney or legal representative in such form as shall be satisfactory to the Trustee. Upon any such transfer, the Authority shall execute and the Trustee shall authenticate and deliver in exchange for such Reoffered Bond a new Reoffered Bond or Reoffered Bonds, registered in the name of the transferee, of any authorized denomination and of the same maturity and series and bearing interest at the same rate.

The Trustee may charge an amount sufficient to reimburse it for any tax, fee or other governmental charge required to be paid in connection with any such transfer, registration, conversion or exchange. The Trustee shall not be required to (i) transfer or exchange any Reoffered Bond during a period beginning at the opening of business 15 days before the day of the mailing of a notice of redemption of such Reoffered Bond and ending at the close of business on the day of such mailing, or (ii) transfer or exchange any Reoffered Bond so selected for redemption in whole or in part, or (iii) during a period beginning at the opening of business on any Record Date for such Reoffered Bond and ending at the close of business on the relevant Interest Payment Date therefor. See also "BOOK-ENTRY

ONLY SYSTEM" herein for further information regarding registration, transfer and exchange of the Reoffered Bonds.

BOOK-ENTRY ONLY SYSTEM

The Depository Trust Company ("DTC"), New York, NY, will act as securities depository for the Reoffered Bonds (the "Securities"). The Securities will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered Security certificate will be issued for each sub-series of the Securities, each in the aggregate principal amount of each maturity of such issue, and will be deposited with DTC.

DTC, the world's largest depository, 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. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity, corporate and municipal debt issues, and money market instrument from over 100 countries that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC, in turn, is owned by a number of Direct Participants of DTC and Members of the National Securities Clearing Corporation — Fixed income Clearing Corporation, and Emerging Markets Clearing Corporation (NSCC, FICC, and EMCC, also subsidiaries of DTCC), as well as 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 both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC has Standard & Poor's highest rating: AAA. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www .dtcc.com and www .dtc.org.

Purchases of Securities under the DTC system must be made by or through Direct Participants, which will receive a credit for the Securities on DTC's records. The ownership interest of each actual purchaser of each Security ("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. Beneficial Owners are, however, 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 Securities 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 Securities, except in the event that use of the book-entry system for the Securities is discontinued.

To facilitate subsequent transfers, all Securities 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 Securities 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 Securities: DTC's records reflect only the identity of the Direct Participants to whose accounts such Securities 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.

Conveyance of notices and other communications 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 Securities may wish to take certain steps to augment transmission to them of notices of significant events with respect to the Securities, such as redemptions, tenders, defaults, and proposed amendments to

the security documents. For example, Beneficial Owners of Securities may wish to ascertain that the nominee holding the Securities for their benefit has agreed to obtain and transmit notices to Beneficial Owners, in the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar 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 Securities 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 such other DTC nominee) will consent or vote with respect to the Securities unless authorized by a Direct Participant in accordance with DTC's Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to 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 Securities are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Redemption proceeds, distributions, and dividend payments on the Securities 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 Authority or Trustee ("Agent") on payable date in accordance with their respective holdings shown on DTC's records, Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with 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. nor its nominee, Agent, or Authority, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, distributions, and dividend payments to Cede & Co. or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Authority or Agent, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as securities depository with respect to the Securities at any time by giving reasonable notice to Authority or Agent. Under such circumstances, in the event that a successor securities depository is not obtained, Security certificates are required to be printed and delivered.

The Authority may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, Security certificates will be printed and delivered to DTC.

The information in this section concerning DTC and DTC's hook-entry system has been obtained from sources that Authority believes to be reliable, but the Authority takes no responsibility for the accuracy thereof.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to Reoffered Bonds unless authorized by a Direct Participant in accordance with DTC's Procedures. 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 Reoffered Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal, premium and interest payments on the Reoffered 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 Participant's accounts upon DTC's receipt of funds and corresponding detail information from the Authority, on the payment date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with 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 principal and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Authority or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payment to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

THE AUTHORITY AND THE TRUSTEE WILL HAVE NO RESPONSIBILITY OR OBLIGATION TO THE DIRECT PARTICIPANTS OR THE PERSONS FOR WHOM THEY ACT AS NOMINEES WITH RESPECT TO THE ACCURACY OF THE RECORDS OF DTC, ITS NOMINEE OR ANY DIRECT PARTICIPANT PERTAINING TO OWNERSHIP IN THE REOFFERED BONDS OR THE PAYMENTS TO, OR THE PROVIDING OF NOTICE FOR, TO THE DIRECT PARTICIPANTS, OR THE INDIRECT PARTICIPANTS OR THE BENEFICIAL OWNERS.

SO LONG AS CEDE & CO., AS NOMINEE OF DTC, IS THE REGISTERED OWNER OF THE REOFFERED BONDS, REFERENCES HEREIN TO THE HOLDERS OF THE REOFFERED BONDS, OR OWNERS OF THE REOFFERED BONDS, SHALL MEAN CEDE & CO., AND SHALL NOT MEAN THE BENEFICIAL OWNERS.

Discontinuation of Book-Entry Only System

DTC may determine to discontinue providing its service with respect to the Reoffered Bonds at any time by giving notice to the Authority and the Trustee and discharging its responsibilities with respect thereto under applicable law. Upon the giving of such notice, the book-entry only system for the Reoffered Bonds will be discontinued unless a successor securities depository is appointed by the Authority.

If the Authority and the Trustee concur that it would be in the best interests of the Holders of the Reoffered Bonds for the book-entry only system to be discontinued (in whole or in part), such book-entry only system shall be discontinued (in whole or in part) in accordance with the provisions of the applicable procedures of DTC.

SECURITY FOR THE REOFFERED BONDS

Limited Obligations

THE REOFFERED BONDS ARE LIMITED OBLIGATIONS OF THE AUTHORITY. THE REOFFERED BONDS DO NOT PLEDGE THE GENERAL CREDIT OR TAXING POWER OF THE CITY OF PITTSBURGH (THE "CITY"), THE COMMONWEALTH OF PENNSYLVANIA (THE "COMMONWEALTH") OR ANY POLITICAL SUBDIVISION THEREOF; NOR SHALL THE REOFFERED BONDS BE DEEMED AN OBLIGATION OF THE CITY, THE COMMONWEALTH OR ANY POLITICAL SUBDIVISION THEREOF (OTHER THAN THE AUTHORITY); 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 REOFFERED BONDS. THE AUTHORITY HAS NO TAXING POWER.

Pledge of Subordinate Receipts and Revenues

The Reoffered Bonds, together with the other Subordinate Bonds issued under the Subordinate Indenture and the Authority's obligation to make Periodic Payments under Qualified Interest Rate Swap Agreements related to such Subordinate Bonds, if any, and the Authority's obligations under the Reimbursement Agreements are secured, on a parity, by a pledge of the Receipts and Revenues of the Water and Sewer System after payment of (i) Current Expenses, (ii) the debt service due on the First Lien Bonds and Periodic Payment related thereto, (iii) the funding of the Debt Service Reserve Fund, the Operating Reserve Fund, the Renewal and Replacement Fund, held pursuant to and as required and defined in the First Lien Indenture and Policy Costs (as defined in the First Lien Indenture), (the "Subordinate Receipts and Revenues"), together with cash and investments from time to time held in certain funds pursuant to the Subordinate Indenture. Any other amounts due, including any termination payments under Qualified Interest Rate Swap Agreement related to either First Lien Bonds or Subordinate Bonds are subordinate to payment of debt service payments on Subordinate Bonds. (See "DEBT OF THE AUTHORITY" and APPENDIX B "Summary of the Indentures".)

Debt Service Reserve Fund

The Subordinate Indenture requires that a Debt Service Reserve Fund be funded in an amount which when added to the amounts on hand in the Debt Service Reserve Fund of the First Lien Indenture is equal to the maximum annual debt service requirements on all Authority Bonds, subject to restrictions of federal tax laws. Currently, the Debt Service Reserve Funds for such First Lien Bonds and the Subordinate Bonds are fully funded as required under the First Lien Indenture and the Subordinate Indenture. Debt Service Reserve Fund requirements currently are satisfied through Municipal Bond Debt Service Reserve Fund Policies issued by Assured Guaranty Municipal Corp.

Additional Debt

The Authority may issue additional bonds on a parity with the First Lien Bonds for the purposes of financing the cost of acquiring, constructing or completing capital additions or refunding outstanding indebtedness incurred under the First Lien Indenture, upon satisfaction of the conditions set forth in the First Lien Indenture. Additional bonds may be issued under the Subordinate Indenture for any lawful purpose, including refunding. The Subordinate Indenture also permits the incurrence of debt that is subordinated to payments due on the Subordinate Bonds.

Covenants of the Authority

Under both the First Lien Indenture and the Subordinate 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, (3) to maintain the Water and Sewer System in good repair, working order and condition, (4) to maintain its rates and charges at a specified level, and (5) limiting the disposition of assets and encumbering assets with liens. (See “RATE COVENANT” and APPENDIX B — “Summary of the Indenture”).

LETTERS OF CREDIT

On November 10, 2009, the Authority caused to be delivered to the Trustee the Series 2008C-1A Letter of Credit issued by Northwest Bank, the Series 2008C-1B Letter of Credit issued by ESB Bank and the Series 2008C-1C Letter of Credit issued by Washington Federal (each an “LOC Bank” and together, the “LOC Banks”) in connection with the reoffering of the Reoffered Bonds. The Trustee is entitled under each respective Letter of Credit to (a) draw up to the principal amount of the applicable sub-series of Reoffered Bonds to enable the Trustee to pay the principal amount of such sub-series of Reoffered Bonds when due by reason of maturity, redemption or acceleration, plus (b) an amount equal to interest on the applicable sub-series of Reoffered Bonds for up to 195 days (computed at the Maximum Interest Rate), for payment of interest on the Reoffered Bonds when due, or as part of the Purchase Price of such sub-series of Reoffered Bonds tendered to it and, if applicable, not remarketed by the Remarketing Agent.

Confirming Letters of Credit

The Federal Home Loan Bank of Pittsburgh (the "Confirming Bank")issued three separate irrevocable confirming letters of credit (the "Confirming Letters of Credit") in the aggregate total amount of $26,625,000.00. If any of the Letter of Credit Banks fail to honor a properly presented draw on, or repudiates, the Letters of Credit, the Trustee will be entitled to draw under the Confirming Letters of Credit an amount not exceeding the total of $26,625,000.00 which consists of (a) up to $25,000,000 which amount equals the principal amount of the Reoffered Bonds, in order to pay the principal on the Reoffered Bonds when due or upon redemption or acceleration or to pay the portion of the purchase price thereof corresponding to the principal amount upon certain tenders by Holders, plus (b) $1,625,000.00, initially, and for so long as the Reoffered Bonds bear interest at the Term Mode Rate, which amount will not exceed 195 days' interest on the principal amount of the Reoffered Bonds, computed at the maximum rate of 12% per annum, in order to pay accrued interest on the Reoffered Bonds when due or to pay the

portion of the purchase price of the Reoffered Bonds corresponding to accrued interest. The Confirming Letters of Credit expire on November 9, 2011, unless terminated or extended pursuant to their terms.

BOND INSURANCE

Bond Insurance Policy

On the date of original issuance of the Reoffered Bonds, Assured Guaranty Municipal Corp. (formerly known as Financial Security Assurance Inc.) ("AGM") issued its Municipal Bond Insurance Policy for the Reoffered Bonds (the "Policy"). The Policy guarantees the scheduled payment of principal of and interest on the Reoffered Bonds when due as set forth in the form of the Policy included as an exhibit to this Remarketing Circular.

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

ASSURED GUARANTY MUNICIPAL CORP. (FORMERLY KNOWN AS FINANCIAL SECURITY ASSURANCE INC.)

AGM is a New York domiciled financial guaranty insurance company and a wholly owned subsidiary of Assured Guaranty Municipal Holdings Inc. ("Holdings"). Holdings is an indirect subsidiary of Assured Guaranty Ltd. (“AGL”), a Bermuda-based holding company whose shares are publicly traded and are listed on the New York Stock Exchange under the symbol “AGO”. AGL, through its operating subsidiaries, provides credit enhancement products to the U.S. and global public finance, infrastructure and structured finance markets. No shareholder of AGL, Holdings or AGM is liable for the obligations of AGM.

Effective November 9, 2009, Financial Security Assurance Inc. changed its name to Assured Guaranty Municipal Corp.

AGM’s financial strength is rated “AAA” (negative outlook) by Standard and Poor’s Ratings Services, a Standard & Poor’s Financial Services LLC business (“S&P”) and “Aa3” (negative outlook) by Moody’s Investors Service, Inc. (“Moody’s”). On February 24, 2010, Fitch, Inc. (“Fitch”), at the request of AGL, withdrew its “AA” (Negative Outlook) insurer financial strength rating of AGM at the then current rating level. Each rating of AGM should be evaluated independently. An explanation of the significance of the above ratings may be obtained from the applicable rating agency. The above ratings are not recommendations to buy, sell or hold any security, and such ratings are subject to revision or withdrawal at any time by the rating agencies, including withdrawal initiated at the request of AGM in its sole discretion. Any downward revision or withdrawal of any of the above ratings may have an adverse effect on the market price of any security guaranteed by AGM. AGM does not guarantee the market price of the securities it insures, nor does it guarantee that the ratings on such securities will not be revised or withdrawn.

Current Financial Strength Ratings

On May 17, 2010, S&P published a Research Update in which it affirmed its “AAA” counterparty credit and financial strength ratings on AGM. At the same time, S&P continued its negative outlook on AGM. Reference is made to the Research Update, a copy of which is available at www .standardandpoors.com, for the complete text of S&P’s comments.

In a press release dated February 24, 2010, Fitch announced that, at the request of AGL, it had withdrawn the “AA” (Negative Outlook) insurer financial strength rating of AGM at the then current rating level. Reference is made to the press release, a copy of which is available at www .fitchratings.com, for the complete text of Fitch’s comments.

On December 18, 2009, Moody's issued a press release stating that it had affirmed the "Aa3" insurance financial strength rating of AGM, with a negative outlook. Reference is made to the press release, a copy of which is available at www .moodys.com, for the complete text of Moody's comments.

There can be no assurance as to any further ratings action that Moody's or S&P may take with respect to AGM.

For more information regarding AGM's financial strength ratings and the risks relating thereto, see AGL's Annual Report on Form 10-K for the fiscal year ended December 31, 2009, which was filed by AGL with the Securities and Exchange Commission (the "SEC") on March 1, 2010, AGL's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2010, which was filed by AGL with the SEC on May 10, 2010, and AGL's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2010, which was filed by AGL with the SEC on August 9, 2010.

Capitalization of AGM

At June 30, 2010, AGM's consolidated policyholders' surplus and contingency reserves were approximately $2,264,680,337 and its total net unearned premium reserve was approximately $2,259,557,420, in each case, in accordance with statutory accounting principles.

Incorporation of Certain Documents by Reference

Portions of the following documents filed by AGL with the SEC that relate to AGM are incorporated by reference into this Official Statement and shall be deemed to be a part hereof:

(i) The Annual Report on Form 10-K for the fiscal year ended December 31, 2009 (which was filed by AGL with the SEC on March 1, 2010);

(ii) The Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2010 (which was filed by AGL with the SEC on May 10, 2010); and

(iii) The Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2010 (which was filed by AGL with the SEC on August 9, 2010)

All information relating to AGM included in, or as exhibits to, documents filed by AGL pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, after the filing of the last document referred to above and before the termination of the offering of the Bonds shall be deemed incorporated by reference into this Official Statement and to be a part hereof from the respective dates of filing such documents. Copies of materials incorporated by reference are available over the internet at the SEC's website at www .sec.gov, at AGL's website at www .assuredguaranty.com, or will be provided upon request to Assured Guaranty Municipal Corp. (formerly known as Financial Security Assurance Inc.): 31 West 52nd Street, New York, New York 10019, Attention: Communications Department (telephone (212) 826-0100).

Any information regarding AGM included herein under the caption "BOND INSURANCE – Assured Guaranty Municipal Corp. (formerly known as Financial Security Assurance Inc.)" or included in a document incorporated by reference herein (collectively, the "AGM Information") shall be modified or superseded to the extent that any subsequently included AGM Information (either directly or through incorporation by reference) modifies or supersedes such previously included AGM Information. Any AGM Information so modified or superseded shall not constitute a part of this Official Statement, except as so modified or superseded.

AGM makes no representation regarding the Reoffered Bonds or the advisability of investing in the Reoffered Bonds. In addition, AGM has not independently verified, makes no representation regarding, and does not accept any responsibility for the accuracy or completeness of this Official Statement or any information or disclosure contained herein, or omitted herefrom, other than with respect to the accuracy of the information regarding AGM supplied by AGM and presented under the heading "BOND INSURANCE".

FLOW OF FUNDS

The Authority has heretofore established a special fund (the "Revenue Fund") with Authorized Depositaries into which it deposits its Receipts and Revenues. 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* - Established Under First Lien Indenture

   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.

2. *Operating Reserve Account*- Established Under First Lien Indenture

   There is a special account within the Operation and Maintenance Fund called the "Operating Reserve Account," which is held by the Trustee under the First Lien Indenture. 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.

3. *Debt Service Fund* - Established Under First Lien Indenture

   After making the foregoing transfers, on or before each Interest Payment Date and Periodic Payment Date, moneys in the amount of the interest to come due on the First Lien Bonds on such Interest Payment Date, Periodic Payments owed, if any, to such Counterparty under a Qualified Swap Agreement related to any First Lien Bonds on such Periodic Payment Date, and obligations owed under the Reimbursement Agreements, 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.

4. *Debt Service Reserve Fund and Deficiency in Operating Reserve Account* – Established Under First Lien Indenture

   Next, on the first day of each month in which there is a deficiency in the Debt Service Reserve Fund or the Operating Reserve Account, both established under the First Lien Indenture, or if there has been a draw on the surety bond held in the Debt Service Reserve Fund of the First Lien 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 or paid to the surety provider.

5. *Renewal and Replacement Fund*-- Established Under First Lien Indenture

   After the foregoing transfers, 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 First Lien Indenture.

6. *Debt Service for Subordinated Debt* – Held under the Subordinated Indenture

After making the foregoing transfers, on the first day of each month moneys shall be transferred in amounts sufficient to make all payments due on Subordinate Bonds and Periodic Payments on Qualified Interest Rate Swap Agreements related to any Subordinate Bonds and payments due under the Reimbursement Agreements relating to Letters of Credit and Confirming Letters of Credit supporting the Reoffered Bonds.

7. *Debt Service Fund* – Established Under First Lien Indenture and the Subordinated Indenture

Any payments, other than Periodic Payments, due under any Qualified Interest Rate Swap Agreements relating to Authority Bonds, including, without limitation, termination payments.

8. *Depreciation Reserve Account* – Held outside of the First Lien Indenture

On December 1 of each year, after making the foregoing transfers, moneys shall be transferred to the Depreciation Reserve Account held by an Authorized Depository as an account within the Revenue Fund required to be established by the First Lien Indenture, in an amount equal to the excess of the depreciation on the Water and Sewer System during such year over the principal payments on the Bonds outstanding during such year and the amount of Capital Additions funded from the Authority's Gross Revenues during such year. Moneys in the Depreciation Reserve Account may be used by the Authority to pay (i) principal on the Bonds of the Authority; (ii) Capital Additions; and (iii) the costs of construction, acquisition and improvements to the Water and Sewer System.

RATE COVENANT

Under the First Lien Indenture and the Subordinate 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 Authority Bonds (i.e., the First Lien Bonds and Subordinate 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 Authority Bonds or other Authority Long Term Indebtedness or are applied directly to payment of debt service on the Authority 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 Authority 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 First Lien Bonds and Subordinate 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 or the Subordinate Indenture will be remedied before the end of the next ensuing fiscal year.

INTEREST RATE SWAP AGREEMENTS

The Authority has previously entered into Qualified Interest Rate Swap Agreements ("Swap Agreements") relating to outstanding bonds, including Series 2008C-1 Bonds. The Swap Agreements provide, in general, that the Authority will pay to the respective Counterparties thereunder periodic fixed amounts ("Periodic Payments") based on a fixed percentage on an aggregate notional amount equal to the Authority's aggregate outstanding amount of bonds relating to the Swap Agreements) and that the respective Counterparties thereunder will pay to the Authority periodic floating amounts based on the Securities Industry and Financial Market Association ("SIFMA") Municipal Swap Index times the same notional amount until the maturity dates of the bonds relating thereto, unless earlier terminated. The execution and delivery of the Swap Agreements does not alter the Authority's obligation to pay the principal of, premium, if any, and interest on the related bonds. However, as the Swap Agreements will be "Qualified Interest Rate Swap Agreements" as defined in the Indenture, the obligations of the Authority to make Periodic Payments (but not Settlement Amounts (defined below) payable under the Swap Agreements) will be secured on a parity with the Authority's obligations to make payments on the Reoffered Bonds and other Bonds issued under the Indenture.

The Authority has adopted a policy relating to interest rate management agreements ("Swap Policy") to establish guidelines for the use and management of all interest rate management agreements, including, but not limited to, interest rate swaps, swaptions, caps, collars and floors (collectively "Swaps" or "Agreements") incurred in connection with the incurrence of debt. The Authority may change the Swap Policy at any time in its sole discretion.

The Swap Policy authorizes the Authority to use swaps to hedge interest rate movement, basis risk and other risks, to lock-in a fixed rate or, alternatively, to create synthetic variable rate debt. Swaps may also be used to produce interest rate savings, limit or hedge variable rate payments, alter the pattern of debt service payments, manage exposure to changing market conditions in advance of anticipated bond issues (through the use of anticipatory hedging instruments) or for asset/liability matching purposes. The Swap Policy includes provisions relating to the credit quality of counterparties, the term and notional amount of Swaps, monitoring of existing Swaps, the engagement of advisors to assist the Authority in monitoring the Swaps, disclosure and reporting of amounts, value and issues relative to existing Swaps, and other related matters. Pursuant to the Swap Policy, the Authority will actively monitor the degree of risk and exposure associated with Swaps to which it is a party but can offer no assurances that compliance with its Swap Policy will prevent the Authority from suffering adverse financial consequences as a result of these transactions.

See "Interest Rate Swap Agreements" under Appendix A for a list of outstanding swap agreements.

CERTAIN BONDHOLDERS' RISKS

Investment in the Reoffered Bonds may involve certain risks and each investor should carefully consider the risks involved to determine whether to purchase any of the Reoffered Bonds. Each prospective investor should carefully examine this Reoffering Circular 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 Reoffered 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 Reoffered 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 Reoffering Circular, including the Appendices hereto.

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, conveyance of sanitary/storm wastewaters and possibly the storage and disposal of solid waste materials. The Sewer System conveys wastewater generated within the City boundaries, and from certain other municipalities connected to the Sewer Conveyance Systems to ALCOSAN interceptors located along the rivers and streams of the City for conveyance to ALCOSAN's wastewater treatment facility for processing prior to discharge into the Ohio River. The Combination 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 PWSA Sewer Systems 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 treatment capacity, resulting in certain overflows, bypassing and flooding. See APPENDIX A — "DESCRIPTION OF THE AUTHORITY AND WATER AND SEWER SYSTEM— *Government Regulation*" and "*— The Sewer System.*"

The U.S. Environmental Protection Agency ("USEPA") has adopted regulations governing discharges to surface bodies of water under the Federal Clean Water Act, 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. 73% of the 1,234 miles of the Authority's sewers are combined sewers and there are 194 Permitted CSOs within the Authority's Sewer System including connections to ALCOSAN's interceptors. The CSO Policy requires owners of any sewer system having CSOs to acquire National Pollutant Discharge Elimination System ("NPDES") discharge permits for each overflow site. On January 29, 2004, pursuant to a resolution adopted by its Board on December 19, 2003, the Authority entered into the Order regarding alleged wet weather sewer overflows within the City of Pittsburgh, Allegheny County, Pennsylvania. The other signatories to the Order are the City of Pittsburgh, the Pennsylvania Department of Environmental Protection ("DEP") and the Allegheny County Health Department ("ACHD").

The Order was developed as part of a two-year process of negotiation and consensus-building among the DEP, the ACHD, the Authority and eighty-two other municipalities and municipal authorities whose sewage is ultimately treated by ALCOSAN at its Woods Run Sewage Treatment Plant. In the negotiations and consensus-building, the participants developed proposed orders to be used by the municipalities served by ALCOSAN to address regional concerns regarding wet weather sewer overflows.

Generally, the Order requires the Authority and the City to assess the combined and separate sanitary sewers within the City in order to develop a plan to address alleged wet weather sewer overflows within the City. The assessment activities required under the Order include performing: (1) a physical survey and visual inspection of manholes; (2) sewer line cleaning and closed circuit television internal inspections; (3) sewer system mapping; (4) sewer system dye testing; (5) a system of hydraulic characterization; and (6) flow monitoring. The Order

provides a very specific schedule for the completion of assessment activities. Most assessment activities for critical sewers and the separate sanitary portion of the sewer system are to be completed in 2010. Assessment activities for non-critical sewers are to be completed on a longer schedule with some tasks to be completed in 2012.

In addition to assessment activities, the Order requires the Authority and the City to implement the Nine Minimum Controls for the control of CSOs, and to perform repairs and maintenance to the deficiencies in the sewer system revealed by the assessment activities. Such deficiency corrections include eliminating the conveyance of streams by the sewer system and repairing or replacing sewer lines that restrict flows causing unpermitted overflows. Generally, deficiency corrections in the critical sewers and the separate sanitary sewer system are to be completed in 2010. Deficiency corrections in the assessed, non-critical sewers are to be completed by 2012.

The Order called for collection system investigations, repairs and further studies. The collection system investigation and repairs are reflected in the Capital Improvement Program. Included within this program for the 2010 period are approximately 3.6 million for sewer televising, 4.6 million to gunite sewers, 4.3 million to conduct cured-in-place pipe linings, and 4.9 million to conduct point repairs and deteriorated sewers.

The Authority is currently developing a feasibility study in conjunction with ALCOSAN to address the combined sewer overflow issue and achieve compliance with water quality standards and the Clean Water Act and expects to submit its feasibility study to DEP and ALCOSAN by January 2010.

Ultimately, an ALCOSAN Regional 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 Regional Long Term Control Plan developed by ALCOSAN must be submitted to the regulatory agencies by 2012. The Authority's share is estimated to cost $300,000,000, but will be more accurately determined when the Regional Long Term Control Plan is finally approved. The amount is dependent, in part, on coordination with other regional providers and ALCOSAN. According to the ALCOSAN Consent Decree, the construction of all wet weather facilities is to be completed by 2026.

The DEP has issued to the Authority and the City a National Pollutant Discharge Elimination System ("NPDES") permit regarding the CSOs within the City. The Authority is permitted for a total of 194 CSOs in the sewage collection system. Of these, the Authority operates and maintains 40 of the CSOs. The remainder of CSOs are operated and controlled by the regional treatment provider, ALCOSAN.

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 governments significantly regulate providers of water and sewer systems. Future 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 — "DESCRIPTION OF THE AUTHORITY AND WATER AND SEWER SYSTEM — Government Regulation."

Swap Agreements

Under the Indenture and Subordinate Lien Indenture, the Authority is also a party to seven separate variable to fixed interest rate exchange agreements in the combined aggregate outstanding notional amount as of September 1, 2010 of $403,160,000 with respect to certain Series of Bonds issued under the Indenture and the Subordinate Lien Indenture (collectively, the "Swap Agreements"). See "SWAP AGREEMENTS" herein.

Collateral Posting Requirements

The Authority has entered into various swap agreements as described under "Swap Agreements" herein. Under certain circumstances (including certain events of default with respect to the Authority or either of the Counterparties), the Swap Agreements could terminate in whole or in part prior to their respective stated termination dates. Following any such early termination of the Swap Agreements, either the Authority or the Counterparties, as applicable may owe a termination payment ("Settlement Amounts") to the other, depending upon market conditions. If at the time of an early termination of the Swap Agreements long-term interest rates are significantly lower than they were when the Swap Agreements were executed and delivered, the Authority could owe substantial Settlement Amounts to the Counterparties. The Authority's obligation to pay any Settlement Amounts with respect to Qualified Interest Rate Swap Agreements relating to any First Lien Bonds will be subordinate to the Authority's obligation to make all payments due and owing on the Reoffered Bonds, any other outstanding First Lien Bonds and Periodic Payments due under the Swap Agreements, and to any of the Authority's obligation to make any payments on any Subordinate Bonds and any Periodic Payments under Qualified interest Rate Swap Agreements related to such Subordinate Bonds.

The Authority's payment obligation with respect to Periodic Payments, but not any Settlement Amounts, under the Swap Agreements will be guaranteed by AGM under one or more swap insurance policies. The provider of the swap insurance policy will be given certain rights under the Swap Agreements, including rights to consent to the designation of an early termination date (which may result in the payment of a Settlement Amount) upon the occurrence of certain events and the right to designate an early termination date with respect to the Authority, if an event of default under the Swap Agreements occurs with respect to the Authority as the defaulting party.

There are a number of risks associated with the Swap Agreements that could affect the value of the Swap Agreements, the ability of the Authority to accomplish its objectives in entering into the Swap Agreements and the ability of the Authority to meet its obligations under the Swap Agreements and with respect to the Reoffered Bonds. These risks include, among others, the following:

(i) counterparty risk - the failure of the Counterparty to make required payments;

(ii) credit risk — the occurrence of an event modifying the credit rating of the Authority or the respective Counterparties;

(iii) termination risk — the need to terminate the transaction in a market that dictates a payment of a Settlement Amount by the Authority; and

(iv) basis risk - the mismatch between actual variable rate debt service on the Authority's variable rate bonds and variable rate indices used to determine swap payments.

In addition, the Swap Agreements require the posting of collateral from one counterparty to the other counterparty based on the market to market calculations when such calculations result in an amount that exceeds certain thresholds set forth in the contract. Collateral posting may be required if there is a change in the ratings of either counterparty. As of the date of this reoffering, the Authority has not had to post collateral under these agreements.

Liquidity Support for the Authority's Variable Rate Bonds

In connection with the issuance of certain First Lien Bonds and Subordinate Bonds, the Authority entered into various credit agreements which are subject to renewal. Please refer to APPENDIX A — "OUTSTANDING CREDIT AGREEMENTS" for more information.

LITIGATION

In the opinion of Authority Counsel, there is no litigation pending or threatened seeking to enjoin the issuance, sale or delivery of the Reoffered 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, that, 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.

TAX MATTERS

In connection with the original issuance of the Reoffered Bonds, Bond Counsel delivered an opinion (the "Original Opinion") that concluded that under then existing law, interest on the Reoffered Bonds was excluded from the gross income of the owners of the Reoffered Bonds for federal income taxation, assuming compliance with certain requirements of the Code and covenants regarding the use, expenditure and investment of Reoffered Bonds proceeds. The Original Opinion further concluded that, under then existing law, interest on the Reoffered Bonds would not be an item of tax preference for purposes of computing the alternative minimum tax liabilities of individuals and corporations, would not be included in the earnings and profits of a corporate holder of the Reoffered Bonds for purposes of the alternative minimum tax, but could, if received by a foreign corporation, be subject to the branch profits tax imposed by the Code.

On September 1, 2010, Bond Counsel will deliver its opinion to the effect that the remarketing of the Reoffered Bonds will not in and of itself adversely affect the exclusion of interest on said Reoffered Bonds from gross income for purposes of federal income taxation. The form of such opinion to be delivered by Bond Counsel and the opinion of Bond Counsel related to the reissuance of the Reoffered Bonds dated November 10, 2009 are contained in APPENDIX K to this Reoffering Circular. Consistent with customary procedures, Bond Counsel has not been asked to conduct and has not conducted any review of facts and circumstances relating to the tax status of interest on the Reoffered Bonds and expresses no opinion as to whether interest on the Reoffered Bonds is currently excluded from gross income for federal income tax purposes.

THE TRUSTEE

The obligations and duties of the Trustee are described in the Subordinate Indenture, and the Trustee has undertaken only those obligations and duties which are expressly set out in the Subordinate Indenture. The Trustee has not independently passed upon the validity of the Reoffered Bonds, the security therefor, the adequacy of the provisions for payment thereof or the tax-exempt status of the interest on the Reoffered Bonds. The Trustee has relied upon the opinion of Bond Counsel for the validity and tax-exempt status of the interest on the Reoffered Bonds. The Subordinate 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 Subordinate Indenture, the Trustee is liable only for those damages caused by its gross negligence or willful misconduct. Under the Subordinate Indenture, the Trustee is not required to take notice and is not deemed to have notice, of any default under the Subordinate 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 Reoffered Bonds, when due at maturity or earlier redemption, or interest on the Reoffered 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 Subordinate Indenture to be delivered to the Trustee must be delivered at the corporate trust office of the Trustee in Pittsburgh, Pennsylvania. In the absence of any such notice, the Trustee may conclusively assume no Event of Default (as defined in the Subordinate Indenture) exists, except as expressly stated above and in the Subordinate Indenture.

LEGAL OPINIONS

The remarketing of the Reoffered Bonds by the Remarketing Agent is subject to the receipt of the approving legal opinion of Pepper Hamilton LLP, Pittsburgh, Pennsylvania, Bond Counsel. The unqualified approving opinion of Bond Counsel will be substantially in the form attached to this Reoffering Circular as APPENDIX K. Certain legal matters for the Authority will be passed upon by its counsel, Thorp, Reed & Armstrong, LLP, Pittsburgh, Pennsylvania. Certain legal matters were passed upon by Cohen & Grigsby, P.C. Pittsburgh, Pennsylvania, which was retained by, and acted as counsel to the Letter of Credit Banks.

INDEPENDENT AUDITORS

The audited financial statements of the Authority, as of and for the years ended December 31, 2009 and 2008, included in APPENDIX C — Authority Financial Statements have been audited by Maher Duessel, independent certified public accountants, as indicated in their report with respect thereto, which report also appears in APPENDIX C.

RATINGS OF THE REOFFERED BONDS

Standard & Poor's Ratings Services ("S&P") assigned its short term municipal bond ratings of "A-1+", to the Reoffered Bonds, with the understanding that upon delivery of the Reoffered Bonds, the Letters of Credit, the Confirming Letters of Credit and the Policy remains in effect.

The short-term municipal bond ratings based on the support provided by the Letters of Credit will expire on the respective Expiration Dates of the Letters of Credit unless such ratings are withdrawn, reduced or extended prior to the Expiration Dates of the Letters of Credit.

The aforementioned ratings reflect only the respective views of such organizations, and an explanation of the significance of a rating may be obtained only from the rating agency furnishing the same. A rating is not a recommendation to buy, sell or hold securities. There is no assurance that such ratings will be retained for any given period of time or that they will not be revised downward or withdrawn entirely by S&P, if, in its judgment, circumstances so warrant. Any such downward revision or withdrawal of such ratings may have an adverse effect on the market price of the Reoffered Bonds.

CONTINUING DISCLOSURE; DISCLOSURE DISSEMINATION

Pursuant to Securities and Exchange Commission Rule 15c2-12 under the Securities Exchange Act of 1934, as amended (the "Rule"), the Authority undertook upon the original issuance of the Series 2008C-1 Bonds, for the benefit of the holders of such Reoffered 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 Authority entered into a Disclosure Dissemination Agent Agreement ("Disclosure Dissemination Agreement") with Digital Assurance Certification, L.L.C. ("DAC"), under which the Authority has designated DAC as Disclosure Dissemination Agent (the "Disclosure Dissemination Agent"). The Annual Report is to be filed by the

Disclosure Dissemination Agent not later than 200 days after the end of the Authority's fiscal year to the Municipal Securities Rulemaking Board ("MSRB") through its Electronic Municipal Market System ("EMMA"). Notices of material events are to be filed with MSRB through EMMA 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 Reoffering Circular 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.

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 Reoffered 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; Substitution of credit or liquidity providers, or their failure to perform;
(v) Adverse tax opinions or events affecting the tax-exempt status of the Reoffered Bonds; Modifications to rights of holders of the Reoffered Bonds;
(vi) Bond calls (other than mandatory sinking fund redemptions);
(vii) Defeasances;
(viii) Release, substitution or sale of property securing repayment of the Reoffered Bonds; and
(ix) Rating changes.

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

Amendments. The Disclosure Dissemination Agreement may be amended, without the consent of the holders of the Reoffered Bonds, but only upon the Authority obtaining an opinion of counsel expert in federal securities laws acceptable to both the Authority and the Disclosure Dissemination Agent to the effect that such amendment, and giving effect thereto, will not materially impair the interests of the holders of the Reoffered Bonds and would not, in and of itself, cause the undertakings therein to violate the Rule; provided neither the Authority nor the Disclosure Dissemination Agent shall be obligated to agree to any amendment modifying their respective duties or obligations without their consent thereto. Notwithstanding the foregoing, the Disclosure Dissemination Agent shall have the right to adopt amendments to the Disclosure Dissemination Agreement necessary to comply with modifications to and interpretations of the provisions of the Rule as announced by the Securities and Exchange Commission from time to time by giving not less than 20 days written notice of the intent to do so together with a copy of the proposed amendment to the Authority. Not such amendment shall become effective if the Authority shall, within 10 days following the giving of such notice, sends a notice to the Disclosure Dissemination Agent in writing that it objects to such amendment.

Termination. The continuing obligation of the Authority and the Disclosure Dissemination Agent under the Disclosure Dissemination Agreement shall terminate upon the legal defeasance, prior redemption or payment in full of all of the Reoffered Bonds, when the Authority is no longer an Obligated Person with respect to the Reoffered Bonds, or upon delivery by the Authority to the Disclosure Dissemination Agent of an opinion of nationally recognized bond counsel to the effect that continuing disclosure is no longer required.

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 Disclosure Dissemination Agreement shall not be an event of default with respect to the Reoffered 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 Reoffered Bonds in the secondary market. Consequently, any such failure may adversely affect the transferability and liquidity of the Reoffered 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 Disclosure Dissemination Agreement will not constitute an Event of Default under the Indenture (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 Reoffered Bonds in the secondary market. Consequently, such a failure may adversely affect the transferability and liquidity of the Reoffered Bonds and their market price.

Bondholders are advised that the Disclosure Dissemination 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.

The Disclosure Dissemination Agent has only the duties specifically set forth in the Disclosure Dissemination Agreement. The Disclosure Dissemination Agent's obligation to deliver the information at the times and with the contents described in the Disclosure Dissemination Agreement is limited to the extent the Authority has provided such information to the Disclosure Dissemination Agent as required by the Disclosure Dissemination Agreement. The Disclosure Dissemination Agent has no duty with respect to the content of any disclosures or notice made pursuant to the terms of the Disclosure Dissemination Agreement. The Disclosure Dissemination Agent has no duty or obligation to review or verify any information in the Annual Report, Audited Financial Statements, notice of Notice Event or Voluntary Report (as defined in the Disclosure Dissemination Agreement), or any other information, disclosures or notices provided to it by the Authority and shall not be deemed to be acting in any fiduciary capacity for the Authority, the holders of the Reoffered Bonds or any other party. The Disclosure Dissemination Agent has no responsibility for the Authority's failure to report to the Disclosure Dissemination Agent a Notice Event or a duty to determine the materiality thereof. The Disclosure Dissemination Agent shall have no duty to determine or liability for failing to determine whether the Authority has complied with the Disclosure Dissemination Agreement. The Disclosure Dissemination Agent may conclusively rely upon certifications of the Authority at all times.

REMARKETING

Pursuant to the Indenture, Boenning & Scattergood, Inc. has been appointed initially as exclusive Remarketing Agent for the Reoffered Bonds (the "Remarketing Agent"). The Remarketing Agent has agreed to purchase the Reoffered Bonds for an aggregate purchase price of at least equal to par, plus accrued interest. The Remarketing Agent will purchase all the Reoffered Bonds if any are purchased.

Subject to certain conditions, upon the delivery or deemed delivery of Reoffered Bonds tendered for purchase by any owners thereof in accordance with the provisions of the Indenture, the Remarketing Agent will offer for sale such tendered Reoffered Bonds, any such remarketing to be made on the date such tendered Reoffered Bonds are to be purchased, at a price equal to 100% of the principal amount thereof plus accrued interest, if any. Remarketing Agent may be removed or replaced by the Authority and the Remarketing Agent may also resign in accordance with the provisions of the Indenture.

The Remarketing Agent is Paid by the Authority

The Remarketing Agent's responsibilities include determining the interest rate from time to time and remarketing Reoffered Bonds that are mandatory tendered by the owners thereof (subject, in each case, to the terms of the Remarketing Agreement), all as further described in this Reoffering Circular. The Remarketing Agent is

appointed by the Authority and is paid by the Authority for its services. As a result, the interests of the Remarketing Agent may differ from those of existing holders and potential purchasers of Reoffered Bonds.

Bonds May be Offered at Different Prices on Any Date Including an Interest Rate Determination Date

Pursuant to the Remarketing Agreement, the Remarketing Agent is required to determine the applicable rate of interest that, in its judgment, is the lowest rate that would permit the sale of the applicable sub-series of Reoffered Bonds bearing interest at the applicable interest rate at par plus accrued interest, if any, on and as of the applicable Rate Determination Date. The interest rate will reflect, among other factors, the level of market demand for the Reoffered Bonds (including whether the Remarketing Agent is willing to purchase Reoffered Bonds for its own account). There may or may not be Reoffered Bonds tendered and remarketed on a Rate Determination Date, the Remarketing Agent may or may not be able to remarket any Reoffered Bonds tendered for purchase on such date at par and the Remarketing Agent may sell Reoffered Bonds at varying prices to different investors on such date or any other date. The Remarketing Agent is not obligated to advise purchasers in a remarketing if it does not have third party buyers for all of the Reoffered Bonds at the remarketing price. In the event the Remarketing Agent owns any Reoffered Bonds for its own account, it may, in its sole discretion in a secondary market transaction outside the tender process, offer such Reoffered Bonds on any date, including the Rate Determination Date, at a discount to par to some investors.

The Ability to Sell the Bonds other than through Tender Process May Be Limited

The Remarketing Agent may buy and sell Reoffered Bonds other than through the tender process. However, they are not obligated to do so and may cease doing so at any time without notice and may require holders that wish to tender their Reoffered Bonds to do so through the Tender Agent with appropriate notice. Thus, investors who purchase the Reoffered Bonds, whether in a remarketing or otherwise, should not assume that they will be able to sell their Reoffered Bonds other than by tendering the Reoffered Bonds in accordance with the tender process.

Under Certain Circumstances, the Remarketing Agent May Be Removed, Resign or Cease Remarketing the Bonds, Without a Successor Being Named

Under certain circumstances the Remarketing Agent may be removed or have the ability to resign or cease its remarketing efforts, without a successor having been named, subject to the terms of the Remarketing Agreement.

FINANCIAL ADVISOR

PNC Capital Markets LLC served as the financial advisor (the "Financial Advisor") to the Authority in connection with the preparation, authorization and reoffering of the Reoffered Bonds. 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 Reoffering Circular. The Financial Advisor will receive a fee for services with regard to the reoffering of the Reoffered Bonds.

CERTAIN RELATIONSHIPS

PNC Capital Markets LLC has served as Financial Advisor in connection with the Reoffered Bonds. PNC Bank, National Association has provided to the Authority liquidity facilities in the form of a Standby Bond Purchase Agreement and a direct pay letter of credit on other various outstanding Authority bond issues. From time to time in the normal course of business PNC Bank, National Association and/or affiliates of the same, may have a credit or other financial relationships with the Authority. PNC Capital Markets LLC and PNC Bank, National Association are each wholly-owned subsidiaries of The PNC Financial Services Group, Inc. See "FINANCIAL ADVISOR" herein

Cohen & Grigsby, P.C. has served as counsel to the LOC Banks and the Confirming Bank in connection with the remarketing and conversion of the Reoffered 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 Reoffered Bonds, the security for the payment of the Reoffered Bonds and the rights of the owners thereof. All capitalized terms used herein are used with the meaning set forth in the Subordinate Indenture unless otherwise so specified.

The information contained in this Reoffering Circular 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 Reoffering Circular 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 Reoffering Circular 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 Reoffering Circular has been duly executed and delivered on behalf of the Authority by an Authorized Representative.

THE PITTSBURGH WATER AND SEWER AUTHORITY

By: /s/ Dan Deasy
Chairman

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APPENDIX A

DESCRIPTION OF THE AUTHORITY AND THE WATER AND SEWER SYSTEM

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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:

Member	Occupation
Dan Deasy, Chairman	Member, 27th Legislative District, House of Representatives, PA
Robert P. Jablonowski, Vice Chairman	Retired Chemist, Duquesne Light Co.
Scott Kunka, Treasurer	Director of Finance, City of Pittsburgh
Henry C. Blum, Secretary	1st Vice President, Public Events Employees Union Local No. 188
Margaret L. Lanier, Asst. Sec./Asst. Treasurer	Treasurer, City of Pittsburgh
Vacant	
Patrick Dowd, Member	Pittsburgh City Councilman

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, system safety and security 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 – Michael P. Kenney was appointed by the Board to the position of Executive Director in 2008 following over twenty-five years of service with the Municipal Authority of Westmoreland County, where Mr. Kenney served as Assistant Manager before his departure. While with the Municipal Authority of Westmoreland County, a southwestern Pennsylvania regional water and sewer authority spanning five counties, Mr. Kenney was responsible for the management of over 125,000 connections, servicing a population of over 400,000, and with a budget in excess of $50,000,000. Mr. Kenney also developed and implemented an annual capital improvement program of $8,000,000 and oversaw construction projects totaling $70,000,000. While with the Municipal Authority of Westmoreland County, Mr. Kenney directed a work force of 270 employees – 55 management and 215 bargaining unit employees.

Director of Finance -- Stephen Simcic joined the Authority's Administrative Division in September 2001. Mr. Simcic is responsible for the financial reporting of the Authority and reports directly to the Executive Director. The Director of Finance oversees the Finance and Accounting Departments consisting of Accounts Payable, Procurement, Receivables, Payroll, Budgets, Forecasts, Banking and Investor Relations, Capital Expenditures and Collections. Effective April, 2010 the Director of Finance was also assigned oversight responsibilities of the Customer Service, Human Resource and Management Information System Departments. Mr. Simcic came to the Authority with ten years experience in the corporate accounting field with two major energy companies followed by eight years as Controller with an environmental remediation engineering consulting firm subcontracting with the

DOD and DOE. Mr. Simcic has a Bachelor of Science Degree in Business Administration from Robert Morris University, with a primary focus in Accounting. He is a member of the Government Financial Officer's Association.

Director of Water Quality and Production -- 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 2009, he was appointed Director of Water Quality and Production. In his new role, he is responsible for the operation of the two water treatment plants, including reservoirs, tanks, pumping stations, and sewage lift stations; 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 – Thomas M. Gigliotti, P.E., joined the Authority in 1996 after 12 years with an engineering and construction firm and two years with the Mine Safety and Health Administration. In September of 2009, Mr. Gigliotti was appointed as the Director of Engineering and Construction responsible for the overall coordination and management of the Engineering and Construction Division's involvement in the Capital Improvement Program. Mr. Gigliotti held the position as Plant Manager from 2004 to 2009 and was responsible for the operation and maintenance of two water treatment plants, 14 pump stations and 13 tanks and reservoirs. Mr. Gigliotti has published articles in several periodicals including the Journal of American Waterworks Association, Trenchless Technology, Water Engineering and Management and presented at AWWA conferences. Mr. Gigliotti earned a Masters of Science, Civil and Environmental Engineering and a Bachelor of Science, Mining Engineering from the University of Pittsburgh. He is a Registered Professional Engineer in the Commonwealth of Pennsylvania and is a member of the Water Environment Federation, Water Works Operators Association of Pennsylvania, and American Water Works Association.

Cyril Obermeier: Director, Sewer Operations, Pittsburgh Water & Sewer Authority
Cyril Obermeier is currently the Director of Sewer Operations for the Pittsburgh Water and Sewer Authority located in the City of Pittsburgh in Allegheny County.

After receiving a Journeyman Plumbing License with Allegheny County in 1979, he worked in the plumbing field installing plumbing in homes and commercial buildings for ten years. On April 19, 1982 he accepted and held the position of Plumber with the Pittsburgh Water Department of the City of Pittsburgh (which later became the Pittsburgh Water and Sewer Authority) until 1988 when he was promoted to the position of Service Foreman. In 1990 he accepted and served in the position of Service Supervisor until 2001 when he was promoted to Sewer Manager for the Pittsburgh Water and Sewer Authority. In February 2010 he was appointed to the position of Director, Sewer Operations and continues to serve in that capacity. As Director of Sewer Operations, he is responsible for the daily maintenance of sewer operations as well as service of the water meters.

Cyril is an active member of AWWA, ICC (International Building Code Council) NFPA (National Fire Protection Assoc.), Rural Water Works Association and holds an Allegheny County Master Plumbing license.

Thomas Palmosina: Director, Water Operations, Pittsburgh Water & Sewer Authority
Thomas Palmosina is currently the Director of Water Operations for the Pittsburgh Water and Sewer Authority (PWSA) located in the City of Pittsburgh in Allegheny County.

Mr. Palmosina is responsible for overseeing the daily operations and distribution of water for the PWSA Water System which services 80,000 customers and includes 1,200 miles of water lines, 32,000 valves, and 7,800 fire hydrants. PWSA's repair and maintenance teams partner with a network of qualified private contractors to implement repairs and system upgrades quickly and correctly.

Mr. Palmosina began his employment with the City of Pittsburgh Water Department (later to become the Pittsburgh Water and Sewer Authority) in 1973 as a Laborer. He has held several positions including Pipeline Repairman, Repair Foreman, Service Foreman, Supervisor, and Manager of Operations. He holds an Associates Degree in Liberal Arts from Robert Morris University and is a 25 year member of the American Water Works Association. Mr. Palmosina has a current DEP Water Operator's License with the Commonwealth of Pennsylvania and is also a certified Emergency Responder for Water and Waste/Water Disasters.

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 has the option to acquire 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, provides for payments totaling One Hundred One Million Four Hundred Sixteen Thousand Nine Hundred Seventy-Four Dollars and Sixty Cents ($101,416,974.60), which, payments 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. The City and Authority are currently negotiating changes to the Cooperation Agreement to more accurately reflect changes in services the City and the Authority provide to each other and to adjust payments made by the Authority to the City thereunder.

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, 990 miles of mains and service lines, 25,900 valves, 7,180 fire hydrants, twelve pumping stations, one membrane filtration plant, five reservoirs, and eleven storage tanks. The total storage capacity of the reservoirs and tanks is approximately 455 million gallons. With consideration given to the pressure requirements of the distribution system, and storage capacities in each of the 15 pressure zones, PWSA stores enough finished water to provide a 2 to 3 day uninterrupted supply to all customers should it temporarily be unable to treat additional water from the Allegheny River. In the opinion of the Authority's Consulting Engineer, Chester Engineers, Inc. (the "Consulting Engineer"), 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 70.5 million gallons per day. 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 80,000 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.

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 of the plant to achieve the most effective and efficient plant operations to meet current and future regulatory compliance issues. The Authority has addressed the new regulations for Stage 1 of 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 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.

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. Mircofiltration 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 Cryptosporidum and Giardia). The membrane filtration plant is currently being expanded to produce 26 million gallons per day.

The Sewer System

The wastewater collection and transmission system (the "Sewer System") is part of a regional system that provides service to about 550,000 people, of whom nearly 325,000 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").

The Sewer System also is utilized by 24 suburban municipalities pursuant to agreements with the City and/or the Authority 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. Typically, the sharing of maintenance costs applies only to the trunk sewer lines through which the wastewater flows to the ALCOSAN interceptor.

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 on the Authority 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.

Historical Rates (1999–2009)

YEAR	Residential[1] Rate	Residential[1] Increase[3]	Commercial[1] Rate	Commercial[1] Increase[3]	Industrial[1] Rate	Industrial[1] Increase[3]	Wholesale[2] Rate	Wholesale[2] Increase[3]	Health & Education[1] Rate	Health & Education[1] Increase[4]
	$	%	$	%	$	%	$	%	$	%
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
2004	5.52	19.0	5.43	19.0	5.07	19.0	3.70	19.0	7.43	19.0
2005	6.46	17.0	6.35	17.0	5.93	17.0	4.33	17.0	8.69	17.0
2006	6.99	6.7	6.79	6.7	6.30	6.7	3.69	6.7	9.25	6.7
2007	7.50	5.4	7.19	5.4	6.74	5.4	3.69	--	9.83	5.4
2008	7.50	0	7.19	0	6.74	0	3.69	0	9.83	0
2009	7.50	0	7.19	0	6.74	0	3.69	0	9.83	0

(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.

2009 Water Consumption by Customer Classification (1)

Classification	Customers	Percentage of usage
Residential	73,082	36.76%
Commercial (2)	6,481	47.81%
Industrial	125	6.03%
	16	9.40%
TOTAL	79,704	100.0%

(1) Excludes customers of other water purveyors.
(2) The "Commercial" category includes water usage by health and education sector, as well as various units of government.

10 Largest Users

	User	% of Total Usage for 2009
1.	Fox Chapel Water Authority	6.48%
2.	University of Pittsburgh	3.90
3.	UPMC Health System	3.16
4.	Bay Valley Foods	3.07
5.	Allegheny County	1.93
6.	Carnegie Mellon University	1.65
7.	Borough of Millvale	1.22
8.	SCI Pittsburgh	1.06
9.	Reserve Water Dept.	0.92
10.	West Penn Hospital;	0.84

Source: Pittsburgh Water and Sewer Authority

PWSA Water Rate Comparison (2009)

	Rate 1,000 Gal.	Minimum Monthly Charge	Minimum Gallons Per Month
Aspinwall Borough	$7.25		
Fox Chapel Authority	6.30		
Monroeville Authority	4.51	$27.06	6,000
Pittsburgh Water and Sewer Authority (1)	**5.00**	**14.67**	**1,000**
Plum Borough Municipal authority	6.58		
Richland Township Municipal Authority	4.50	8.00	
Shaler Township	3.66	20.50	
Penn Hills (Oakmont Residents)	3.44	20.19	
Westmoreland Authority – Forward Township	3.99	28.78	
Westmoreland Authority – McKeesport	6.77	13.54	
Westmoreland Authority – Truxall	3.99	44.98	

(1) Excluding $2.50 for Sewer Use Rate

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 70.5 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.

Outstanding Bond

First Lien Debt

Upon issuance of the Reoffered Bonds, the Authority will have $661,230,000 aggregate principal amount of First Lien Bonds Outstanding (of which $361,865,000 is Fixed Rate and $299,365,000 is Variable Rate) as follows:

- $68,970,000 (Fixed Rate) Water and Sewer System First Lien Revenue Refunding Bonds, Series A of 2008 Taxable (the "Taxable 2008A Bonds");

- $145,495,000 (Variable Rate Demand) Water and Sewer System First Lien Revenue Refunding Bonds, Series B1 of 2008 and Series B2 of 2008

- $24,665,000 (Fixed Rate) Water and Sewer System First Lien Revenue Bonds, Series D-1 of 2008 (the "2008D-1 Bonds");

- $71,225,000 (Variable Rate Demand) Water and Sewer System First Lien Revenue Bonds, Series D-2 of 2008 (the "2008D-2 Bonds");

- $119,840,000 Water and Sewer System First Lien Revenue Refunding Bonds, Series of 2007 (the "2007 Bonds");

- $57,000,000 Water and Sewer System Revenue Refunding Bonds, Series of 2003 (the "2003 Bonds");

- $146,805,000 Water and Sewer System First Lien Revenue Bonds, Series B of 1998 (the "1998B Bonds"); and

- $27,230,000 Water and Sewer System Revenue Refunding Bonds, Series A of 1993 (the "1993A Bonds").

Subordinate Debt

The Authority has $103,795,000 Subordinate Debt outstanding as follows:

- $10,000,000 (Term Mode) Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1A of 2008 (the "Subordinate 2008 C-1A Bonds"), the Reoffered Bonds;

- $10,000,000 (Term Mode) Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1B of 2008 (the "Subordinate 2008 C-1B Bonds"), the Reoffered Bonds;

- $5,000,000 (Term Mode) Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1C of 2008 (the "Subordinate 2008 C-1C Bonds"), the Reoffered Bonds;

- $26,910,000 (Term Mode) Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1D of 2008 (the "Subordinate 2008 C-1D Bonds");[1]

- $51,885,000 (Variable Rate) Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-2 of 2008 (the "Subordinate 2008 C-2 Bonds");

Other Obligations

In addition to its First Lien and Subordinate Bonds, the Authority has outstanding loans with the Pennsylvania Infrastructure Investment Authority ("PENNVEST") which loans mature on various dates during 2025-2030 and are subordinate to the First Lien and Subordinate Bonds. As of March 31, 2010, the Authority owed PENNVEST approximately $14.2 million from draw downs on these PENNVEST loans, including approximately $1.6 million from draw downs on 2009 and 2010 PENNVEST loans ("Recent PENNVEST Loans") in the maximum aggregate loan amount of approximately $36.8 million. It is expected that the Authority will draw down additional amounts on the Recent PENNVEST Loans.

Debt Service Requirements

The schedule on the following page sets forth the amount required during each Fiscal Year (ending December 31) shown below for the payment of the principal of and the interest on Outstanding First Lien Revenue Bonds and Outstanding Subordinate Revenue Refunding Bonds assuming all variable rate bonds bear interest at applicable bank bond rate and swap rate through maturity.

[1] Upon closing of the Series 2008 C-1D Bonds

Debt Service Requirements on First Lien and Subordinate Bonds

	Debt Service on First Lien Series 2008D-2 Revenue Bonds [1]	Debt Service on Outstanding First Lien Revenue Bonds[2/3]	Debt Service on Outstanding Subordinate Lien Revenue Bonds[4/5/6]	Total Debt Service on First Lien Revenue and Subordinate Lien Revenue Bonds [7/8]
2010	1,461,181	25,956,906	2,678,056	30,096,143
2011	2,922,362	35,015,563	5,356,112	43,294,036
2012	2,922,362	31,668,944	5,431,112	40,022,417
2013	2,922,362	32,687,775	5,412,063	41,022,200
2014	2,922,362	33,005,475	5,348,877	41,276,714
2015	2,922,362	33,070,125	5,348,877	41,341,364
2016	2,922,362	33,116,150	5,348,877	41,387,389
2017	2,922,362	32,798,750	5,348,877	41,069,989
2018	2,922,362	32,783,914	5,348,877	41,055,152
2019	2,922,362	32,798,930	5,348,877	41,070,168
2020	2,922,362	32,823,564	5,348,877	41,094,803
2021	2,922,362	32,836,711	5,348,877	41,107,949
2022	2,922,362	32,872,652	5,348,877	41,143,890
2023	2,922,362	33,036,734	5,348,877	41,307,972
2024	2,922,362	33,241,084	5,348,877	41,512,323
2025	2,922,362	33,724,012	5,348,877	41,995,250
2026	2,922,362	34,212,090	5,348,877	42,483,328
2027	2,922,362	34,231,080	5,348,877	42,502,319
2028	2,922,362	34,203,891	5,348,877	42,475,130
2029	2,922,362	34,217,292	5,348,877	42,488,530
2030	2,922,362	30,934,709	8,288,877	42,145,948
2031	2,922,362	18,633,247	20,542,217	42,097,826
2032	3,162,362	8,921,375	29,910,380	41,994,116
2033	3,307,515	8,925,492	29,564,309	41,797,316
2034	6,371,308	5,875,088	29,368,195	41,614,590
2035	2,753,728	32,745,088	6,046,698	41,545,514
2036	2,753,728	38,810,078	-	41,563,806
2037	2,753,728	38,936,350	-	41,690,078
2038	2,753,728	39,067,052	-	41,820,781
2039	29,428,728	12,484,560	-	41,913,288
2040	42,099,253	0	-	42,099,253
Total	158,214,857	893,634,681	228,180,046	1,280,029,584

Totals may not add due to rounding.

1 Interest on 2008D-2 First Lien Bonds are calculated at the associated swap rate of 4.103%

2 Interest on Series 1993A, 1998B, 2003, 2007A, 2008A taxable and 2008D1 First Lien (Fixed Rate) Bonds are calculated at fixed rate

3 Interest on Series 2007B-1, 2007B-2, 2008B-1and 2008B-2 First Lien Bonds are calculated at the associated swap rate of 3.932%, 4.038%, and 4.103%, respectively

4 Interest on the Series 2008C-1ABC bonds are calculated at the associated swap rate (3.998%) plus the initial term rate of 2.00%. (Debt service shown above does not reflect the regularly scheduled payments to the Authority under the swap agreement). Please note that there is a mandatory tender on September 1, 2010, at which time the Series 2008C-1ABC bonds would be reoffered at a rate that may be higher or lower than the initial term mode rate.

5 Interest on the Series 2008C-1D bonds are calculated at the associated swap rate (3.998%) plus the initial term mode rate of 2.625%. (Debt service shown above does not reflect the regularly scheduled payments to the Authority under the swap agreement). Please note that there is a mandatory tender on September 1, 2012, at which time the Series 2008C-1D bonds would be reoffered at a rate that may be higher or lower than the initial term mode rate.

6 Interest on 2008C-2 Subordinate Lien Bonds are calculated at the associated swap rate of 3.998%

7 Does not include loans with PENNVEST

8 As of March 1, 2010

Letter of Credit and Liquidity Agreements

The Authority has entered into various letter of credit and standby agreements relating to the outstanding bonds of the Authority as provided in the following table:

The JPMorgan Chase Bank Standby Bond Purchase Agreement on the 2008 Series D-2 will be replaced by PNC Bank, National Association Standby Bond Purchase Agreement after August 5 2010.

Variable Rate Bond Series	Provider	Agreement	Term
2007 Series B-1 and B-2	JPMorgan Chase Bank	Standby Bond Purchase Agreement	June 10, 2012
2008 Series B-1	Bank of America, N.A.	Direct Pay Letter of Credit	October 22, 2011
2008 Series B-2	PNC Bank, National Association	Direct Pay Letter of Credit	October 22, 2011
2008 Series C-1A	Northwest Bancorp, Inc. with Federal Home Loan Bank of Pittsburgh confirming LOC	Direct Pay Letter of Credit	November 9, 2011
2008 Series C-1B	ESB Bank with Federal Home Loan Bank of Pittsburgh confirming LOC	Direct Pay Letter of Credit	November 9, 2011
2008 Series C-1C	Washington Financial Bank with Federal Home Loan Bank of Pittsburgh confirming LOC	Direct Pay Letter of Credit	November 9, 2011
2008 Series C-2	JPMorgan Chase Bank	Standby Bond Purchase Agreement	June 9, 2011
2008 Series D-2	PNC Bank, National Association	Standby Bond Purchase Agreement	August 4, 2011

Interest Rate Swap Agreements

The Authority has entered into other Qualified Interest Rate Swap Agreements relating to other outstanding bonds of the Authority. The following table sets forth the terms of all of the Swap Agreements as of September 1, 2009:

Pittsburgh Water and Sewer Authority
Interest Rate Swap Agreement Summary
As of September 1, 2009

Variable to Fixed Rate Swaps	Counterparty	Outstanding Notional Amount	Effective Date	Termination Date	Fixed Rate	Floating Index
2007 B1 & B2	JPMorgan Chase Bank & Merrill Lynch Capital Services, Inc.	$ 82,645,000	3/9/2007	9/1/2033	3.932%	SIFMA
2008 B	JPMorgan Chase Bank & Merrill Lynch Capital Services, Inc.	$145,495,000	6/12/2008	9/1/2039	4.038%	SIFMA
2008 C	JPMorgan Chase Bank & Merrill Lynch Capital Services, Inc.	$103,795,000	6/12/2008	9/4/2035	3.998%	SIFMA
2008 D	JPMorgan Chase Bank	$ 71,225,000	6/12/2008	9/4/2040	4.103%	SIFMA
Total		$403,160,000				

Projected Capital Borrowings

The Authority has established a five (5) year capital improvement program encompassing years 2008 to 2012 (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 Water and Sewer 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 initially implemented in 1984 and has resulted in major improvements, additions and rehabilitation to all components of the Water and Sewer Systems.

As more fully discussed under "CERTAIN BONDHOLDERS' RISKS — Certain Environmental Matters", 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. Pursuant to the January 2004 Consent Order and Agreement (the "Order"), the Authority is currently developing a feasibility study in conjunction with the Allegheny County Sanitary Authority ("ALCOSAN') which entered into a Consent Decree with the United States Environmental Protection Agency ("USEPA"), the Pennsylvania Department of Environmental Protection ("DEP") and the Allegheny County Health Department ("ACHD"), to address combined sewer overflows and achieve compliance with water quality standards and the Clean Water Act. The Authority expects to submit its feasibility study to DEP and ALCOSAN by March 31, 2013. 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 currently preliminarily estimated by the Authority at $300,000,000, but will be more accurately determined when the feasibility study necessary for the implementation ALCOSAN Regional Long Term Control Plan is finally approved. The amount is dependent, in part, on coordination with other regional providers and ALCOSAN. Funding of a portion of the amount needed to address the combined sewer overflow issue and achieve compliance with the Clean Water Act was provided with proceeds of the Authority's Water and Sewer System First Lien Revenue Bonds, Series of 2002 and the Authority's Water and Sewer System First Lien Revenue Bonds, Series of 2005 (both refinanced with Series of 2007 Bonds previously issued by the Authority).

The final years of the current Capital Improvement Program contemplate additional expenditures for sewer compliance issues and infrastructure improvements. It is anticipated that funding for these expenditures, as well as implementation of the feasibility study necessary for the completion of the ALCOSAN Regional Long Term Control Plan was provided, in all or in part, through the original issuance of the Reoffered Bonds, the Pennvest Loans and additional debt. In total, the new money bonds issued as a component of the Authority's First Lien Bonds and Subordinate Lien Bonds issued in 2008 will fund approximately $100 million out of the Authority's $125 million Capital Improvement Program. The Authority also received approval in late 2009 for an additional $36 million in Pennvest Loans, which are subordinate to payments due on the Authority's Bonds.

Expenses of Operation

Salaries and related expenses account for approximately seventeen percent (17%) of total operating expenses in the 2010 budget. In 2010 the Authority's budget provides for two-hundred-seventy-three (273) positions as follows: thirty-nine (39) in billing and collections; twenty-three (23) in administrative and accounting positions; one-hundred-ninety-three (193) 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 Cooperating Agreement are approximately eight percent (8%) of the 2010 total operating expenses. In addition, utility fees and the cost of chemicals account for approximately ten percent (10%) of the 2010 total operating expenses.

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, 2006 through December 31, 2009. The audited financial statements and management discussion and analysis for the years ended December 31, 2009 and 2008 are included as APPENDIX C.

Total operating revenues in 2009 increased to $134.2 million up $4.4 million from 2008. The increase was due to a 16% rate increase by ALCOSAN. Water and sewer conveyance revenues remained unchanged from 2008. Non-operating revenues increased by a net $9.5 million due to a $14.6 million rise in new development and donated property revenues and a $4.3 million decline in interest earnings. Some of the largest new development projects included the North Shore Connector developed by the Port Authority, Sheraden Park developed by the Army Corp of Engineer's, the Rivers Casino and work on Carson Street and the Pittsburgh Technology Center.

Total operating expenses remained unchanged in 2009 at $105.6 million. A significant change in operating expenses included an 11.7%, or $4.7 million increase in waste water treatment expense. However, this was offset with a $4.7 million decrease in depreciation and amortization expense as a result of an overall asset review to bring asset lives of plant, water and sewer lines in sync with standard industry practices. Operating income finished with a net increase of $4.4 million. Interest expense on long term debt increased by $9.0 million due in part to 12 months of accrued expense in 2009 on the 2008 Construction fund bonds of $98 million issued in June of 2008, versus 6 months expense accrued in 2008. Interest expense also increased due to higher liquidity and remarketing fees and lower counterparty receipts from the Swap Counterparties.

Statement of Revenues, Expenses and Changes in Net Assets*
(Dollars expressed in thousands)
(Years Ended December 31, 2009, 2008, 2007 and 2006)

	2009	2008	2007	2006
Operating revenues:				
Residential, commercial and industrial water sales	$ 86,271	$ 86,627	$ 89,766	$ 83,954
Wastewater treatment	45,514	39,439	37,381	33,968
Other	2,390	3,668	2,685	2,371
Total operating revenues	$ 134,175	$ 129,734	$ 129,832	$ 120,293
Operating Expenses:				
Direct operating expenses	$ 38,770	$ 38,346	$ 35,328	$ 33,935
Cooperation agreement operating expenses:				
Wastewater direct expenses	44,795	40,096	38,094	34,661
Indirect cost allocation - wastewater	4,500	4,415	4,415	3,000
Indirect cost allocation - water	4,131	5,235	5,235	4,150
Transfer costs, net				
Expense of water provided by other entities:				
Subsidy of customers located in the City	$ 1,603	$ 1,070	$ 684	$ 819
Depreciation	10,317	13,914	13,692	13,332
Amortization of capitalized lease assets	1,491	2,557	2,557	2,557
Total operating expenses	105,607	105,633	100,005	92,454
Operating income	$ 28,568	$ 24,101	$ 29,827	$ 27,839
Other revenues (expenses):				
Federal Grants	248	986	--	
Donated Property	14,819	204	75	
Interest revenue	690	5,032	2,598	2,216
Interest expense	(37,984)	(29,362)	(28,394)	(27,946)
Unrealized gain/(loss) on trust investments	(149)	(153)	(155)	(145)
Amortization of bond issue costs	(1,633)	(1,202)	(622)	(627)
Total other revenue (expense)	(24,009)	(24,495)	(26,498)	(26,502)
Increase/(Decrease) in Net Assets	$ 4,559	$ (394)	$ 3,329	$ 1,337
Net Asset Surplus/(Deficit):				
Beginning of year	(34,997)	(34,603)	(37,932)	(39,269)
End of year	$ (30,438)	$ (34,997)	$ (34,603)	$ (37,932)
Annual debt service requirement				
Principal	14,625	$ 15,531	$ 17,299	$ 17,834
Interest	30,435	24,223	22,345	26,021
Total annual debt service	45,060	$ 39,754	$ 39,644	$ 43,855

- 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 of which cannot now be determined. See "CERTAIN BONDHOLDERS' RISKS".

Effective January 1, 2010, the Authority implemented a 5% Distribution Infrastructure System Charge (DISC) to provide funding for long term operational system improvements. This increase is applied as an assessment fee on total billings for water and sewer conveyance and is not based on consumption. Revenues are projected to increase between $4.0 to $4.5 million dollars as a result of this increase. Based on the Authority's unaudited results for the first three months ending March 31, 2010, total operating revenues were approximately $31.9 million, or 7.1% below total operating revenues of $34.4 million for the same three-month period ended March 31, 2009. The variance were primarily due to lower levels of consumption. Operating expenses for the three months ended March 31, 2010, are approximately $20.9 million, or 8.3%, above operating expenses of $19.3 million for the same three-month period ended March 31, 2009, with the variance due primarily to increases in repairs and maintenance, utilities and professional services. Non-operating expenses declined by 3.7% or $.617 million from the same period in 2009.

Debt Service Coverage

The Authority is required to satisfy one of the two debt service coverage tests under Indenture. Under Test 1 receipts, revenues and unrestricted revenue fund cash must be sufficient to provide for payment of (a) current expenses of PWSA and (b) 120% of debt service on the first and subordinate lien bonds. Under Test 2, receipts and revenues, including construction fund earnings with certain limitation, together with debt service reserve fund earnings must be sufficient to provide for payment of (a) current expenses of PWSA and (b) 100% of debt service on the first and subordinate lien bonds. Below is the historical debt service coverage from 2005 to 2009 for Test 1.

Debt Service Coverage Calculations	2005	2006	2007	2008	2009
Receipts and Revenues	$117,346	$ 120,293	$ 129,907	$ 129,734	$ 134,175
Unrestricted Cash	20,617	26,344	31,907	35,024	41,914
Total	$ 137,963	$ 146,637	$ 161,814	$ 164,758	$ 176,089
Operating Expenses	$ 71,718	$ 76,565	$ 83,756	$ 89,162	$ 93,799
120% Debt Service	48,407	52,626	47,573	47,576	54,072
Total	$120,125	$ 129,191	$131,329	$ 136,738	$ 147,871
Funds in Excess of Test	$ 17,838	$ 17,446	$ 30,485	$ 28,020	$ 28,218
Test 1 Debt Service Coverage	137%	133%	164%	159%	152%

Billings, Collections and Enforcement

All bills are due 20 days after the billing date and interest is applied on the next invoicing date. Dunning notices are generated and mailed to customers with any past due balances, and all unpaid balances plus interest are reflected on the next regularly scheduled monthly statement. In addition, accounts with past due balances in excess of 90 days are also issued to a collection agency as part of the overall collection process. Any accounts eligible to be terminated are posted for non-payment, and water services are terminated when necessary.

Effective May 2004, the Authority began direct-billing City residents for current wastewater treatment charges. The intent of this operational change (from purchasing delinquent wastewater receivables and billing) is to reduce delinquencies by providing for more timely billing and collection activities.

In order to effect this billing change, the Authority entered into a tentative agreement with ALCOSAN relating to direct billing by the Authority of the ALCOSAN wastewater treatment charges. Under that agreement, the Authority is obligated to create and fund an escrow account covering a two-month billing period.

In October 2008, the Authority partnered with Paymentus Corporation to bring a one-time telephone and internet payment solution to its customers. A full Electronic Billing Payment and Presentment (EBPP) solution was installed and available to customers in the fourth quarter of 2009 via the Authority's billing vendor, Pittsburgh Mailing Services, Inc.

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, and the American Federation of State, County and Municipal Employees (AFSCME), Local 2719 represents white-collar employees while, Local 2037 represents the foremen. 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. A five year agreement was recently reached with the AFSCME which provides for a salary increase effective January 1, 2009, 2010, 2011, 2012, and 2013. The Pittsburgh Joint Collective Bargaining Committee reached a five year agreement which provides for a salary increase effective January 1, 2008, 2009, 2010, 2011, and 2012.

Government Regulation

The Authority is subject to Federal, State and County regulations in connection with water treatment, water distribution, wastewater collection, construction activities, and 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 exceeding events, and issuance of consumer confidence 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 storm water. Any facility which discharges sewage, process wastewater, non-contact cooling water, storm water from municipal separate storm sewer systems or storm water 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 Authority and the City of Pittsburgh have been issued an NPDES Permit for discharge from the municipal separate storm sewer systems within the City.

The PWSA Water Treatment Plant recently received an NPDES Permit to allow treated process water discharges to the Allegheny River.

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 been issued its NPDES CSO Permit for its combined sewer overflows.

On January 29, 2004, the Authority entered into a Consent Order and Agreement which contains detailed requirements for addressing wet weather sewer overflows (see "CERTAIN BONDHOLDERS' RISKS, *Certain Environmental Matters*").

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.

Water Treatment Plant

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.

Air Quality

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.

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APPENDIX B

SUMMARY OF INDENTURES

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SUMMARY OF FIRST LIEN INDENTURE

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

Authority Bonds. Means Bonds owned by the Authority.

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 ("FNMAs"); participation certificates of the General Services Administration; guaranteed mortgage-backed securities and guaranteed participation certificates of the Government National Mortgage Association ("GNMAs"); 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-l" 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-l" by Moody's and a "Short-Term CD" rating of "A-l" 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, GNMAs, FNMAs or FFILMCs 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-l" or "A3" or better by Moody's and "A-l" or "A-" or better by S&P, provided:

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

(i) 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 that $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

(j) 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

(k) 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

(l) 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%.

(m) Investment agreements approved by the Bond Insurers.

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, and payments payable by the Authority to the City under the Cooperation Agreement.

Debt Service Requirements. The term "Debt Service Requirements" shall mean, in respect of any Fiscal Year, the sum of the amount required to be paid in such Fiscal Year by the Authority in respect of the interest on and the principal of the Bonds outstanding or to be outstanding, as the case may be, and the amounts required to be paid to any sinking, purchase or analogous fund established for such Bonds and any Periodic Payments to be paid in connection with any Qualified Interest Rate Swap Agreement to the extent not taken into account in calculating the Debt Service Requirements on Bonds bearing interest at a variable rate pursuant to the immediately following sentence; provided, however, that the Debt Service Requirements in respect of any Fiscal Year for a series of Bonds for which there shall have been established a sinking, purchase or analogous fund shall be determined after projecting the operation of such fund to the retirement of Bonds by redemption and giving effect to the reduction in the payments to be made in such Fiscal Year in respect of the principal of and interest on such Bonds by reason of such redemption. To the extent any Bonds under consideration bear interest at a variable rate, and a Qualified Interest Rate Swap Agreement is in place with respect to such Bonds, the Debt Service Requirements on those Bonds shall be calculated by substituting the fixed rate used to determine amounts payable by the Authority under the Qualified Interest Rate Swap Agreement in lieu of the variable rate on the Bonds (except as such calculation relates to amounts to be deposited into the Debt Service Reserve Fund); provided, the Counterparty to such Qualified Interest Rate Swap Agreement maintains a rating by Standard & Poor's of at least "AA-" and by Moody's of at least "Aa3", otherwise the Debt Service Requirements for such Bonds shall be assumed to bear interest at the highest of: (i) the actual rate on the date of calculation, or if the indebtedness is not yet outstanding, the initial rate (if established and binding); (ii) if the indebtedness has been outstanding for at least twelve (12) months, the average rate over the twelve (12) months immediately preceding the date of calculation; and (iii) (1) if the interest on the indebtedness is excludable from gross income under the applicable provisions of the Internal Revenue Code of 1986, as amended, the most recently published Bond Buyer 25 Bond Revenue Index (or comparable index if no longer

published) plus fifty (50) basis points, or (2) if interest is not so excludable, the interest rate on direct U.S. Treasury Obligations with comparable maturities plus fifty (50) basis points.

Letter of Credit. The term "Letter of Credit" shall mean an irrevocable transferable direct-pay letter of credit issued for a series or subseries of Bonds by a Letter of Credit Bank for the account of the Authority in favor of the Trustee supporting a series or subseries of Bonds as set forth in a Reimbursement Agreement between the Letter of Credit Bank and the Authority.

Letter of Credit Bank. The term "Letter of Credit Bank" shall mean the issuer of a irrevocable transferable direct-pay Letter of Credit pursuant to a Reimbursement Agreement.

Periodic Payment Date. The term "Periodic Payment Date" shall mean the date on which a Fixed Swap Payment is required under any Qualified Swap Agreement until the termination or maturity of the Qualified Interest Rate Swap Agreement.

Periodic Payments. The term "Periodic Payments" shall mean any regularly scheduled payment payable by the Authority to the Counterparty pursuant to the terms of any Qualified Interest Rate Swap Agreement(s); however, Periodic Payments shall not include any termination payments, costs and fees or any other sums payable under the Qualified Swap Agreement that are not regularly scheduled payments payable by the Authority.

Pledged Bonds. The term "Pledged Bonds" shall mean Bonds purchased with proceeds of a draw on a Letter of Credit and not remarketed and held in pledge by the Letter of Credit Bank or its designee.

Qualified Interest Rate Swap Agreement. The term "Qualified Interest Rate Swap Agreement" or "Qualified Swap Agreement" shall mean any agreement relating to any Bonds issued or to be issued under the Indenture with a Counterparty whereby the Authority will pay to the Counterparty periodic fixed amounts based upon a fixed percentage of a notional amount specified in such agreement and such Counterparty will pay to the Authority certain periodic floating amounts based upon a variable percent of the same notional amount; provided, that (i) the underwriter or the Authority's financial advisor shall certify to the Authority and the Trustee that (based upon then current market conditions) such Qualified Swap Agreement creates an overall lower Debt Service Requirement than would be attained through the issuance of Additional Bonds in an amount equal to such notional amounts at a Fixed Rate without such Qualified Interest Rate Swap Agreement and (ii) there is in place a municipal bond insurance policy, letter of credit or other credit enhancement instrument with respect to the Bonds to which the agreement relates guaranteeing payments of amounts owed on the Bonds and a swap insurance policy guaranteeing the payment of Periodic Payments due pursuant to such agreement respectively. Periodic Payments under a Qualified Interest Rate Swap Agreement may be on parity with the Bonds to which the Qualified Interest Rate Swap Agreement relates.

Receipts and Revenues. The term "Receipts and Revenues" shall mean any and all rates, fees, payments received by the Authority from a counterparty pursuant to the terms of a Qualified Interest Rate Swap Agreement, 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.

Reimbursement Agreement. The term "Reimbursement Agreement" shall mean a Reimbursement Agreement between the Authority and the respective Letter of Credit Bank, which may be amended from time to time in accordance with the terms thereof.

Reimbursement Obligations. The term "Reimbursement Obligations" shall mean the obligations of the Authority to reimburse the Letter of Credit Bank for draws on such Letter of Credit Bank's Letter of Credit and to pay all other amounts due or to become due under the Reimbursement Agreement.

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 of 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, Letter of Credit Banks and Qualified Interest Rate Swap Agreement without preference, priority or distinction as to lien or otherwise, except as otherwise provided in the First Lien Indenture, of any one Bond, Reimbursement Agreement or Qualified Interest Rate Swap Agreement over any other Bond Reimbursement Agreement or Qualified Interest Rate Swap Agreement by reason of priority in the issue, sale or authentication thereof or otherwise. The municipal bond insurance policy issued with respect to a particular series of the Bonds is for the sole benefit and security of the holders of the particular series of Bonds to which such policy relates. Holders of Bonds of another series shall have no rights or protection under a bond insurance policy issued with respect to another series of the Bonds.

Additional Bonds

The Authority may issue Additional Bonds, on a parity with the 2008 Bonds, 2007 Bonds, the 2003 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.

Funds Established Under the 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 an amount equal to the Reimbursement Obligations and pursuant to Reimbursement Agreement and an amount equal to the Periodic Payments for that Periodic Payment 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 or 1/12th of the amount representing draws to be paid by the applicable Letter of Credit Bank for payment of principal 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 separate account for each series of Outstanding Bonds. Deposits, transfers and payments from the particular rebate accounts shall be made in accordance with tax regulatory agreements entered into with respect to the respective series of Bonds.

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 Authority Bonds (i.e., the Bonds and any bonds issued under the Subordinate Indenture) 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 Authority Bonds or other Authority Long Term Indebtedness or are applied directly to payment of debt service on the Authority 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 Authority 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 policies); 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 (except as summarized under "Rate Covenant") the failure of the Authority to meet the rate covenant set forth in the First Lien Indenture 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; or

(j) the Trustee shall have received written notice from a Letter of Credit Bank that an Event of Default shall have occurred under the Reimbursement Agreement, with a direction from the Letter of Credit Bank to the Trustee to accelerate the principal and interest on the respective series or subseries of Bonds secured by such Letter of Credit Bank's Letter of Credit; or

(k) any acceleration of the payment of principal of any series or subseries of Bonds or the payment of Reimbursement Obligations shall have occurred; or

(l) failure by the Authority to pay the principal of any Reimbursement Obligation when due or within any applicable grace period, if any, set forth in the applicable Reimbursement Agreement; or

(m) failure by the Authority to pay any installment of interest on any Reimbursement Obligation when due or under any applicable grace period, if any, set forth in the applicable Reimbursement Agreement.

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. Upon the occurrence and continuance of an Event of Default as described in Section 8.01(j) or Section 8.01(k), at the written direction of the applicable Letter of Credit Bank, the Trustee shall, by written notice to the Authority, declare the series or subseries of Bonds secured by such Letter of Credit Bank's Letter of Credit to be due and payable five (5) Business Days after delivery of such written notice by the Trustee to the Authority, whereupon such series or subseries of Bonds shall, without further action, become and be due and payable five (5) Business Days after the provision of such notice by the Trustee to the Authority. The Trustee shall give written notice thereof to the Authority and shall

give notice thereof by first class mail to all holders of such series or subseries of Outstanding Bonds and to all other holders of Outstanding Bonds and to any Letter of Credit Bank, Insurer or other provider of credit or credit enhancement to any series or subseries of Bonds (each a "Provider). No later than one (1) Business Day of receiving written direction of acceleration from the applicable Letter of Credit Bank, the Trustee shall give written notice to each Provider of the Trustee's receipt of such written direction of acceleration. Such written notice may be electronic. In the case of electronic notice provided pursuant hereto to Bank of America, N.A., such electronic notice shall be sent to any address or addresses as directed by Bank of America, N.A., in the case of electronic notice provided pursuant hereto to PNC Bank, National Association, such electronic notice shall be sent to such other address or addresses as directed by PNC Bank, National Association, and in the case of electronic notice provided pursuant hereto to the Insurer, such electronic notice shall be sent to such address or addresses as directed by the Insurer. Upon the occurrence and continuance of an Event of Default as described in Section 8.01(l) or Section 8.01(m), at the written direction of the applicable Letter of Credit Bank, the Trustee shall, by written notice of the Authority, declare the principal and accrued interest and all other Reimbursement Obligations owed to the applicable Letter of Credit Bank to be immediately due and payable whereupon such Reimbursement Obligations shall, without further action, be immediately due and payable. The Trustee shall give notice thereof by first class mail to all holders of Outstanding Bonds and to each Provider, no later than one (1) Business Day of receiving written direction of acceleration from the applicable Letter of Credit Bank, in the same manner as provided in the previous paragraph. 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 a Bond 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. In no event, so long as a Letter of Credit is in effect and the applicable Letter of Credit Bank is not in default of its obligations pursuant to the applicable Letter of Credit, shall the Trustee waive a default or an Event of Default without prior written consent of the applicable Letter of Credit Bank. Prior to waiving a default or an Event of Default pertaining to an applicable series or subseries of Bonds, the Trustee must receive from the applicable Letter of Credit Bank written notice that the applicable Letter of Credit is still in effect if not drawn upon pursuant a default or an Event of Default hereunder, or if drawn upon pursuant to a default or an Event of Default hereunder, that the applicable Letter of Credit has been fully reinstated. In the event that the principal and interest on any series or subseries of Bonds is declared due and payable, when such Bonds are then supported by a Letter of Credit, the interest on those Bonds shall cease to accrue on the date to which the principal and interest on such Bonds has been accelerated.

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 under the First Lien Indenture subject to the provisions thereof with respect to claims for principal and interest, to the payment of the principal of 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. So long as any series or subseries of Bonds are supported by a Letter of Credit, and the Letter of Credit Bank issuing such Letter of Credit is not in default of its obligations pursuant to the applicable Letter of Credit, the applicable Letter of Credit Bank shall be deemed to be the Bondholder of the series or subseries of Bonds secured by such Letter of Credit with respect to the taking of each remedy provided in this Section and the Trustee shall not take any action directed by the registered owners of the Bonds of the series or subseries of Bonds supported by such Letter of Credit Bank's Letter of Credit. If a Letter of Credit has been drawn to pay principal and interest or purchase price and there are unpaid Reimbursement Obligations, the respective Letter of Credit Bank shall be deemed to be a Bondholder in the amount of the unpaid Reimbursement Obligations, provided that nothing herein shall be interpreted as providing for the double-counting of principal.

So long as the Bond 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. So long as any series or subseries of Bonds are supported by a Letter of Credit, and the Letter of Credit Bank issuing such Letter of Credit is not in default of its obligations pursuant to the applicable Letter of Credit, the applicable Letter of Credit Bank shall be deemed to be the Bondholder of the series or subseries of Bonds secured by such Letter of Credit with respect to the taking of each remedy provided in this Section and the Trustee shall not take any action directed by the Bondholders of the series or subseries of Bonds supported by such Letter of Credit Bank's Letter of Credit without the prior written consent of the applicable Letter of Credit Bank. If a Letter of Credit has been drawn to pay principal and interest or purchase price and there are unpaid Reimbursement Obligations, the respective Bank shall be deemed to be a Bondholder in the amount of the unpaid Reimbursement Obligations.

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 series or subseries of the Bonds are supported by a Letter of Credit, and the Letter of Credit Bank issuing such Letter of Credit is not in default of its obligations pursuant to the applicable Letter of Credit, the applicable Letter of Credit Bank shall be deemed to be the holder of the series or subseries of Bonds supported by such Letter of Credit Bank's Letter of Credit with respect to any direction to the Trustee with respect to the taking of each remedy provided in this Section with respect to such series or subseries of the Bonds and the Trustee shall not

take any direction by the registered owners of the Bonds of the series or subseries of Bonds supported by such Letter of Credit Bank's Letter of Credit.

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.

SUMMARY OF SUBORDINATE INDENTURE

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

Defined Terms

Acquisition Fund. Proceeds deposited in the Acquisition Fund shall be disbursed by the Trustee to pay the costs of the acquisition by the Authority of the capital assets of the Water and Sewer System from the City of Pittsburgh pursuant to a Capital Lease Agreement (the "Acquisition"). Funds may be withdrawn from the Acquisition Fund to pay the costs of Acquisition as provided in the Capital Lease Agreement. Investment earnings on the amounts on deposit in the Acquisition Fund shall be retained in the Acquisition Fund unless the Authority directs the Trustee otherwise. Any monies remaining in the Acquisition Fund after all amounts due in respect of the Acquisition are paid shall be transferred by the Trustee to the Debt Service Fund.

Additional Bonds. The Authority may issue additional Bonds from time to time under the Subordinate Indenture for any lawful purpose including refunding. Any such additional Bonds will not be secured by or afforded the benefits of the Bond insurance policy issued in connection with the Subordinate Bonds. 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 Subordinate Indenture.

Authority Bonds. The term "Authority Bonds" shall mean Bonds owned by the Authority.

Confirming Bank. The term "Confirming Bank" shall mean the bank or financial institution issuing a Confirming Letter of Credit and, as of November 5, 2009, means the Federal Home Loan Bank of Pittsburgh.

Confirming Letter of Credit. The term "Confirming Letter of Credit" shall mean any confirming letter of credit, advice of confirmation or similar instrument issued in connection with a Liquidity Facility, and initially means the Advice of Confirmation dated as of November 5, 2009 issued by the Federal Home Loan Bank of Pittsburgh.

Debt Service Requirements. The term "Debt Service Requirements" shall mean, in respect of any Fiscal Year, the sum of the amount required to be paid in such Fiscal Year by the Authority in respect of the interest on and the principal of the Bonds outstanding or to be outstanding, as the case may be, and the amounts required to be paid to any sinking, purchase or analogous fund established for such Bonds and any Periodic Payments to be paid in connection with any Qualified Interest Rate Swap Agreement to the extent not taken into account in calculating the

Debt Service Requirements on Bonds bearing interest at a variable rate pursuant to the immediately following sentence; provided, however, that the Debt Service Requirements in respect of any Fiscal Year for a series of Bonds for which there shall have been established a sinking, purchase or analogous fund shall be determined after projecting the operation of such fund to the retirement of Bonds by redemption and giving effect to the reduction in the payments to be made in such Fiscal Year in respect of the principal of and interest on such Bonds by reason of such redemption. To the extent any Bonds under consideration bear interest at a variable rate, and a Qualified Interest Rate Swap Agreement is in place with respect to such Bonds, the Debt Service Requirements on those Bonds shall be calculated by substituting the fixed rate used to determine amounts payable by the Authority under the Qualified Interest Rate Swap Agreement in lieu of the variable rate on the Bonds (except as such calculation relates to amounts to be deposited into the Debt Service Reserve Fund); provided, the Counterparty to such Qualified Interest Rate Swap Agreement maintains a rating by Standard & Poor's of at least "AA-" and by Moody's of at least "Aa3", otherwise the Debt Service Requirements for such Bonds shall be assumed to bear interest at the highest of: (i) the actual rate on the date of calculation, or if the indebtedness is not yet outstanding, the initial rate (if established and binding); (ii) if the indebtedness has been outstanding for at least twelve (12) months, the average rate over the twelve (12) months immediately preceding the date of calculation; and (iii) (1) if the interest on the indebtedness is excludable from gross income under the applicable provisions of the Internal Revenue Code of 1986, as amended, the most recently published Bond Buyer 25 Bond Revenue Index (or comparable index if no longer published) plus fifty (50) basis points, or (2) if interest is not so excludable, the interest rate on direct U.S. Treasury Obligations with comparable maturities plus fifty (50) basis points.

Debt Service Fund. The Trustee of the First Lien Indenture will transfer to the Trustee, under the Subordinate Indenture, moneys sufficient to pay the debt service on the Subordinate Bonds.

Debt Service Reserve Fund. There shall be maintained in the Debt Service Reserve Fund an amount which when added to the amounts on hand in the Debt Service Reserve Fund of the First Lien Indenture is equal to the maximum annual debt service on all Authority Bonds. 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.

Failed Remarketing Period. "Failed Remarketing Period" means a Term Mode Period from and including the day on which the Bonds are subject to mandatory tender for purchase but are not remarketed and are thereafter returned to the Holders tendering such Bonds and ending on the day which is 30 days after such mandatory tender date. If such Bonds are not redeemed prior to the end of a Failed Remarketing Period, then such Bonds will be subject to mandatory tender at the end of such Failed Remarketing Period and, if not remarketed, will continue in another 30-day Failed Remarketing Period in which such Bonds will bear interest at the Maximum Rate.

Letter of Credit. The term "Letter of Credit" shall mean an irrevocable transferable direct-pay letter of credit or standby letter of credit issued for a series or subseries of Bonds by a Letter of Credit Bank for the account of the Authority in favor of the Trustee supporting a series or subseries of Bonds as set forth in a Reimbursement Agreement and, during any period in which a Confirming Letter of Credit is in effect, shall also include such Confirming Letter of Credit to the extent provided in the Subordinate Indenture.

Letter of Credit Bank. The Term "Letter of Credit Bank" shall mean the issuer of Letter of Credit pursuant to a Reimbursement Agreement and during any period in which a Confirming Letter of Credit is in effect, shall also include the Confirming Bank to the extent provided in the Subordinate Indenture.

Periodic Payment Date. The term "Periodic Payment Date" means the date on which a Fixed Swap Payment is required under any Qualified Swap Agreement until the termination or maturity of the Qualified Interest Rate Swap Agreement.

Periodic Payments. The term "Periodic Payments" means any regularly scheduled payment payable by the Authority to the Counterparty pursuant to the terms of any Qualified Interest Rate Swap Agreement(s); however, Periodic Payments shall not include any termination payments, costs and fees or any other sums payable under the Qualified Swap Agreement that are not regularly scheduled payments payable by the Authority.

Pledge and Security. The Subordinate Indenture creates a lien on Receipts and Revenues after the payment of (1) the Authority's Current Expenses; (2) the debt service on bonds issued from time to time under the First Lien Indenture; (3) the funding of the Debt Service Reserve Fund, the Operating Reserve Fund and the Renewal and Replacement Fund held pursuant to and as required by the First Lien Indenture; and (4) policy costs under the First Lien Indenture, together with all cash and investments held in any fund other than the Rebate Fund by the Trustee.

Pledged Bonds. The term "Pledged Bonds" shall mean Bonds purchased with proceeds of a draw on a Letter of Credit and not remarketed and held in pledge by the Letter of Credit Bank or its designee.

Qualified Interest Rate Swap Agreement. The term "Qualified Interest Rate Swap Agreement" or "Qualified Swap Agreement" means any agreement relating to any Bonds issued or to be issued under the Subordinate Indenture with a Counterparty whereby the Authority will pay to the Counterparty periodic fixed amounts based upon a fixed percentage of a notional amount specified in such agreement and such Counterparty will pay to the Authority certain periodic floating amounts based upon a variable percent of the same notional amount; provided, that (i) the underwriter for the applicable Bonds or the Authority's financial advisor shall certify to the Authority and the Trustee that (based upon then current market conditions) such Qualified Swap Agreement creates an overall lower Debt Service Requirement than would be attained through the issuance of Additional Bonds in an amount equal to such notional amounts at a fixed rate without such Qualified Interest Rate Swap Agreement and (ii) there is in place a municipal bond insurance policy, letter of credit or other credit enhancement with respect to the Bonds to which the agreement relates guaranteeing payments of amounts owed on the Bonds and a swap insurance policy guaranteeing the payment of Periodic Payments due pursuant to such agreement respectively. Periodic Payments under a Qualified Interest Rate Swap Agreement may be on parity with the Bonds to which the Qualified Interest Rate Swap Agreement relates.

Rebate Fund. Separate and apart from the pledge of the Subordinate Indenture is a Rebate Fund. Deposits, transfers and payments from the Rebate Fund shall be made in accordance with a tax regulatory agreement entered into in connection with the Subordinate Bonds.

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 Subordinate Bonds at the option of the Authority and the Trustee shall apply such monies placed in the Redemption Fund to the purchase or redemption of the Subordinate 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 in the Debt Service Fund with respect to interest on the Subordinate Bonds being redeemed and shall pay the interest due on the redemption date out of such moneys.

Reimbursement Agreement. The term "Reimbursement Agreement" shall means a reimbursement agreement between the Authority and a Letter of Credit Bank, which may be amended from time to time in accordance with the terms hereof and thereof.

Reimbursement Obligations. The term "Reimbursement Agreement" shall mean the obligations to reimburse the Letter of Credit Bank for draws on such Letter of Credit Bank's Letter of Credit or to reimburse the Confirming Bank for draws on the Confirmation, and to pay all other amounts due or to become due under the applicable Reimbursement Agreement.

Term Mode. The "Term Mode" means the Rate Mode during which any Bonds bear interest at the Term Rate.

Term Rate. The "Term Rate" means the per annum interest rate with respect to Bonds in the Term Mode.

Term Rate Period. The "Term Rate Period" means the period commencing, as it relates to a subseries of the Bonds, on the Initial Conversion Date and ending on September 1, 2010, and thereafter each one-year period commencing on September 2 of year and ending on September 1 of the following year or another year, as determined by the Authority.

Investment of Funds

The funds of the Subordinate Indenture may be invested in the following:

(g) Direct obligations (other than an obligation subject to variation in principal repayment) of the United States of America ("United States Treasury Obligations"), (2) obligations fully and unconditionally guaranteed as to timely payment of principal and interest by the United States of America, (3) obligations fully and unconditionally guaranteed as to timely payment of principal and interest by any agency or instrumentality of the United States of America when such obligations are backed by the full faith and credit of the United States of America, or (4) evidences of ownership of proportionate interests in future interest and principal payments on obligations described above held by a bank or trust company as custodian, under which the owner of the investment is the real party in interest and has the right to proceed directly and individually against the obligor and the underlying government obligations are not available to any person claiming through the custodian or to whom the custodian may be obligated.

(h) Federal Housing Administration debentures.

(i) The listed obligations of government-sponsored agencies which are not backed by the full faith and credit of the United States of America: (1) Federal Home Loan Mortgage Corporation (FHLMC) participation certificates (excluded are stripped mortgage securities which are purchased at prices exceeding their principal amounts) and senior debt obligations; (2) Farm Credit Banks (formerly: Federal Land Banks, Federal Intermediate Credit Banks and Banks for Cooperatives) consolidated system-wide bonds and notes; (3) Federal Home Loan Banks (FHL Banks) consolidated debt obligations; (4) Federal National Mortgage Association (FNMA) senior debt obligations and mortgage-backed securities (excluded are stripped mortgage securities which are purchased at prices exceeding their principal amounts); (5) Student Loan Marketing Association (SLMA) senior debt obligations (excluded are securities that do not have a fixed par value and/or whose terms do not promise a fixed dollar amount at maturity or call date); (6) Financing Corporation (FICO) debt obligations; and (7) Resolution Funding Corporation (REFCORP) debt obligations.

(j) Unsecured certificates of deposit, time deposits, and bankers* acceptance (having maturity of not more than 30 days) of any bank the short-term obligations of which are rated "A-l" or better by S&P.

(k) Deposits the aggregate amount of which are fully insured by the Federal Deposit Insurance Corporation (FDIC), in banks which have capital and surplus of at least $5 million.

(l) Commercial paper (having original maturities of not more than 270 days) rated "A-l +" by S&P and "Prime-1" by Moody's.

(m) Money market funds rated "AAm" or "AAm-G" by S&P, or better.

(n) "State Obligations", which mean: (1) Direct general obligations of any state of the United States of America or any subdivision or agency thereof to which is pledged the full faith and credit of a state the unsecured general obligation debt of which is rated "A3" by Moody's and by S&P, or better, or any obligation fully and unconditionally guaranteed by any state, subdivision or agency whose unsecured general obligation debt is so rated; (2) Direct general short-term obligations of any state agency or subdivision or agency thereof described in (1) above and rated "A-1 + " by S&P and "Prime-l" by Moody's; and (3) Special Revenue Bonds (as defined in the United States Bankruptcy Code) of any state, state agency or subdivision described in (1) above and rated " AA" or better by S&P and "Aa" or better by Moody's.

(o) Pre-refunded municipal obligations rated "AAA" by Standard & Poor's Ratings Group and "Aaa" by Moody's Investors Service meeting the following requirements: (1) the municipal obligations are (i) not subject to redemption prior to maturity or (ii) the trustee for the municipal obligations has been given irrevocable instructions concerning their call and redemption and the issuer of the municipal obligations has covenanted not to redeem such municipal obligations other than as set forth in such instructions; (2) the municipal obligations are secured by cash or United States Treasury Obligations which may be applied only to payment of the principal of, interest and premium on such municipal obligations; (3) the principal of and interest on the United States Treasury Obligations (plus any cash in the

escrow) has been verified by the report of independent certified public accountants to be sufficient to pay in full all principal of, interest, and premium, if any, due and to become due on the municipal obligations; (4) the cash or United States Treasury Obligations serving as security for the municipal obligations are held by an escrow agent or trustee in trust for owners of the municipal obligations; (5) no substitution of a United States Treasury Obligation shall be permitted except with another United States Treasury Obligation and upon delivery of a new Verification; and (6) the cash or United States Treasury Obligations are not available to satisfy any other claims, including those by or against the trustee or escrow agent.

(p) Repurchase agreements: with (1) any domestic bank the long term debt of which is rated at least "AA" by S&P and "Aa" by Moody's; (2) any foreign bank the long term debt of which is rated at least "AA" by S&P and "Aa" by Moody's; (3) any broker-dealer with "retail customers" which has, or the parent company (which guarantees the broker dealer) of which has, long-term debt rated at least "AA" by S&P and "Aa" by Moody's, which broker-dealer falls under the jurisdiction of the Securities Investors Protection Corporation (SIPC); or (4) any other entity described above rated "A" or better and acceptable to the Bond Insurer, provided that: (A) The market value of the collateral is maintained at levels and upon such conditions as would be acceptable to S&P and Moody's in an "A" rated structured financing (with a market value approach); (B) Failure to maintain the requisite collateral percentage will require the Authority or the Trustee to liquidate the collateral (C) The Trustee or a third party acting solely as agent therefor (the "Holder of the Collateral") has possession of the collateral or the collateral has been transferred to the Holder of the Collateral in accordance with applicable state and federal laws (other than by means of entries on the transferor's books); (D) The repurchase agreement shall state and an opinion of counsel shall be rendered that the Holder of the Collateral has a perfected first priority security interest in the collateral, any substituted collateral and all proceeds thereof (in the case of bearer securities, this means the Holder of the Collateral is in possession); (£) The transferor represents that the collateral is free and clear of any third-party Liens or claims; (F) The repurchase agreement is a "repurchase agreement" as defined in the United States Bankruptcy Code and, if the provider is a domestic bank, a "qualified financial contract" as defined in the Financial Institutions Reform Recovery and Enforcement Act of 1989 ("FIRREA") and such bank is subject to FIRREA; (G) There is or will be a written agreement governing every repurchase transaction; (H) The Authority and the Trustee each represents that it has no knowledge of any fraud involved in the repurchase transaction; (I) The Authority and the Trustee receive the opinion of counsel (which opinion shall be addressed to the Authority and the Bond Insurer) that such repurchase agreement is legal, valid, binding and enforceable upon the provider in accordance with its terms; (J) The repurchase agreement shall provide that if during its term (i) the provider's rating by either S&P or Moody's falls below "AA-" or "Aa3", respectively, the provider must, at the direction of the Authority or the Trustee (who shall give such direction if so directed by the Bond Insurer), within 10 days of receipt of such direction, either (a) maintain collateral at levels and of the type as shall be reasonably acceptable to the Bond Insurer; or (b) repurchase all collateral and terminate the agreement, and (ii) the provider's rating by either Moody's or S&P is withdrawn or suspended or falls below "A" by S&P or *A2" Moody's, as appropriate, the provider must, at the direction of the Authority or the Trustee (who shall give such direction if so directed by the Bond Insurer), within 10 days of receipt of such direction, repurchase all collateral and terminate the agreement, in either case with no penalty or premium to the Authority or Trustee. Notwithstanding the above, if a repurchase agreement has a term of 270 days of less (with no evergreen provision), collateral levels need not be as specified in (a) above, so long as such collateral levels are 103% or better and the provider is rated at least "AA" and "Aa" by S&P and Moody's, respectively.

(q) Investment agreements with a domestic or foreign bank the long-term debt of which is rated at least "AA" by S&P and " Aa" by Moody's; provided that, by the terms of the investment agreement: (1) interest payments are to be made to the Trustee at times and in amounts as necessary to pay debt service (or, if the investment agreement is for the construction fund, construction draws) on the Bonds; (2) the invested funds are available for withdrawal without penalty or premium, at any time upon not more than seven days* prior notice (which notice may be amended or withdrawn at any time prior to the specified withdrawal date); provided that the Subordinated Indenture specifically requires the Authority or the Trustee to give notice in accordance with the terms of the investment agreement so as to receive funds thereunder with no penalty or premium paid; (3) the investment agreement shall state that is the unconditional general obligation of, and is not subordinated to any other obligation of, the provider thereof; (4) a fixed guarantee rate of interest is to be paid on invested funds and all future deposits, if any required to be made to restore the amount of such funds to the level specified under the Subordinate Indenture: (5) the Authority or the Trustee receives the opinion of domestic counsel (which opinion shall be addressed to the Authority and the Bond Insurer) that such investment agreement is legal, valid, binding and enforceable upon the provider in accordance with its terms and of foreign counsel (if applicable) in form and substance acceptable, and addressed to, the Bond Insurer; (6) the investment agreement shall provide that if during its term (a) the provider's rating by either S&P or Moody's falls below "AA" of "Aa", respectively,

the provider must, at the direction of the Authority or the Trustee (who shall give such direction if so directed by the Bond Insurer), within 10 days of receipt of such direction, either (i) collateralize the investment agreement by delivering or transferring in accordance with applicable state and federal laws (other than by means of entries on the provider's books) to the Authority, the Trustee or a third party acting solely as agent therefor (the "Holder of the Collateral") collateral free and dear of any third-party liens or claims the market value of which collateral is maintained at levels and upon such conditions as would be acceptable to S&P and Moody's in an "A" rated structured financing (with a market value approach); or (ii) repay the principal of and accrued but unpaid interest on the investment, (b) the provider's rating by either S&P or Moody's is withdrawn or suspended or falls below "A" or "A2", respectively, the provider must, at the direction of the Authority or the Trustee (who shall give such direction if so directed by the Bond Insurer), within 10 days of receipt of such direction, repay the principal of an accrued but unpaid interest on the investment, in either case with no penalty or premium to the Authority or Trustee; (7) The investment agreement shall state and an opinion of counsel shall be rendered that the Holder of the Collateral has a perfected first priority security interest in the collateral, any substituted collateral and all proceeds thereof (in the case of bearer securities, this means the Holder of the Collateral is in possession); and (8) the investment agreement must provide that if during its term (a) the provider shall default in its payment obligations, the provider's obligations under the investment agreement shall, at the direction of the Authority or the Trustee (who shall give such direction if so directed by the Bond Insurer), be accelerated and amounts invested and accrued but unpaid interest thereon shall be repaid to the Authority or Trustee, as appropriate, and (b) the provider shall become insolvent, not pay its debts as they become due, be declared or petition to be declared bankrupt, etc. ("event of insolvency"), the provider's obligations shall automatically be accelerated and amounts invested and accrued but unpaid interest thereon shall be repaid to the Authority or Trustee, as appropriate.

Rate Covenant

The Authority covenants that it will comply with one of the following in any fiscal year:

3) The Authority will maintain, charge and collect, so long as any of the Bonds shall remain 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) Funds 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 Authority Bonds during the then current fiscal year of the Authority.

(c) The Authority will maintain, charge and collect, so long as any of the Subordinate Bonds shall remain 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 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 funds and may be used to pay debt service on Authority Bonds or are applied directly to payment of debt service on Authority Bonds), shall be at all times at least sufficient to provide annually:

(d) Funds to pay all of the Current Expenses of the Authority; and

(e) An amount equal to 100% of the debt service requirements with respect to Authority Bonds during the then current fiscal year of the Authority,

The Authority also covenants with the holders of the Subordinate Bonds that if at any time the revenues collected shall not be sufficient to enable the Authority to comply with the provisions as 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 Subordinate Indenture will be remedied before the end of the next ensuing fiscal year.

Insurance Covenant

The Authority will at all times cause all of 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 such properties are usually insured by persons operating properties of similar nature in the same or similar localities.

Annual Audit

The Authority covenants to employ an independent auditor to perform such duties as are imposed on the independent auditors by the Subordinate 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 Subordinate Bond issued under the Subordinate Indenture:

(f) failure by the Authority to pay the principal of, or the premium (if any) payable upon the redemption of, any Subordinate 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

(g) failure by the Authority to pay any installment of interest on any Subordinate Bond when due and payable (no effect being given to payments made under the Bond insurance policy); or

(h) the entry of an order or decree appointing a receiver or receivers of the Water and Sewer System, the Receipts and Revenues or the Pledged 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

(i) 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 the Pledged 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

(j) 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, the Receipts and Revenues, or the Pledged 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

(k) 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 may be due to the impracticability of such repair or replacement or the lack of funds therefor or for any other reason); or

(l) 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 under the Subordinate Indenture or the Municipality Authorities Act; or

(m) the failure of the Authority to observe any other covenant, condition or agreement of the Authority contained in the Subordinate Bonds or in the Subordinate 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 Subordinate Bonds then outstanding or the bond insurer, provided that, the failure of the Authority to meet the rate covenant in the Subordinate Indenture shall not constitute such 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

(n) there has been declared a default with respect to bonds issued pursuant to the First Lien Indenture.

Remedies Subject to First Lien Indenture

Upon the occurrence or continuance of an event of default, the Trustee may judicially seek specific performance with respect to the rate covenant. Notwithstanding any other provision hereto, however, for so long as the First Lien Indenture is operative, the Trustee may not exercise rights or remedies hereunder with respect to the Receipts and Revenues until and unless the trustee of the First Lien Indenture shall have instituted proceedings to exercise its rights under the First Lien Indenture.

Remedies

Acceleration of Principal. Subject to the Section entitled "Remedies Subject to First Lien Indenture," 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 Subordinate Bonds then Outstanding shall by written notice to the Authority, declare the Subordinate Bonds to be immediately due and payable, whereupon they shall, without further action, become and be immediately due and payable, anything in the Subordinate Indenture or in the Subordinate Bonds to the contrary notwithstanding, and the Trustee shall give notice thereof to the Authority and shall give notice thereof by certified mail to all holders of outstanding Subordinate Bonds. In addition, the Trustee shall be entitled to exercise any or all of the remedies granted to a trustee or under the 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 payment default thereunder, shall the Trustee accelerate the payment of the Subordinate Bonds without the written consent of the bond insurer.

The above provision, however, is subject to the condition that if, after the principal of said Subordinate Bonds shall have been so declared to be due and payable, all arrears of interest, if any, upon the Subordinate Bonds and interest on overdue installments of interest at the rate of interest specified therein, and the principal of all Subordinate 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 Subordinate Bonds, including reasonable attorneys' fees paid or incurred, then, and in every such case, the holders of not less than a majority in an aggregate principal amount of the Subordinate 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 Subordinate Bonds issued hereunder; 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 the 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.

Remedies of Trustee and Bondholders; Rights of Entry

Subject to the Sections entitled "Remedies Subject to First Lien Indentures" and "Acceleration of Principal," 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 Subordinate 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 all Receipts and venues, and after deducting therefrom the expenses of operation, maintenance and repair and all expenses incurred hereunder and all other proper outlays hereto 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 of and interest on the Subordinate Bonds. Whenever all that is due upon such Subordinate Bonds and installments of interest and under any of the terms of the Subordinate 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 Article VIII of the Subordinate Indenture entitled "Remedies," the bond insurer shall, so long as no payment default has occurred under its insurance policy, be deemed to be the sole owner of the Subordinate Bonds.

Judicial Action

In case of the breach of any of the covenants or conditions of the Subordinate Indenture, the Trustee shall have the right and power to take appropriate judicial proceedings for the enforcement of its rights and the right of the Bondholders thereunder. Upon the happening of an event of default under the Subordinate Indenture, the Trustee may either after entry, or without entry, proceed by suit or suits, actions or special proceedings at laws or in equity to enforce its rights and the rights of the Bondholders hereunder, 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 Subordinate Bonds then outstanding and upon being indemnified. For purposes of Article VIII of the Subordinate Indenture entitled Remedies, the bond insurer shall, so long as no event of payment default has occurred under its insurance policy, be deemed to be the sole owner of the Subordinate Bonds.

Anything in the Subordinate Indenture to the contrary notwithstanding, so long as the insurance policy is in effect and the bond is not in payment default, the bond insurer may direct the Trustee with respect to the taking of each remedy provided in Article VIII of the Subordinate Indenture entitled "Remedies," and the Trustee shall not take any action directed by the Bondholders without the prior written consent of the bond insurer.

Waivers and Supplemental Indentures Not Requiring Consent of Bondholders

In addition to any supplemental subordinate indenture otherwise by the Subordinate Indenture, the Authority (with 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 hereto as shall not be inconsistent with the terms and provisions hereof and which shall not adversely affect the rights of the holders of the Subordinate Bonds hereunder (which supplemental indentures or agreements shall thereafter form a part thereof) for the following purposes:

(o) to cure any ambiguity, formal defect or omission in the Subordinate Indenture or any supplemental subordinate indenture;

(p) 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;

(q) to add to the covenants and agreements of the Authority in the Subordinate Indenture, other covenants and agreements thereafter to be observed, or to surrender any right or power herein reserved to or conferred upon the Authority;

(r) to modify any of the provisions of the Subordinate Indenture or to relieve the Authority of any of the obligations, conditions or restrictions contained in the Subordinate Indenture, provided that such modification or relief shall not, by the express terms of the particular supplemental subordinate indenture, become effective until all Subordinate Bonds outstanding on the date of the execution and delivery of such supplemental subordinate indenture shall no longer be outstanding;

(s) to make such provision in regard to matters or questions arising under the Subordinate Indenture as may be necessary or desirable and not inconsistent with the Subordinate Indenture; or

(t) to close the Subordinate 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 to all Subordinate Bonds issued and to be issued thereunder or in respect of one or more series of Subordinate Bonds, or otherwise.

Supplemental Subordinate Indentures Requiring Consent of Bondholders

With the consent of the holders of not less than 66-2/3 % in aggregate principal amount of the Subordinate Bonds then outstanding or, in the case one or more but less than all of the series of the Subordinate 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 Subordinate Bonds of each series so affected then outstanding, and with the consent of any guarantor of principal and interest of any series of Subordinate Bonds, the Authority and the Trustee may from time to time and at any time enter into an indenture or indentures supplemental to the Subordinate Indenture for the purpose of eliminating any of the provisions of the Subordinate Indenture or of any supplemental subordinate indenture or of modifying in any manner the rights of the holders of the Subordinate 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 Subordinate Indenture upon any part of the Pledged Revenues, or reduce the aforesaid percentage of Subordinate Bonds, the holders of which are required to consent to any such supplemental subordinate indenture, without the consent of the holders of all Subordinate Bonds then outstanding. No supplemental subordinate indenture shall be effective unless it has been consented to in writing by the bond insurer.

Discharge of Subordinate Indenture

If the Authority, its successors or assigns, shall pay or cause to be paid unto the holders of all Subordinate Bonds outstanding the principal and interest to become due thereon and the premium thereon, if any, and to the bond insurer any and all amounts due and owing under the Subordinate Indenture, then the Subordinate 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 Subordinate Indenture which may then be in the possession of the Trustee.

Subordinate 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 Subordinate 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: (i) a verification report of an independent nationally recognized certified public accountant verifying the sufficiency of the escrow established to pay the Subordinate Bonds in full on the maturity date in form and substance satisfactory to the bond insurer; (ii) an escrow agreement in form and substance satisfactory to the bond insurer; and (iii) an opinion of bond counsel that the Subordinate Bonds are no longer outstanding under the Subordinate Indenture.

Removal of Trustee

The Trustee may be removed at any time by an instrument in writing signed by the Authority, without cause, so long as no event of default has occurred and is continuing, or by the holders of not less than a majority in aggregate principal amount of Subordinate Bonds outstanding if an event of default has occurred and is continuing, or by the bond insurer, without cause, so long as no event of default has occurred and is continuing. No such removal shall become effective until a successor (or temporary) trustee is appointed and has accepted the duties of Trustee.

Claims Upon the Bond Insurance Policy

The Trustee shall receive any amount paid under the bond insurance policy in trust on behalf of holders of the Subordinate Bonds and shall deposit any such amount in a Policy Payments Account established by the Trustee and distribute such amount only for purposes of making the payments for which a claim was made. Such amounts shall be disbursed by the Trustee to holders of the Subordinate Bonds in the same manner as principal and interest payments are to be made with respect to the Subordinate Bonds.

Subject to and conditioned upon payment of any interest or principal with respect to the Subordinate Bonds by or on behalf of the bond insurer, each Subordinate Bondholder, by its purchase of Subordinate Bonds, assigns to the bond insurer, all rights to the payment of interest or principal on the Subordinate Bonds, including, without limitation, any amounts due to the Subordinate Bondholders in respect of securities law violations arising from the offer and sale of the bonds, which are then due for payment. The bond insurer may exercise any option, vote, right, power or the like with respect to the Subordinate Bonds to the extent it has made a principal payment pursuant to the bond insurance policy. The foregoing assignment is in addition to, and not in limitation of, rights of subrogation otherwise available to the bond insurer to respect of such payments.

Each Subordinate Bondholder, by its purchase of bonds, and the Trustee hereby agrees that the bond insurer may at any time during the continuation of an insolvency proceeding direct all matters relating to such insolvency proceeding, including, without limitation, (i) all matters relating to any preference claim, (ii) the direction of any appeal of any order relating to any preference claim, and (iii) the posting of any surety, supersedeas or performance bond pending any such appeal. In addition, and without limitation of the foregoing, the bond insurer shall be subrogated to the rights of the Trustee and each Subordinate Bondholder in any insolvency proceeding to the extent it is subrogated pursuant to the bond insurance policy, including, without limitation, any rights of any party to an adversary proceeding action with respect to any court order issued in connection with any such insolvency proceeding.

APPENDIX C

AUTHORITY FINANCIAL STATEMENTS AS OF DECEMBER 31, 2009 AND DECEMBER 31, 2008

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MaherDuessel
Certified Public Accountants

Pittsburgh Water And Sewer Authority

Financial Statements and Required Supplementary and Additional Information

Years Ended December 31, 2009 and 2008
with Independent Auditor's Report

PITTSBURGH WATER AND SEWER AUTHORITY

YEARS ENDED DECEMBER 31, 2009 AND 2008

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Independent Auditor's Report

Board of Directors
Pittsburgh Water and Sewer Authority

We have audited the accompanying financial statements of the Pittsburgh Water and Sewer Authority (Authority), a component unit of the City of Pittsburgh (City), Pennsylvania, as of and for the years ended December 31, 2009 and 2008 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 audits 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 the 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 opinions.

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, 2009 and 2008, and the respective changes in financial position and cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

The Management's Discussion and Analysis Section on pages i through vi is not a required part of the financial statements but is supplementary information required by accounting principles generally accepted in the United States of America. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the supplementary information. However, we did not audit the information and express no opinion on it.

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

Maher Duessel

Pittsburgh, Pennsylvania
April 27, 2010

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THE PITTSBURGH WATER AND SEWER AUTHORITY

2009 Financial Statements
Management Discussion and Analysis

The Pittsburgh Water and Sewer Authority (the "Authority") comparative 2009 and 2008 fiscal year financial statements enclosed have been conformed to meet the requirements of Governmental Accounting Standards Board ("GASB") Statement No. 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, the Statements of Revenues, Expenses and Changes in Net Assets, 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 of 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 asset section of the balance sheet classifies the total net asset deficit, as invested in capital assets, restricted for capital activity and unrestricted.

The Statements of Revenues, Expenses, and Changes in Net Assets summarize operating and non-operating activity for the fiscal year and the resulting impact on the Authority's net assets.

The Statements of Revenues, Expenses, and Changes in Net Assets include Wastewater Treatment Revenues and Expenses for services provided by the Allegheny County Sanitary Authority (ALCOSAN). There are no outstanding bond issues associated directly or indirectly with wastewater revenue streams.

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 year.

Effective January 1, 2009, the Authority began depreciating certain qualifying utility assets capitalized in 2009 over 50 and 70 year lives. The change was made prospectively, for qualifying assets acquired prior to January 1, 2009. The purpose of the change was to bring the Authority's depreciable lives of specific infrastructure categories such as plant, water and sewer lines in sync with industry standard practices.

During 2009, the Authority completed a review of over 400 utility assets having a total acquisition value exceeding $410.0 million and having a net book value of $289.0 million. Only assets having an acquisition value of $50,000 or greater were included in the analysis. Prior to the change, the average number of years remaining on the qualified assets was 31 years. Post-implementation extended, on average, the qualifying asset lives by an additional 27 years. The result is an annual reduction in depreciation expense of $4.66 million beginning in 2009.

Financial Highlights

In 2009, operating income increased by 18.5% or $4.5 million resulting in net income of $4.6 million, up from a $.4 million net loss in 2008. Below are the 2009 financial highlights:

Total operating revenues in 2009 were up $4.4 million or 3.4% to $134.2 million when compared to 2008. This was driven primarily by a 13.6% increase in wastewater treatment revenues due to a 16% rate

increase by ALCOSAN effective January 1, 2009. Water and sewer conveyance revenues remained unchanged from 2008.

Total non-operating revenues increased by $9.5 million, mostly driven by the $14.8 million rise in development/donated revenues. Some the largest development projects include the Port Authority's $8.0 million North Shore Connector project, Army Corps of Engineer's $2.2 million Sheraden Park, Pittsburgh's $1.85 million Casino project, Carson Street's $1.7 million and the Pittsburgh Technology Center's project for $.735 million. Non-operating revenues for grants declined 74.8% or $.738 million to $.248 million and interest revenue decreased by $4.3 million to $.690 million due to lower market rates.

Total operating expenses remained unchanged in 2009 at $105.6 million compared to $105.6 million in 2008. Significant operating expenses included the following factors:

- Salary and employee benefit expenses were up $1.1 million or 7.5%. The increase is attributed to an average salary increase of 3% and staff increases in operations.

  The 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) represent Local 2719 [white-collar] employees and Local 2037 [foremen]. A new five-year agreement with AFSCME became effective January 1, 2009 and will expire December 31, 2013. A five-year agreement with the PJCBC became effective January 1, 2008, and expires December 31, 2012.

- Overall direct operating expenses, including salaries and benefits, increased by $6 million to $58.6 million in 2009 or, 11.4% from $52.6 million in 2008. Wastewater treatment expense increased by $4.7 million or 11.7% to $44.8 million over $40.1 million in 2008. Chemicals expense increased by $.4 million. Equipment increased by $.2 million for new vehicles. Sewer repairs decreased by $.216 million or 17.0% to $1.05 million in 2009, from $1.27 million in 2008. Vactor Debris removal expense increased by $.1 million. Emergency water line repairs decreased by $.826 million to $.842 million or 49.5% from $1.67 million in 2008. Curb box repairs increased by $.23 million. Catch basin repairs increased by $.518 million to $1.3 million or 68.2% from $.759 million in 2008. Repairs and maintenance expense for IT infrastructure and building repairs increased by $.656 million due primarily to annual software support costs in 2009, up $.538 million.

- Overall G&A expenses decreased by $2.2 million to $10.3 million, or 18% in 2009 compared to $12.5 million in 2008. This was achieved primarily due to a high rate of collections on delinquent accounts resulting from a new relationship with a third-party collection agency and a $1.4 million settlement associated with the Authority's purchase of the Borough of Millvale's (formerly a wholesale customer) water infrastructure systems. Additional information on the purchase is provided below.

- Overall other expenses increased 6.7% or $3.9 million to $61.8 million in 2009 from $57.9 million in 2008. Non-city water subsidy to Pennsylvania American Water Company (PAWC) increased 50% or $.5 million to $1.6 million in 2009 compared to $1.07 million in 2008. Interest expense on bond debt increased 29.5% or $9.0 million to $39.7 million in 2009 compared to $30.7 million in 2008. The increase in interest expense was driven by the recognition of 12 months of expense in 2009 compared to 6 months of expense in 2008. The new 2008 Construction Fund of $98 million was established in June 2008. Interest expense was also up due to an increase in liquidity and remarketing fees and lower receipts from the SWAP Partners. Expenses related to the cooperate agreement with the City of Pittsburgh decreased by $1.02 in 2009 and finally, as mentioned above, depreciation and amortization expense decreased by $4.66 million due to the change in utility asset lives for specific and qualifying infrastructure.

- In 2009, collections increased by $8.5 million or 7.0%. ALCOSAN's 16% rate increase for wastewater treatment provided $6.9 million of the increase, while the remaining $2.9 million was derived by improved collection agency results and a $1.4 settlement of one

delinquent wholesale customer. These significant improvements in collections resulted in a drop in bad debt expense of $1.9 million from 2008.

Other 2009 highlights include:

- For the first time in its history, the Authority agreed to purchase and fully manage a water system outside the City of Pittsburgh. In an effort to seek efficiencies and reduce increasing infrastructure costs, the Borough of Millvale, an adjacent municipality, agreed to sell its water system to the Authority for $1.555 million in cash and settlement of all outstanding AR balances of $1.4 million. The agreement brings 1,800 customers, servicing some 4,000 residents, to the Authority system increasing revenues by an estimated $.7 million per year.

- In March, the Authority appointed Jordan Tax Service, Inc. as its Collector and the law firm of Goehring, Rutter & Boehm, P.C. as Special Legal Counsel for the collection of delinquent water, sewer and sewage treatment charges. The agreement calls for a collection commission, plus other administrative and legal proceeding costs to be added to all Authority delinquent claims not paid within 90 days of the initial billing date. If fully collected, the Authority stands to collect 100% of delinquent balances without incurring a collection agency fee. The agency collected over $2.6 million, of which the Authority received $2.3 million during 2009.

- In 2009, the Authority restructured its Series B of 2008 Water and Sewer System First Lien Revenue Refunding Bonds from variable rate obligations enhanced with FSA bond insurance and a Dexia standby agreement to variable rate obligations enhanced by direct pay letters of credit (LOCs). The Series 2008B Bonds were restructured into two subseries. The 2008 B-1 with a par value of $72.75 million with a Bank of America LOC and the 2008 B-2 with a par value of $72.745 million with a PNC Bank, NA LOC. The Authority maintained the FSA insurance on the swap agreements associated with the Series B Bonds. The LOCs will expire on October 22, 2011. Merrill Lynch serves as remarketing agent on the Series B1 and J.P. Morgan Securities Inc. as remarketing agent on the Series B2. Each series is rated Aaa/VMIG 1 by Moody's and AAA/A-1 by Standard & Poor's. Due to the expiration of the Dexia standby agreement on October 8, 2009, the 2008 B Bonds went into bank bond mode for 14 days, accruing interest of $.440 million. Annual fees increased from 25 bps to 175 bps.

- Also in 2009, the Authority restructured its Series C of 2008 Water and Sewer System Subordinate Revenue Refunding Bonds from weekly variable rate bonds to term mode bonds. The Series C Bonds were converted into four subseries 2008C-1A, 2008C-1B, 2008C-1C and 2008C-1D's, each maintaining the FSA bond insurance. However, the 2008C-1A, 2008C-1B and 2008C-1C's utilized LOCs provided by Northwest Savings Bank, ESB Bank, and Washington Federal Savings Bank, respectively, with confirming letter of credits (CLOCs) provided by the Federal Home Loan Bank of Pittsburgh. The initial term mode for these bonds is September 1, 2010. At the end of this period, there will be a mandatory tender. The bonds could then be converted to another term mode, fixed or a weekly mode. During the final months of the restructuring, portions of the Series 2008 C Bonds structured with a federal home loan bank LOC moved into bank bond status for 33 days accruing interest of $.408 million. The remaining Series C-1D Bonds were structured as term mode with FSA bond insurance without a standby agreement. The initial term mode for the Series C-1D Bonds is September 1, 2012. At the end of this period, there will be a mandatory tender. The bonds could then be converted to another term mode, fixed or a weekly mode. Prior to the restructuring of the 2008 Series C-1 Bonds the liquidity expired on October 8, 2009 and a portion of the bonds were held in bank bond mode for 23 days accruing interest of $.170 million. The CLOC provides coverage for payments of regularly scheduled principal and interest, as well as unremarketed tendered bonds for an amount equal to 195 days at the 12% maximum rate. The anticipated expiration of the CLOC is November 9, 2011 unless terminated earlier or extended for an additional year. Annual fees increased from 25 bps to 125 bps with FHLB member banks.

- The Authority, in an exchange with JP Morgan Chase, for extending liquidity on the 2008 Series D2 Bonds and 2008 Series C2 Bonds which expired on June 11, 2009, agreed to revise the liquidity expiration date on the 2007 Series B1 and B2 to 1 year from an initial five-year period. The liquidity for the 2007 Series B1 and B2 now expire on June 11, 2010. Annual liquidity fees on the 2007 Series B1 and B2 Bonds increased by 10 bps. Annual fees on the 2008 Series D2 Bonds increased by 110 bps and the fees for the 2008 Series C2 Bonds increased by 105 bps.

- Debt service coverage in 2009 and 2008 was 1.87 and 2.1, respectively. These coverage factors exceed the 1.2 coverage factor required under the bond covenant.

- In late December, the Authority went live with an Electronic Billing and Presentment (EBPP) system. Customers now have the ability to enroll for this free service, receive their Authority bills via e-mail and to pay them on-line. The process is provided by BillTrust and linked to the Authority's web site. Internally, the Authority now processes in-house checks using a scanning machine provided by ProfitStars. This process scans customer and miscellaneous revenue checks, creates two electronic files, one for the bank for deposit and another for automatically uploading into the financial reporting systems. This eliminates the need to physically take in-house checks to a bank and improves the accuracy of bank reconciliations.

- The Authority applied for and closed on five (5) low-interest loans with the Pennsylvania Infrastructure Investment Authority (Pennvest) totaling $36.8 million including three sewer projects and two water projects. The three sewer projects will cover $19.8 million cost of rehabilitation on 10 miles of 8"-30" diameter sewer pipe, 8,215 linear feet of large diameter public sewers, and 7,867 linear feet of 18"-24" reinforced concrete sewer lines. The work is required under the Consent Order and Agreement. The two water projects include $8.6 million for rehabilitation of the Clarifiers No. 1, 2 & 3, replacement of 10,000 linear feet of pipe main that is over 150 years old, and $8.4 million in construction of a new backwash water holding tank and tank rehabilitation on Herron Hill. This project qualified for funding under the American Recovery & Reinvestment Act (ARRA).

- As part of its health and wellness program, the Authority installed exercise equipment in a designated area and provided mandatory instructional training sessions to allow employees at specific times of the day to use the systems to improve their health and lifestyle. The employee responses have been encouraging.

- Partnership with Port Authority - In 2009, the Authority recognized $8.0 million in donated property revenues related to construction and relocation of several large water and sewer lines to accommodate the North Shore Connector. This project is ongoing and, upon completion, will improve the quality of life for city residents.

- The City of Pittsburgh is the largest of the 83 municipalities that convey raw sewage to ALCOSAN for treatment. In January 2004, the Authority and the City of Pittsburgh executed a Consent Order and Agreement (the Order) regarding sanitary and combined sewer overflows within the City of Pittsburgh. The other signatories to the Order are the Pennsylvania Department of Environmental Protection and Allegheny County Health Department which executed the Order on April 21, 2004. The intent of the Order is to develop a regional Long-Term Control Plan to address combined and sanitary sewer overflows and ultimately improve water quality.

  The Order does not contain fines or penalties for past non-compliance, but does propose binding obligations for work on a going forward basis. The Authority continues to meet the requirements of the Order. See note 12 - Commitments and Contingencies for additional details.

- The City of Pittsburgh remained under financial stress in 2009. The Authority has three agreements with the City of Pittsburgh. The Authority leases the water and sewer system under the Capital Lease, which was fully funded in 1998. The Authority makes payment

to the City of Pittsburgh for direct and indirect services under the Cooperation Agreement. Under this Agreement the Authority also funds, on behalf of the City of Pittsburgh, a rate equalization subsidy to other City water companies. Under a separate agreement the Authority also, on behalf of the City of Pittsburgh, is required to purchase delinquent wastewater treatment receivables. The Authority is financially self-sufficient and should not be adversely affected by any bankruptcy filing by the City of Pittsburgh. Any other actions by the City of Pittsburgh to increase Authority funding would require Board approval.

CONDENSED STATEMENT OF NET ASSETS
(Dollars expressed in thousands)

	December 31,		Variance	
	2009	2008	Dollars	%
Capital assets:			Increase (Decrease)	
Producing assets	$ 444,804	$ 416,413	$ 28,391	6.8%
Construction in progress	25,548	27,307	(1,759)	-6.4%
Restricted assets	107,188	135,943	(28,755)	-21.2%
Current assets and bond costs	92,474	90,899	1,575	1.7%
Total Assets	$ 670,014	$ 670,562	$ (548)	-0.1%
Liabilities:				
Current liabilities	$ 50,333	$ 43,695	$ 6,638	15.2%
Long-term liabilities	650,119	661,864	(11,745)	-1.8%
Total Liabilities	700,452	705,559	(5,107)	-0.7%
Net Assets (Deficit):				
Invested in capital assets, net of related liabilities	(57,456)	(71,634)	14,178	-19.8%
Restricted for capital activity and debt service	13,954	15,988	(2,034)	-12.7%
Unrestricted	13,064	20,649	(7,585)	-36.7%
Total Net Assets (Deficits)	(30,438)	(34,997)	4,559	-13.0%
Total Liabilities and Net Assets (Deficits)	$ 670,014	$ 670,562	$ (548)	-0.1%

CONDENSED STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET ASSETS

(Dollars expressed in thousands)

	Year Ended December 31,		Variance	
	2009	2008	Dollars	%
			Increase (Decrease)	
Operating Revenues	$ 134,175	$ 129,734	$ 4,441	3.4%
Operating Expenses:				
Direct operating	38,770	38,346	424	1.1%
Wastewater treatment	44,795	40,096	4,699	11.7%
Cooperation Agreement	8,631	9,650	(1,019)	-10.6%
Subsidy of non-customer City residents	1,603	1,070	533	49.8%
Depreciation and amortization	11,808	16,471	(4,663)	-28.3%
Total Operating Expenses	105,607	105,633	(26)	0.0%
Operating Income	28,568	24,101	4,467	18.5%
Non-operating revenues (expenses):				
Federal grants	248	986	(738)	-74.8%
Donated property	14,819	204	14,615	7164.2%
Interest revenue	690	5,032	(4,342)	-86.3%
Interest expense and other	(39,766)	(30,717)	(9,049)	29.5%
Total Non-operating Revenues (Expenses)	(24,009)	(24,495)	486	-2.0%
Net Gain/(Loss)	$ 4,559	$ (394)	$ 4,953	-1257.1%

Financial Condition

The Authority's financial condition in 2009 remained stable for a seventh year in a row despite the downturn in the national economy and major disruptions in the financial markets. Water utility revenues remained steady and unrestricted cash reserves from operations increased by 2.5% or $1.0 million.

The Authority's strategic plan continues to focus on improving its financial condition, customer service, improving internal efficiencies, maintaining regulatory compliance and security, while providing an environment that encourages employee development.

Requests for Information

This financial report is designed to provide a general overview of the Authority's finances for all those with an interest in the government's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Executive Director, Penn Liberty Plaza I, 1200 Penn Ave., Pittsburgh, PA 15222.

PITTSBURGH WATER AND SEWER AUTHORITY

STATEMENTS OF NET ASSETS

(Dollars expressed in thousands)

DECEMBER 31, 2009 AND 2008

Assets	2009	2008
Current assets:		
Cash and cash equivalents	$ 42,937	$ 41,914
Accounts receivable, net:		
Water:		
Billed	8,357	10,159
Unbilled	4,457	4,245
Total water	12,814	14,404
Wastewater treatment:		
Billed	4,739	4,894
Unbilled	3,362	3,235
Total wastewater treatment	8,101	8,129
Other receivables	1,077	2,137
Total accounts receivable, net	21,992	24,670
Prepaid expenses	296	190
Inventory	1,623	1,564
Total current assets	66,848	68,338
Noncurrent assets:		
Restricted assets:		
Accrued interest receivable	78	484
Cash and cash equivalents	10,648	22,366
Investments	96,462	113,093
Total restricted assets	107,188	135,943
Capital assets, not being depreciated	25,548	27,307
Capital assets, net of accumulated depreciation	444,804	416,413
Bond issue costs, net of accumulated amortization	25,626	22,561
Total noncurrent assets	603,166	602,224
Total Assets	$ 670,014	$ 670,562

(Continued)

The notes to financial statements are an integral part of this statement.

PITTSBURGH WATER AND SEWER AUTHORITY

STATEMENTS OF NET ASSETS

(Dollars expressed in thousands)

DECEMBER 31, 2009 AND 2008

(Continued)

Liabilities and Net Assets	2009	2008
Liabilities:		
Current liabilities:		
Bonds and loans payable, current portion	$ 16,435	$ 14,625
Accrued payroll and related obligations	683	673
Accounts payable wastewater treatment	15,703	13,757
Accounts payable and other accrued expenses	4,101	3,326
Accounts payable from restricted assets	3,359	1,610
Accrued interest payable from restricted assets	10,052	9,704
Total current liabilities	50,333	43,695
Noncurrent liabilities:		
Deferred revenue	335	356
Accrued payroll and related obligations	1,149	1,150
Bonds and loans payable, net of current portion	648,635	660,358
Total noncurrent liabilities	650,119	661,864
Total Liabilities	700,452	705,559
Net Assets:		
Invested in capital assets, net of related debt	(57,456)	(71,634)
Restricted for capital activity and debt service	13,954	15,988
Unrestricted	13,064	20,649
Total Net Assets	(30,438)	(34,997)
Total Liabilities and Net Assets	$ 670,014	$ 670,562

(Concluded)

The notes to financial statements are an integral part of this statement.

PITTSBURGH WATER AND SEWER AUTHORITY

STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET ASSETS

(Dollars expressed in thousands)

YEARS ENDED DECEMBER 31, 2009 AND 2008

	2009	2008
Operating Revenues:		
Residential, commercial, and industrial water sales	$ 86,271	$ 86,627
Wastewater treatment	45,514	39,439
Other	2,390	3,668
Total operating revenues	134,175	129,734
Operating Expenses:		
Direct operating expenses	38,770	38,346
Wastewater treatment	44,795	40,096
Cooperation agreement operating expenses:		
Indirect cost allocation - sewer conveyance	4,500	4,415
Indirect cost allocation - water	4,131	5,235
Expense of water provided by other entities:		
Subsidy of customers located in the City	1,603	1,070
Depreciation	10,317	13,914
Amortization of capitalized lease assets	1,491	2,557
Total operating expenses	105,607	105,633
Operating Income	28,568	24,101
Non-operating Revenues (Expenses):		
Federal grants	248	986
Donated property	14,819	204
Interest revenue	690	5,032
Interest expense - bonds	(37,984)	(29,362)
Interest expense - other	(149)	(153)
Amortization of bond issue costs	(1,633)	(1,202)
Total non-operating revenues (expenses)	(24,009)	(24,495)
Net Income (Loss)	4,559	(394)
Net Assets:		
Beginning of year	(34,997)	(34,603)
End of year	$ (30,438)	$ (34,997)

The notes to financial statements are an integral part of this statement.

PITTSBURGH WATER AND SEWER AUTHORITY

STATEMENTS OF CASH FLOWS

(Dollars expressed in thousands)

YEARS ENDED DECEMBER 31, 2009 AND 2008

	2009	2008
Cash Flows From Operating Activities:		
Cash received from customers	$ 136,853	$ 130,718
Cash paid to suppliers and employees and customer refunds	(37,964)	(39,555)
Cash paid to City of Pittsburgh under the Cooperation Agreement	(8,631)	(9,650)
Cash paid to other water companies for subsidy of customers located in the City of Pittsburgh	(1,603)	(1,070)
Cash paid to ALCOSAN for wastewater treatment	(42,849)	(38,507)
Net cash provided by (used in) operating activities	45,806	41,936
Cash Flows From Investing Activities:		
Purchase of investment securities	(325,996)	(706,271)
Proceeds from sale and maturities of investment securities	347,937	619,409
Interest income	1,096	4,886
Net cash provided by (used in) investing activities	23,037	(81,976)
Cash Flows From Capital and Related Financing Activities:		
Purchase/construction of property, plant, and equipment	(23,621)	(16,738)
Proceeds from federal grants	248	408
Proceeds from issuance of long-term debt	-	419,276
Payment to refunding bond escrow agent	-	(300,489)
Payment made for bond reoffering costs	(4,719)	-
Principal payments on debt	(14,625)	(15,531)
SWAP receipts	1,926	5,850
SWAP payments	(18,007)	(10,620)
Liquidity and remarketing fees	(4,707)	(824)
Interest paid on borrowings	(16,033)	(18,629)
Net cash provided by (used in) capital and related financing activities	(79,538)	62,703
Increase (Decrease) in Cash and Cash Equivalents	(10,695)	22,663
Cash and Cash Equivalents:		
Beginning of year	64,280	41,617
End of year	$ 53,585	$ 64,280
Consists of:		
Restricted cash and cash equivalents	$ 10,648	$ 22,366
Unrestricted cash and cash equivalents	42,937	41,914
	$ 53,585	$ 64,280
Reconciliation of Operating Income to Net Cash Provided by (Used in) Operating Activities:		
Operating income	$ 28,568	$ 24,305
Adjustments:		
Depreciation and amortization	11,808	16,471
Reserve for uncollectible amounts	(2,997)	1,788
Change in:		
Accounts receivable	4,615	(788)
Other accounts receivable	1,060	(220)
Wastewater accounts payable	1,946	1,589
Accounts payable and other accrued expenses	774	(997)
Other	32	(212)
Net cash provided by (used in) operating activities	$ 45,806	$ 41,936

The notes to financial statement are an integral part of this statement.

1. ORGANIZATION

The Pittsburgh Water and Sewer Authority (Authority) provides water to approximately 80,000 residential, commercial, and industrial customers located in the City of Pittsburgh (City), Pennsylvania, and collects wastewater throughout the City.

A Board of Directors (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"). The Authority's term of existence is through 2045. 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 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 issues bonds and notes payable solely from the Authority's revenues.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity

These financial statements present the financial position, income, 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, *"Financial Reporting Entity."* The Authority's financial statements are not intended to present the financial position or results of operations of the City taken as a whole.

Basis of Accounting and Measurement Focus

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 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 GASB.

Classification of Net Assets

In accordance with the provision of GASB Statement No. 34, *"Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments,"* net assets are classified into three components – invested in capital assets, net of related debt; restricted; and unrestricted. These classifications are defined as follows:

- Invested in capital assets, net of related debt – This component of net assets consists of capital assets net of accumulated depreciation and reduced by the outstanding balances of any bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets net of bond issue costs, premiums and discounts and remaining deferred refunding losses.

- Restricted – This component of net assets consists of constraints placed on net asset use through external restrictions.

- Unrestricted – This component of net assets consists of net assets that do not meet the definition of "restricted" or "invested in capital assets, net of related debt." The net investment in joint ventures is also reflected here.

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.

Deferred Interest

Interest expense, net of related earnings on funds restricted for the purpose of capital improvements, is deferred and allocated to the cost of capital assets. Accordingly, during 2009, the Authority's interest expense of $784, net of deferred interest earnings of $76, resulted in net capitalized interest expense of $708. During 2008, the Authority's interest expense of $797, net of deferred interest earnings of $56, resulted in net capitalized interest expense of $741.

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.

Bond Issue and Reoffering Costs, Premiums, and Discounts

Bond issue and reoffering 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 statements 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 statements of net assets as a decrease to bonds payable.

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, 1998, 2003, 2007, and 2008 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 which extend to 2037. The unamortized balances are reflected as a reduction of bonds payable.

Interest Rate Swap Termination Costs

Termination costs associated with the defeasance of hedged debt are included in the net carrying amount of the old refunded debt when calculating the deferred refunding loss. During 2008, the Authority paid approximately $6 million in swap termination costs associated with the partial refunding of the Series 2007 Bonds.

Remarketing, Liquidity and Letter of Credit Fees

Associated with the Authority's variable rate bonds, the Authority pays various fees to periodically remarket the bonds and to a third party to provide liquidity in the event that the Authority is unable to remarket the variable rate bonds and needs to repurchase the bonds on a temporary basis until they can be later remarketed. These fees are generally paid quarterly and are calculated as a percentage of the outstanding par amount of the variable rate bonds.

Capital Assets

Capital assets owned by the Authority are recorded at cost including that portion of deferred interest that is ultimately capitalized. Depreciation of fixed 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 70 years. Non-utility assets have estimated useful lives ranging from 5 to 10 years.

The water and sewer system represents assets leased from the City. Amortization of capital lease assets is provided on the straight-line basis applying an estimated average remaining useful life from the inception of the lease.

Maintenance and repairs are charged to expense as incurred.

Change in Accounting Estimate

As of December 31, 2008, the Authority depreciated its Utility assets using the straight-line method with assigned useful lives of between 30 and 40 years. Private and public industry practice can include asset lives for specific categories (i.e., plant, water and sewer lines) for up to 70 or more years.

During 2009, the Authority took on the task of reviewing approximately 400 utility assets, having a total acquisition value just over $410 million with a net book value of $289 million. As a result of this analysis the Authority changed the useful lives on certain utility assets of the authority. The Authority determined the actual useful lives on these assets should be 50-70 years. The change was made prospectively. The new depreciation expense on assets already in service was calculated by using the difference in prior useful life and the new useful life as the new useful life. The net book value at December 31, 2008 is now being depreciated over the new calculated useful life. This change in accounting estimate resulted in a decrease in depreciation expense of approximately $4.66 million for the year ended December 31, 2009.

Clarification of Revenues

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

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

- Non-operating revenues – Non-operating revenues include activities that have the characteristics of non-exchange transactions, such as interest income and other

revenue sources that are defined as non-operating revenues by GASB Statement No. 9, *"Reporting Cash Flows of Proprietary and Non-expendable Trust Funds and Governmental Entities that Use Proprietary Fund Accounting"* and GASB Statement No. 34.

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.

Inventory

Inventory is stated at cost, on a moving average price basis.

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 continent 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.

Reclassifications

Certain amounts from the prior year financial statements were reclassified to conform to the current year presentation.

Pending Pronouncements

In June 2008, GASB issued Statement No. 53, *"Accounting and Financial Reporting for Derivative Instruments."* This Statement addresses the recognition, measurement, and disclosure of information regarding derivative instruments entered into by state and local governments. This Statement is intended to improve how state and local governments report information about derivative instruments - financial arrangements used by governments to manage specific risks or make investments - in their financial statements. The Statement specifically requires governments to measure most derivative instruments at fair value in their financial statements that are prepared using the accrual basis of accounting. The

guidance in this Statement also addresses hedge accounting requirements and will be effective for the Authority's financial statements for the year ended December 31, 2010. The Authority is currently evaluating the impact that this new pronouncement will have on the financial statements.

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").

Cooperation Agreement

Under the terms of the Cooperation Agreement, 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 assumes the City's obligation 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.

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.

Pension

Employees of the Authority participate in the City's Municipal Pension Fund Plan (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 the Authority's 2009 payroll of $11,879 was covered by the Plan. Employee contributions for the year amounted to approximately $459.

The City's obligations relative to the Plan 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 2009 Minimum Municipal Obligation calculated for the City's Plan indicated a 2009 normal cost of $561 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 2009, together with other elements of expense for employee service during 2009 would not exceed the sum of the 2009 contributions made by the Authority and 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 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

Water

Water sales revenue is recognized as earned during the period when water is supplied to customers. Customers are billed on a monthly billing cycle by the Authority 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, is recognized coincident with recognition of revenue. At December 31, 2009 and 2008, the reserve for uncollectible water accounts was approximately $15.4 million and $17.1 million, respectively. The Authority has rights to utilize collection agencies, service terminations, liens, and real property sales to protect its interests, limit further losses, and motivate payments from delinquent customers.

Wastewater Treatment

Although the Authority does not provide wastewater treatment, it assumed responsibility for certain wastewater treatment revenue and expenses beginning in 1996. Pursuant to a 1955 agreement, the City was responsible for paying the Allegheny County Sanitary Authority (ALCOSAN) 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 treatment receivables assigned by the City and assumed the City's obligation to pay ALCOSAN for delinquencies. During 2004, the Authority and ALCOSAN executed a first amendment to the 1955 agreement whereby the Authority elected to change the billing structure. Effective May 2004, the Authority began direct billing City residents for current and delinquent wastewater treatment charges and remitting to ALCOSAN the aggregate amount of service charges billed. Wastewater treatment activity and the related assets and liabilities appear on the statements of revenue, expenses and changes in net assets and the statements of net assets, respectively. At December 31, 2009 and 2008, the reserve for uncollectible wastewater accounts was approximately $7.44 million and $8.66 million, respectively.

5. CAPITAL ASSETS

Capital assets consisted of the following at December 31, 2009 and 2008:

	Balance at December 31, 2008	Additions	Transfers	Balance at December 31, 2009
Capital assets not being depreciated:				
Construction in progress	$ 27,307	$ 27,875	$ (29,634)	$ 25,548
Capital assets being depreciated:				
Water and sewer system	102,167	-	-	102,167
Utility assets	480,912	41,766	(1,867)	520,811
Non-utility assets	16,228	300	-	16,528
Total capital assets being depreciated	599,307	42,066	(1,867)	639,506
Total capital assets	626,614	69,941	(31,501)	665,054
Accumulated depreciation	(182,894)	(11,808)	-	(194,702)
Capital assets, net	$ 443,720	$ 58,133	$ (31,501)	$ 470,352

	Balance at December 31, 2007	Additions	Transfers	Balance at December 31, 2008
Capital assets not being depreciated:				
Construction in progress	$ 22,901	$ 13,549	$ (9,143)	$ 27,307
Capital assets being depreciated:				
Water and sewer system	102,167	-	-	102,167
Utility assets	468,557	13,321	(966)	480,912
Non-utility assets	15,842	392	(6)	16,228
Total capital assets being depreciated	586,566	13,713	(972)	599,307
Total capital assets	609,467	27,262	(10,115)	626,614
Accumulated depreciation	(166,446)	(16,448)	-	(182,894)
Capital assets, net	$ 443,021	$ 10,814	$ (10,115)	$ 443,720

During 2009 the Authority received donated utility assets of $14,819 related to various development projects.

6. PAYROLL AND RELATED OBLIGATIONS

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

	Balance at December 31, 2008	Change	Balance at December 31, 2009	Current Portion
Compensated absences	$ 795	$ 101	$ 896	$ 112
Workers' compensation	637	(151)	486	122
Early retirement incentive	-		-	-
Payroll, withholdings, and taxes	390	60	450	449
	$ 1,822	$ 10	$ 1,832	$ 683

	Balance at December 31, 2007	Change	Balance at December 31, 2008	Current Portion
Compensated absences	$ 778	$ 17	$ 795	$ 16
Workers' compensation	644	(7)	637	266
Early retirement incentive	7	(7)	-	-
Payroll, withholdings, and taxes	694	(303)	391	391
	$ 2,123	$ (300)	$ 1,823	$ 673

7. BONDS AND LOANS PAYABLE

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

refunded the outstanding 1985 and 1986 Bonds. The principal of defeased 1986 Bonds still outstanding at December 31, 2009 and 2008 is $122,790 and $136,490, respectively.

Series 1993

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.

During 2009, the bond insurance company for the Series 1993 Bonds had their rating withdrawn by Standard & Poor's and are currently unrated. In October of 2008, the bond insurance company and a financial institution entered into a reinsurance agreement whereby the financial institution reinsured certain bond insurance risks of the bond insurance company.

The Series A-1993 Bonds bear interest at a fixed rate of 6.5%, payable semi-annually at March 1 and September 1. The outstanding 1993 Bonds are not subject to optional or mandatory redemption.

Fair value of the 1993 Bonds at December 31, 2009 and 2008, with carrying amounts of $27 million and $27 million, respectively, based on quoted market prices, is approximately $31 million and $30 million, respectively.

Series 1998

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). At December 31, 2009 and 2008, the remaining unamortized deferred refunding loss of $533 and $569, respectively, on the transaction is shown as a reduction of the long-term debt and will be amortized through 2037.

Fair value of the 1998 Bonds at December 31, 2009 and 2008, with carrying amounts of $59 million and $56 million, respectively, based on quoted market prices, is approximately $59 million and $56 million, respectively.

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 semi-annual basis and are carried at cost plus accrued interest. Total maturity value of the 1998 Series B Bonds is $146.8 million.

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

Series 2003

On September 23, 2003, the Authority issued $167,390 of Water and Sewer System Revenue Refunding Bonds ("2003 Bonds"). The proceeds of the 2003 Bonds were used to provide funds for the current refunding of a portion of the 1993 Bond Series. In connection with the 2003 debt refundings, the Authority recorded a deferred refunding loss of $3,162 which is being amortized as an adjustment to interest expense over the life of the bonds using the effective interest method. The unamortized balance of the deferred refunding adjustment is $1,376 and $1,468 at December 31, 2009 and 2008, respectively.

The 2003 Bonds were issued at a bond discount of $830, which is being amortized as an adjustment to interest expense over the life of the bonds using the effective interest method.

The 2003 Bonds bear interest at rates ranging from 1.45% to 4.75%. Interest is payable in semi-annual installments on March 1 and September 1 until maturity. Stated maturities for the 2003 Bonds are at various face amounts on September 1 of each year beginning September 1, 2004 through 2023. The 2003 Bonds which mature after September 1, 2014, are subject to redemption prior to maturity at the option of the Authority.

The fair market value of the 2003 Bonds at December 31, 2009 and 2008, with carrying amounts of $57 million and $67 million, respectively, based on quoted market prices, is approximately $60 million and $69 million, respectively.

Series 2007

During March 2007, the Authority issued $158,895 Series 2007 First Lien Water and Sewer Revenue Bonds ("2007 Bonds"): $43,720 Series A of 2007 (fixed rate), $57,585 Series B-1 of 2007 (variable rate demand), and $57,590 Series B-2 of 2007 (variable rate demand). The purpose of this bond issue was to refund the Series 2002 and Series 2005 Bonds (the refunded bonds). Proceeds of the 2007 Bonds were invested in an escrow account to pay principal and interest on the refunded bonds from the time of refunding through the bonds' earliest optional call dates. In connection with the debt refundings, the Authority recorded a deferred refunding loss of $6,032, which is being amortized as an adjustment to interest expense over the life of the bonds using the effective interest method. At December 31, 2009 and 2008, the remaining unamortized deferred refunding loss of $5,402 and $5,759, respectively. At December 31, 2009, the principal of the defeased Series 2002 Bonds outstanding was $94,810, and the defeased 2005 Bonds outstanding was $46,515.

The 2007 Bonds were issued at a bond premium of $2,660, which is being amortized as an adjustment to interest expense over the life of the bonds using the effective interest method. Bond issuance costs of $598 are also being amortized over the life of the 2007 Bonds using the effective interest method.

The 2007 Series A Bonds bear interest at rates ranging from 4.00% to 5.00%. Interest is payable in semi-annual installments on March 1 and September 1 until maturity. The 2007 Series A Bonds are subject to extraordinary redemption prior to maturity at the option of the Authority in the event of a condemnation, damage or destruction of the water and sewer system.

The 2007 Series B Bonds bear interest at a variable rate with interest payments due on the first business day of each month. The 2007 Series B Bonds that mature on September 1 of 2018-2033 are subject to mandatory sinking fund redemption.

The fair market value of the 2007 Bonds at December 31, 2009 and 2008, with carrying amounts of $120 million and $124 million, respectively, based on quoted market prices, is approximately $123 million and $127 million, respectively.

In conjunction with the issuance of the 2007 Variable Rate Bonds, the Authority entered into various pay fixed/receive variable interest rate swaps to effectively change the Bonds' variable interest rates to synthetic fixed rates. These swap transactions are discussed in Note 8: Interest Rate Swaps.

Series 2008

During May 2008, the Authority issued $93,635 Series 2008 Water and Sewer System First Lien Revenue Bonds ("2008 Fixed Rate Bonds"): $68,970 Series A of 2008 (fixed rate, taxable) and $24,665 Series D-1 of 2008 (fixed rate). The purpose of this bond issue was to advance refund portions of certain maturities of the Series 1993A and Series 2003 Bonds, to fund the costs of certain capital additions, to fund the premium for the Bond Insurance Policy securing payments on 2008 Fixed Rate Bonds, and to fund termination payments on certain interest rate swaps.

During June 2008, the Authority issued $320,515 Series 2008 Water and Sewer System First Lien Revenue Bonds ("2008 Variable Rate Demand Bonds"): $145,495 Series B of 2008 (variable rate demand), $51,910 Series C-1 of 2008 (variable rate demand), $51,885 Series C-2 of 2008 (variable rate demand), and $71,225 Series D-2 of 2008 (variable rate demand). The purpose of this bond issue was to currently refund the Series 1998A and Series 1998C, to currently refund certain maturities of the Series 2007 B-1 and Series 2007 B-2 Bonds, to advance refund certain maturities of the Series 1998B Bonds, to fund approximately $98 million of certain capital additions, to fund the premium for the Bond Insurance Policy securing payments on 2008 Variable Rate Demand Bonds, and to fund termination payments on certain interest rate swaps.

In connection with these advance refundings, portions of the proceeds of the 2008 Bonds were deposited into irrevocable trusts with an escrow agent to provide for certain debt service payments on the refunded bonds. The advance refunding resulted in a deferred refunding loss of $18,119 which is amortized as an adjustment to interest expense over the life of the 2008 Bonds using the effective interest method. At December 31, 2009, the remaining unamortized deferred refunding loss of $16,357 on the transaction is shown as a reduction of long-term debt and will be amortized through 2037.

At December 31, 2009, the principal of the defeased Series 1993A Bonds outstanding was $21,875 and the defeased 2003 Bonds outstanding was $29,730. The maturity value of defeased 1998B compound interest bonds outstanding at December 31, 2009 was $19,300.

The Taxable 2008 Series A Bonds bear interest at rates ranging from 6.36% to 6.61%. Interest is payable in semi-annual installments on March 1 and September 1 until maturity. The Taxable 2008 Series A Bonds are subject to optional redemption, in whole or in part, on any date, at the option of the Authority. The Taxable 2008 Series A Bonds that mature in 2018 and 2024 are subject to mandatory sinking fund payments beginning in 2017 and continuing through 2024.

The 2008 Series D-1 Bonds (together with the Taxable 2008 Series A Bonds are the 2008 Fixed Rate Bonds) bear interest at rates ranging from 4.50% to 5.00%. Interest is payable in semi-annual installments on March 1 and September 1 until maturity. The 2008 Series D-1 Bonds which mature on or after September 1, 2019 are subject to optional redemption, in whole or in part, on any date, at the option of the Authority at any time on or after September 1, 2018, at 100% of the principal amount plus accrued interest.

The 2008 Series B, C, and D-2 Bonds (2008 Variable Rate Bonds) as originally offered bear interest at a variable rate with interest payments due on the first business day of each month. Interest rates are reset weekly; the fluctuating rate per annum to be determined by the respective remarketing agents. The weekly rate is subject to a cap of 12% per annum.

During the second part of 2009, the Authority reoffered the 2008 Series B Bonds and the 2008 Series C-1 variable rate bonds. The 2008 Series B Bonds had an outstanding principal amount of $145,495,000 and the 2008 C-1 bonds had an outstanding principal balance of $51,910,000 at the time of reoffering.

The Series B Bonds were reoffered on October 16, 2009. The reason for this reoffering was the replacement of expiring standby bond purchase agreements on these variable rate bonds with letters of credit. Bank of America is the letter of credit provider on the Series B-1 Bonds ($72,750,000) and PNC is the letter of credit provider on the Series B-2 Bonds ($72,745,000). The reoffering did not change the interest rate mode on these variable rate bonds.

The 2008 Series C-1 bonds were reoffered in two separate reofferings. On November 10, 2009, $25,000,000 was reoffered in a term interest rate mode. The interest rate on these bonds is fixed at 2% for two years. After the two-year period, the interest rate will reset. The new reoffered bonds are as follows: Series C1-A $10,000,000; Series C1-B $10,000,000, and Series C1-C $5,000,000.

During November the remaining C-1 Bonds were reoffered as the C1-D Series of $26,910,000. These bonds were also issued in a term interest rate mode, fixing the interest rate at 2.625%. It is the Authority's understanding that this rate is only fixed for one year before it will reset.

Credit facilities for the 2008 Series C1-A, C1-B and C1-C bonds are provided by the Northwest Savings Bank, ESB Bank and Washington Federal Savings bank, respectively. Liquidity facilities continue to be provided by JP Morgan Chase on the 2007-B1, 2007-B2, 2008-C2 and 2008-D2 Series bonds and are set to expire on June 11, 2010.

Variable Rate Bonds are subject to optional redemption, in whole or in part, on any date, at the option of the Authority. The 2008 Series B Bonds that mature on September 1 of 2039 are subject to mandatory sinking fund redemption. The 2008 Series C Bonds that mature on September 1 of 2035 are subject to mandatory sinking fund redemption. The 2008 Series D-2 Bonds that mature on September 1 of 2040 are subject to mandatory sinking fund redemption.

The 2008 Series Bonds are subject to extraordinary redemption prior to maturity at the option of the Authority in the event of a condemnation, damage or destruction of the water and sewer system.

The 2008 Fixed Rate Bonds were issued at a bond premium of $824, which is being amortized as an adjustment to interest expense over the life of the bonds using the effective interest method. Bond issuance costs of $7,459, including $5,036 of swap termination fees, are also being amortized over the life of the Bonds using the effective interest method.

The 2008 Variable Rate Bonds issuance costs of $9,337, including $594 of swap termination fees, are being amortized over the life of the Bonds using the effective interest method.

The fair market value of the 2008 Bonds at December 31, 2009 and 2008, with carrying amounts of $414 and $414 million, respectively, based on quoted market prices, is approximately $415 and $413 million, respectively.

Variable rate bonds require a liquidity facility and/or a letter of credit. The Authority is subject to the risk that the bank does not renew the credit facility and/or that the pricing changes throughout the life of the bonds. Additionally, the Authority purchased insurance as a credit enhancement on the variable rate bonds. Trading spreads on the bonds and the preservation of the liquidity facility may be largely linked to the credit quality of the insurance provider. Therefore, if there is an event that would adversely affect the investor's perception of the credit quality of the insurer, the Authority could be subject to paying higher credit spreads on the bonds and risk losing the liquidity facility.

During 2008, the Authority experienced delays in remarketing certain 2008 Variable Rate Demand Bonds (bonds). These bonds were not able to be remarketed on a timely basis due to a downgrade in the bond insurer's credit rating and other market concerns. The bonds were temporarily considered to be Bank Bonds, as they were purchased by banks as governed by the respective series' Standby Bond Purchase Agreement. The yield on bank bonds was 7% per annum. As a result of market deterioration during 2008 and into 2009, the

liquidity and remarketing fees paid in 2009 on the variable rate bonds were higher then anticipated.

In conjunction with the issuance of the 2008 Variable Rate Bonds, the Authority entered into various pay fixed/receive variable interest rate swaps to effectively change the Bonds' variable interest rates to synthetic fixed rates. These swap transactions are discussed in Note 8: Interest Rate Swaps.

Bonds and state loans payable (PENNVEST) consisted of the following at December 31, 2009 and 2008:

	Balance at December 31, 2008	Additions	Reductions	Balance at December 31, 2009
Bonds and loans payable:				
Revenue bonds	$ 688,165	$ 3,038	$ (13,820)	$ 677,383
State loans (PENNVEST)	13,365	-	(805)	12,560
	701,530	3,038	(14,625)	689,943
Less: deferred refunding loss	(28,934)	-	1,828	(27,106)
Unamortized bond (discount)/premium	2,387	-	(154)	2,233
Total bonds and loans	$ 674,983	$ 3,038	$ (12,951)	$ 665,070

	Balance at December 31, 2007	Additions	Reductions	Balance at December 31, 2008
Bonds and loans payable:				
Revenue bonds	$ 574,121	$ 417,041	$ (302,997)	$ 688,165
State loans (PENNVEST)	14,165	-	(800)	13,365
	588,286	417,041	(303,797)	701,530
Less: deferred refunding loss	(20,543)	(18,119)	9,728	(28,934)
Unamortized bond (discount)/premium	85	2,384	(82)	2,387
Total bonds and loans	$ 567,828	$ 401,306	$ (294,151)	$ 674,983

Debt service payments of the State Loans at December 31, 2009 are as follows:

	State Loans		
	Principal	Interest	Total
2010	$ 815	$ 163	$ 978
2011	826	152	978
2012	837	141	978
2013	849	129	978
2014	861	117	978
2015-2019	4,486	403	4,889
2020-2024	3,842	99	3,941
2025	44	-	44
	$ 12,560	$ 1,204	$ 13,764

Debt service payments on the 1993, 1998, 2003, 2007, and 2008 Bonds at December 31, 2009 are as follows:

	Revenue Bonds		
	Principal	Interest	Total
2010	$ 15,620	28,899	$ 44,519
2011	14,885	27,078	41,963
2012	12,465	26,226	38,691
2013	14,155	35,722	49,877
2014	15,250	24,699	39,949
2015-2019	82,235	116,994	199,229
2020-2024	99,458	98,659	198,117
2025-2029	46,314	171,523	217,837
2030-2034	131,879	69,691	201,570
2035-2039	177,920	28,619	206,539
2040	40,440	1,106	41,546
	650,620	$ 629,216	$ 1,279,836
Accretion	26,763		
Total	$ 677,383		

Interest payments were calculated for the Variable Rate Bonds using the synthetic fixed rate interest rates as described in Footnote 8.

Interest incurred for the years ended December 31, 2009 and 2008 on bonds payable, exclusive of capitalized interest and amortization of refunding losses, was approximately $28 and $22 million, respectively. Interest costs for 2009 and 2008 included $1.8 million and $2.0 million, respectively, of amortization of the deferred refunding losses.

In accordance with the provisions of the trust indentures for the 1993, 1998, 2003, 2007, and 2008 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 statements of net assets as "Restricted Assets" at December 31, 2009 and 2008, was:

	2009	2008
Capital project funds	$ 83,226	$ 110,112
Debt service and reserve funds	10,083	10,314
Operating reserve account	8,521	8,476
Capitalized interest fund	4,783	6,466
Other funds	575	575
	$ 107,188	$ 135,943

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. At December 31, 2009, the Authority was in compliance with this covenant.

8. INTEREST RATE SWAPS

Description of 2008 Swaps

During fiscal year 2008, the Authority entered into five pay-fixed, receive-variable interest rate swap contracts. The interest rate swaps were effective June 12, 2008. Beginning September 1, 2008, the Authority began to make semi-annual interest payments on the 1st of

each March and September through September 1, 2035 (two swaps); September 1, 2039 (two swaps); and, September 1, 2040 (for one swap), respectively. The Counterparties make monthly interest payments on the 1st of each calendar month, which began July 1, 2008 through September 1, 2035 for two of the swaps; September 1, 2039 for two of the swaps; and, September 1, 2040 for one swap.

The intention of the 2008 swaps is to effectively change the Authority's variable interest rate on the $145,495 Water and Sewer System (Variable Rate Demand) First Lien Revenue Refunding Bonds Series B of 2008, on the $71,225 Water and Sewer System (Variable Rate Demand) First Lien Revenue Bonds Series D-2 of 2008, and on the $103,795 Water and Sewer System (Variable Rate Demand) Subordinate Revenue Refunding Bonds Series C of 2008 (the bonds) to synthetic fixed rates of 4.038%, 4.103%, and 3.998%, respectively.

The bonds will accrue interest at a weekly rate that is determined by a remarketing agent on each effective rate date. The interest rate on the bonds may not exceed 12%. Per the interest rate swap agreements, the Authority will receive SIFMA Municipal Swap Index while paying a fixed rates of 4.038%, 4.103%, and 3.998%, respectively.

The interest payments on the interest rate swaps are calculated based on notional amounts, all of which reduce, beginning on September 1, 2035, so that the notional amounts approximate the principal outstanding on the respective bonds. The interest rate swaps expire consistent with the final maturity of the respective bonds.

As of December 31, 2009, the 2008 swaps had the following notional amounts and market values: $72,747 notional amount and ($6,456) market value; $41,518 notional amount and ($3,460) market value; $72,747 notional amount and ($6,429) market value; $62,277 notional amount and ($5,100) market value; and, $71,225 notional amount and ($6,912) market value. The market value is an estimated net present value of the expected cash flows calculated using relevant mid-market data inputs and based on the assumption of no unusual market conditions or forced liquidation.

Description of 2007 Swaps

During fiscal year 2007, the Authority entered into two pay-fixed, receive-variable interest rate swap contracts. The interest rate swaps were effective March 9, 2007. Beginning September 1, 2007, the Authority began to make semi-annual interest payments on the 1st of each March and September through September 1, 2033. The Counterparties makes monthly interest payments on the 1st of each calendar month, beginning April 1, 2007 through September 1, 2033. During 2008, a portion of the 2007 interest rate swaps were terminated

as the underlying bonds were refunded. The Authority paid $594 in termination costs related to the termination of these 2007 interest rate swaps.

The intention of the 2007 swaps is to effectively change the Authority's variable interest rate on the $41,320,000 Water and Sewer System (Variable Rate Demand) First Lien Revenue Refunding Bonds Series B-1 of 2007 and on the $41,325,000 Water and Sewer System (Variable Rate Demand) First Lien Revenue Refunding Bonds Series B-2 of 2007 (the bonds) to synthetic fixed rates of 3.932%, respectively.

The bonds will accrue interest at a weekly rate that is determined by a remarketing agent on each effective rate date. The interest rate on the bonds may not exceed 12%. Per the interest rate swap agreements, the Authority will receive SIFMA Municipal Swap Index while paying a fixed rate of 3.932%.

The interest payments on the interest rate swaps are calculated based on notional amounts, both of which reduce, beginning on September 1, 2018, so that the notional amounts approximate the principal outstanding on the respective bonds. The interest rate swaps expire on September 1, 2033 consistent with the final maturity of the bonds.

As of December 31, 2009, the 2007 swaps had the following notional amounts and market values: $41,325 notional amount and ($3,383) market value; and, $41,320 notional amount and ($3,318) market value. The market value is an estimated net present value of the expected cash flows calculated using relevant mid-market data inputs and based on the assumption of no unusual market conditions or forced liquidation.

Additionally, during 2007 in anticipation of the issuance of additional bonds, the Authority entered into four forward starting pay-fixed, receive-variable interest rate swaps. These swaps were terminated and cash settled by the Authority during 2008. Termination costs of approximately $5,063 were paid by the Authority from proceeds of the 2008 bond issues. As the 2007 forward starting swaps were entered into to lock interest rates in anticipation of issuing the 2008 bonds the cost of terminating the swaps were considered to be bond issue costs of the 2008 bonds. Bond issue costs are deferred and amortized into expense over the life of the related bonds.

Accounting and Risk Disclosures

During the years ended December 31, 2009 and 2008, the Authority paid $16,197 and $7,614, respectively, fixed and received $1,695 and $4,964, respectively, variable related to their outstanding swap agreements.

The Authority has the ability to early terminate the interest rate swaps and to cash settle the transaction on any business day by providing at least two business days written notice to the counterparty. Evidence that the Authority has sufficient funds available to pay any amount payable to the counterparty must be provided at the time notice is given. At early termination, the Authority will be required to pay or receive a settlement amount which is comprised of the market value of the terminated transaction(s) based on market quotations and any amounts accrued under the contract(s).

Through the use of derivative instruments such as this interest rate swap, the Authority is exposed to a variety of risks, including credit risk, interest rate risk, termination risk, basis risk, and rollover risk.

- Credit risk is the risk that a counterparty will not fulfill its obligations. On December 31, 2009, the interest rate swap counterparties were rated Aa3 and A2 by Moody's Investors Service, Inc., a nationally recognized statistical rating organization. If a counterparty failed to perform according to the terms of the interest rate swap agreement, there is some risk of loss to the Authority, up to the fair market value of the swaps.

  It is the Authority's policy to require counterparty collateral posting provisions in its non-exchange traded derivative instruments. There terms require collateral to be posted if the respective counterparty's credit rating falls below BBB+ by Standard & Poor's and the swap insurer becomes bankrupt. The amount of collateral to be posted is calculated based on derivatives in asset positions to the Authority. As of year-end, the counterparties had not and were not required to post collateral for these transactions.

- Termination risk is the risk that a derivative's unscheduled end will affect the Authority's asset/liability strategy or will present the Authority with potentially significant unscheduled termination payments to the counterparty. The counterparties to the interest rate swaps do not have the ability to voluntarily terminate the interest rate swap; however, the Authority is exposed to termination risk in the event that the one or more of the counterparties default.

- Basis risk is the risk that arises when variable interest rates on a derivative and an associated bond or other interest-paying financial instrument are based on different indexes. The Authority is subject to basis risk as the interest index on the variable rate arm of the swaps is based on the SIFMA Municipal Swap Index and the variable interest rate on the bonds is based on a different index, a weekly rate that is

determined by a remarketing agent. Although expected to correlate, the relationships between different indexes vary and that variance could adversely affect the Authority's calculated payments, and as a result cost savings or synthetic interest rates may not be realized. During 2009, the weekly rate paid by the Authority on the underlying bonds was approximately $4,010 and exceeded the amount received on the various interest rate swaps of approximately $1,695.

- The Authority is further subject to basis risk in the event that the underlying bonds become fixed rate Bank Bonds or that the maturity of the underlying bonds is accelerated as discussed in Note 7: Bonds and Loans Payable.

- Rollover risk is the risk that a derivative associated with the Authority's debt does not extend to the maturity of that debt. When the derivative terminates, the associated debt will no longer have the benefit of the derivative. The Authority is not exposed to rollover risk as the swap agreements terminate on the same day the last payment is due on the respective bonds.

Contingencies

All of the Authority's derivative instruments, include provisions that require the Authority to post collateral in the event that the credit ratings of its credit support provider's senior long term, unsecured debt credit rating falls below BBB+ by Standard & Poor's and FSA, the swap insurer, becomes bankrupt. The amount of collateral to be posted is calculated based on derivatives in negative market value positions to the Authority. The collateral is to be posted in the form of cash, U.S. Treasuries or other approved securities. As of year-end, the Authority had not and was not required to post collateral for these transactions.

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 trusteed assets, as otherwise permitted by the trust indenture as supplemented and amended in 1998. Throughout the years ended December 31, 2009 and 2008, the Authority invested its funds in such authorized investments. The Authority does not have a formal investment policy which addresses custodial credit risk, interest rate risk, credit risk, or concentration of credit risk.

GASB Statement No. 40, *"Deposit and Investment Risk Disclosures,"* requires disclosures related to the following deposit and investment risks: credit risk (including custodial credit risk and concentration of credit risk), interest rate risk, and foreign currency risk. The following is a description of the Authority's deposit and investment risks.

Custodial Credit Risk – Custodial credit risk is the risk that in the event of a bank failure, the Authority's deposits may not be returned to it. As of December 31, 2009 and 2008, $40,673 and $42,153, respectively, of the Authority's bank balance of $41,923 and $42,653, respectively, was exposed to custodial credit risk. These amounts are collateralized in accordance with Act 72 of the Pennsylvania state legislature which requires the institution to pool collateral for all governmental deposits and have the collateral held by an approved custodian in the institution's name. These deposits have carrying amounts of $42,937 and $41,914 as of December 31, 2009 and 2008, respectively, all of which is reported as current assets in the statements of net assets.

In addition to the deposits noted above, included in cash and cash equivalents as non-current restricted assets on the statements of net assets are the following short-term investments at December 31, 2009 and 2008: money market funds of $10,073 and $22,366, respectively, and repurchase agreements of $575 and $575, respectively. Of the Authority's $575 and $575 investment in repurchase agreements, at December 31, 2009 and 2008, respectively, all of the underlying securities are held by the investment's counterparty, not in the name of the Authority.

At December 31, 2009, the Authority held the following investment balances:

		Maturity in years
	Carrying value	Less than 1 year
Commonwealth of PA Revenue Bonds (Guaranteed Investment Contracts)	$ 8,516	$ 8,516
Money market	10,073	10,073
Repurchase agreements	575	575
Commercial paper	87,946	87,946
Total Investments	$ 107,110	$ 107,110

At December 31, 2008, the Authority held the following investment balances:

			Maturity in years	
	Carrying value		Less than 1 year	
Commonwealth of PA Revenue Bonds (Guaranteed Investment Contracts)	$	8,464	$	8,464
Money market		22,366		22,366
Repurchase agreements		575		575
Commercial paper		102,450		102,450
U.S. Treasury		1,604		1,604
Total	$	135,459	$	135,459

With the exception of the guaranteed investment contracts, the carrying value of the Authority's investments is the same as their fair market value amount. The Guaranteed investment contracts are carried at amortized cost. Investments of $96,462 and $113,093 are included as noncurrent restricted investments on the statements of net assets at December 31, 2009 and 2008, respectively. Investments of $10,648, consisting of money market funds of $10,648 are included as noncurrent restricted cash and cash equivalents on the statements of net assets at December 31, 2009. Investments of $22,366, consisting of money market funds of $22,366 are included as noncurrent restricted cash and cash equivalents on the statements of net assets at December 31, 2008.

Interest Rate Risk – Interest rate risk, the risk that changes in the interest rates will adversely affect the fair market value of the Authority's investments. The Authority is not subject to interest rate risk as all of its investments at December 31, 2009 and 2008 had maturities of less than one year.

Credit Risk – Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligation. As of December 31, 2009, the Authority's investments in the guaranteed investment contracts were rated AAA by Standard & Poor's. The counterparty to the Authority's guaranteed investment contracts is the Commonwealth of Pennsylvania Revenue Bonds. The Authority's investments in money markets were rated AAA by Standard & Poor's. The Authority's investments in commercial paper at December 31, 2009 were rated A-1 and AAA by Standard & Poor's. Additionally, at December 31, 2009, the Authority had various repurchase agreements. The underlying

securities of these repurchase agreements consist primarily of U.S. Treasuries, and are therefore not subject to credit risk.

Concentration of Credit Risk – Concentrations of credit risk is the risk of loss attributed to the magnitude of a government's investments in a single issuer. The Authority places no limit on the amount it may invest in any one issuer. More than five percent of the Authority's investments are in Federated Government Obligation Fund, Dreyfus Cash Management, and Commonwealth of Pennsylvania. These investments are 73.8%, 9.4%, and 8%, respectively, of the Authority's total investments at December 31, 2009.

10. Net Assets

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

	December 31,	
	2009	2008
Invested in capital assets, net of related liabilities:		
Net property, plant, and equipment in service	$ 470,352	$ 443,720
Debt subject to capital improvements	(617,683)	(633,699)
Accounts payable for capital items	(3,359)	(1,610)
Funded debt from restricted assets:		
Unspent debt proceeds:		
Capital projects	83,217	109,680
Debt service and reserve funds	10,017	10,275
	(57,456)	(71,634)
Restricted for capital activity and debt service:		
Restricted cash and cash equivalents	10,648	22,366
Restricted investments	96,462	113,093
Restricted receivables	78	484
Liabilities payable from restricted assets:		
Unspent debt proceeds:		
Capital projects	(83,217)	(109,680)
Debt service and reserve funds	(10,017)	(10,275)
	13,954	15,988
Unrestricted	13,064	20,649
Total Net Assets	$ (30,438)	$ (34,997)

11. Operating Lease

During 2007, the Authority entered into a new lease for office space. The term of the lease is for twenty years commencing on August 1, 2007 and ending on July 31, 2027. The lease is subject to an automatic roll-over for five years, if the Authority does not communicate in writing one year prior to expiration that is desires not to extend the lease. The general terms of the lease requires the lessor to provide for utilities, building repairs, maintenance, and real estate taxes.

The total minimum future commitments under the lease for year ending December 31, 2009 are as follows:

2010	$	593
2011		593
2012		599
2013		616
2014		616
2015-2019		3,182
2020-2024		3,358
2025-2027		1,882
	$	11,439

The total annual rental for office space was approximately $593 for 2009 and 2008.

12. 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, 2009, $146 million of the program is complete and $78 million is under active contract.

In addition to the matters discussed in Note 13, Consent Agreement, 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, it became self-insured. In previous years, the Authority established a fund to pay for deductibles, small claims, and other litigation costs. At year-end, the balance in this fund was approximately $575. This fund is grouped with "Restricted Assets" on the statements of net assets. During 2009 and 2008, the Authority paid $0 from this fund for claims, and there is $0 and $0 accrued as of December 31, 2009 and 2008, respectively.

13. Purchase of Water System

In December 2009, the Authority entered into an agreement for the purchase of the water system of the Borough of Millvale (Borough) for approximately $3 million. $1.55 million

was paid to the Borough and the Authority agreed to relieve the Borough of receivables totaling approximately $1.4 million. The Authority included the total purchase price of approximately $3 million as a utility asset addition for 2009. The Authority will also provide sanitary sewer and garbage billing to the Borough at no additional charge.

14. CONSENT AGREEMENT

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). On January 29, 2004, the Authority and the City of Pittsburgh executed a Consent Order and Agreement (Order) regarding wet weather sewer overflows within the City. The other signatories to the Order are the Pennsylvania Department of Environmental Protection (DEP) and the Allegheny County Health Department (ACHD).

Generally, the Order requires the Authority and the City to assess the City sewers in order to develop a plan with ALCOSAN to address wet weather sewer overflows within the City. The Order is part of a sewer assessment program for all municipalities served by ALCOSAN. Most assessment activities for critical sewers and separate sanitary sewers are to be completed by 2010. As of December 31, 2009, ninety percent of the critical sewers and separate sanitary sewer work had been completed. Assessment activities for non-critical sewers are to be completed on a longer schedule with some tasks to be completed by 2012. In addition to the assessment, the Order requires the Authority and the City to implement the Nine Minimum Controls to reduce combined sewer overflows, and to perform repairs and maintenance of deficiencies revealed by the assessment. Deficiency corrections identified during assessment in critical sewers and separate sanitary sewers are to be completed by 2010, and in non-critical sewers are to be completed by 2012.

Given the scope of the Order, the size of the City sewer system, and the various conditions and/or deficiencies that may be discovered by the assessment, it is difficult to predict the total cost of compliance with the Order. Moreover, it is difficult to predict what, if any, large-scale and/or regional capital improvements may be required after the completion of the assessment to address wet weather sewer overflows in the City and in the ALCOSAN service area. Large-scale and/or regional capital improvements are not covered by the Order. The Authority has hired two engineering firms to assess and model the sewer system, and it is moving forward with its plans to comply with the Order. Costs associated with Order compliance will be reflected in the capital improvement program and funded by proceeds of potential future bond issuances.

MaherDuessel
Certified Public Accountants

Additional Information

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PITTSBURGH WATER AND SEWER AUTHORITY

SCHEDULE OF RESTRICTED ASSETS COMPOSITION - SCHEDULE I

(Dollars expressed in thousands)

DECEMBER 31, 2009

				Cash Equivalents		Investments					
	Total	Unrealized Gain/(Loss)	Accrued Interest Receivable	*(1) Dreyfus U.S. Gov't Securities	Tri-Party-Repo Investments	*(2) Federated Gov't Obligation Fnd #5 US Gov't Securities	Commonwealth of PA Revenue Bonds	*(3) Basin Elec PWR COOP DISC COML	*(4) Korea Dvlpmnt BK	*(5)White PT FDG INC DISC C/P 4/2	*(6) Silver Tower Fndng LLC C/P 4/2
Capital project and construction funds:											
2005 Capital Project Fund	$ 4,132	$ -	$ -	$ 4,132	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008 Construction Fund	79,094	-	9	-	-	79,085	-	-	-	-	-
	83,226	-	9	4,132	-	79,085	-	-	-	-	-
Debt service funds:											
1993 Debt Service Fund	602	8	4	2	-	-	-	147	294	147	-
2003 Debt Service Fund	4,812	147	35	4	-	-	-	186	2,314	186	1,940
2007 A Debt Service Fund	1,987	54	15	5	-	-	-	148	956	148	661
2007 B-1 Var Debt Service Fund	12	-	-	12	-	-	-	-	-	-	-
2007 B-2 Var Debt Service Fund	11	-	-	11	-	-	-	-	-	-	-
2008A Debt Service Fund	1,538	17	12	1	-	-	-	377	754	377	-
2008B1 Debt Service Fund	18	-	-	18	-	-	-	-	-	-	-
2008B2 Debt Service Fund	17	-	-	17	-	-	-	-	-	-	-
2008C2 Debt Service Fund	13	-	-	13	-	-	-	-	-	-	-
2008D1 Debt Service Fund	989	-	-	989	-	-	-	-	-	-	-
2008D2 Debt Service Fund	84	-	-	84	-	-	-	-	-	-	-
	10,083	226	66	1,156	-	-	-	858	4,318	858	2,601
1993 Operating Reserve Fund	8,521	-	3	2	-	-	8,516	-	-	-	-
2008 Capitalized Interest Fund	4,783	-	-	4,783	-	-	-	-	-	-	-
Self-Insured Escrow Fund	575	-	-	-	575	-	-	-	-	-	-
	$ 107,188	$ 226	$ 78	$ 10,073	$ 575	$ 79,085	$ 8,516	$ 858	$ 4,318	$ 858	$ 2,601

(1) Dreyfus Gov't Cash Mgmt Agency with the Bank of New York Mellon, yielding 0.00%.

(2) Federated Government Obligation FD 5, yielding 0.09%

(3) Basin Elec Pwr COOP Disc Coml yielding 4.92% with a maturity date of 2/25/2010

(4) Korea Development Bk yielding 4.62% with a maturity date of 2/26/2010

(5) White Pt Fdg Inc Disc C/P 4/2 yielding 4.51% with a maturity date of 03/01/2010

(6) Silver Tower Fdg LLC 4/2 CPDS yielding 4.62% with a maturity date of 08/19/2010

PITTSBURGH WATER AND SEWER AUTHORITY

SCHEDULE OF RESTRICTED ASSETS ACTIVITY - SCHEDULE II

(Dollars expressed in thousands)

YEAR ENDED DECEMBER 31, 2009

	Series 1993 Bonds		Series 2003 Bonds	Series 2005 Bonds	Series 2007 Bonds				
	Debt Service Fund	Operating Reserve Account	Debt Service Fund	Capital Project Fund	2007 CPF/Project Fund	2007A Debt Service Fund	2007 B1 Debt Service Fund	2007 B2 Debt Service Fund	Subtotal
Increases:									
Interest	$ 21	$ 47	$ 257	$ 14	$ 27	$ 117	$ -	$ -	$ 483
Total increases	21	47	257	14	27	117	-	-	483
Bond Restructuring of the 2008B's and 2008C1's	-	-	-	-	(583)	-	-	-	(583)
Decreases:									
Capital projects	-	-	-	3,372	5,191	-	-	-	8,563
Interest	1,770	-	2,542	-	-	1,937	1,954	1,878	10,081
Bond principal/refunding escrow	-	-	10,005	-	-	3,815	-	-	13,820
Other	-	-	-	4	1	-	-	-	5
Total decreases	1,770	-	12,547	3,376	5,192	5,752	1,954	1,878	32,469
Interfund Transfers:									
Nontrusteed accounts	1,750	-	12,775	-	583	5,660	1,876	1,796	24,440
2008B Debt Svc Fund	-	-	-	-	-	-	-	-	-
2008C1 Debt Svc Fund	-	-	-	-	-	-	-	-	-
2008D1 Debt Svc Fund	-	-	-	-	-	-	-	-	-
2008D2 Debt Svc Fund	-	-	-	-	-	-	-	-	-
2008 Capital Projects Fund	-	-	-	-	-	-	-	-	-
Total interfund transfers	1,750	-	12,775	-	583	5,660	1,876	1,796	24,440
Net activity	1	47	485	(3,362)	(5,165)	25	(78)	(82)	(8,129)
Balance:									
Beginning of year	601	8,474	4,327	7,494	5,165	1,962	90	93	28,206
End of year	$ 602	$ 8,521	$ 4,812	$ 4,132	$ -	$ 1,987	$ 12	$ 11	$ 20,077

(Continued)

PITTSBURGH WATER AND SEWER AUTHORITY

SCHEDULE OF RESTRICTED ASSETS ACTIVITY - SCHEDULE II

(Dollars expressed in thousands)

YEAR ENDED DECEMBER 31, 2009

(Continued)

		Series 2008 Bonds										
	Self-Insured Escrow Account	2008 Cap. Int. Fund	2008A Debt Svc Fund	2008B Debt Svc Fund	2008B1 Debt Svc Fund	2008B2 Debt Svc Fund	2008C1 Debt Svc Fund	2008C2 Debt Svc Fund	2008D1 Debt Svc Fund	2008D2 Debt Svc Fund	2008 Cap. Proj. Fund	Total
Increases:												
Interest	$ -	$ 11	$ 42	$ -	$ -	$ -	$ -	$ -	$ 1	$ -	$ 106	$ 643
Total increases	-	11	42	-	-	-	-	-	1	-	106	643
Bond Restructuring of the 2008B's and 2008C1's	-	(169)	-	-	-	-	(353)	-	-	-	(2,417)	(3,522)
Decreases:												
Capital projects	-	-	-	-	-	-	-	-	-	-	12,295	20,858
Interest	-	-	4,531	7,438	20	17	2,725	2,355	1,222	3,476	-	31,865
Bond principal/refunding escrow	-	-	-	-	-	-	-	-	-	-	-	13,820
Other	-	3	-	-	-	-	-	-	-	-	48	56
Total decreases	-	3	4,531	7,438	20	17	2,725	2,355	1,222	3,476	12,343	66,599
Interfund Transfers:												
Nontrusteed accounts	-	-	4,492	6,776	38	34	2,524	2,199	-	235	-	40,738
2008 Capitalized Interest Fund	-	(1,523)	-	-	-	-	-	-	-	-	-	(1,523)
2008B Debt Svc Fund	-	-	-	291	-	-	-	-	-	-	-	291
2008C1 Debt Svc Fund	-	-	-	-	-	-	353	-	-	-	-	353
2008D1 Debt Svc Fund	-	-	-	-	-	-	-	-	1,395	-	-	1,395
2008D2 Debt Svc Fund	-	-	-	-	-	-	-	-	-	3,175	-	3,175
2008 Capital Projects Fund	-	-	-	-	-	-	-	-	-	-	(3,706)	(3,706)
Total interfund transfers	-	(1,523)	4,492	7,067	38	34	2,877	2,199	1,395	3,410	(3,706)	40,723
Net activity	-	(1,684)	3	(371)	18	17	(201)	(156)	174	(66)	(18,360)	(28,755)
Balance:												
Beginning of year	575	6,467	1,535	371	-	-	201	169	815	150	97,454	135,943
End of year	$ 575	$ 4,783	$ 1,538	$ -	$ 18	$ 17	$ -	$ 13	$ 989	$ 84	$ 79,094	$ 107,188

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APPENDIX D

CERTAIN INFORMATION REGARDING THE CITY OF PITTSBURGH

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City of Pittsburgh, Pennsylvania

The City of Pittsburgh located in Western Pennsylvania, is the county seat of Allegheny County. As of the 2000 census, the City had a total population of 334,563 (metropolitan area 2,358,695), making it the second-largest city in the state.

THE GOVERNMENT OF PITTSBURGH

Three principal government entities provide services in the Pittsburgh area: the City, the County and the School District. Information relating to the County and the School District may be found in the "OTHER GOVERNMENTAL ENTITIES" section below.

The City was incorporated in 1816, and became a home rule community on January 5, 1976. Its powers are set forth in the Charter which became effective January 5, 1976. The Charter was adopted by the electorate pursuant to Article IX, Section 2 of the Constitution of the Commonwealth and the Home Rule Charter and Optional Plans Law, Act of April 13, 1972, P.L. 184, No. 162. Under the Charter, the City has all home rule powers and may perform any function and exercise any power not denied by the Constitution of the Commonwealth, the laws of the Commonwealth or the Charter. The Charter provides, among other things, for the election of the Mayor and the powers and duties of the executive and administrative branch; the election, organization, powers and duties of the legislative branch; the method by which the City's capital and operating budgets are adopted; the rules which govern City personnel; and the financial disclosure requirements for elected officials.

Under the Charter, the executive, administrative and law enforcement powers of the City are vested in the Mayor, who is directed to control and be accountable for the executive branch of the City government. The Charter establishes a "strong mayor" form of government in which the Mayor controls and has wide powers of appointment over the units of the City government, and has the power to initiate and veto legislation and to propose the City's operating and capital budgets, to which proposals the City's legislative body, the City Council, must react within a definite time period. The Mayor is elected to a four-year term and may be re-elected for subsequent consecutive terms without limitation.

The Controller of the City is elected to a four-year term in a different municipal election year from the mayoral election, and may be re-elected for subsequent consecutive terms without limitation. As provided in the Charter, the Controller audits all units of City government, countersigns all City contracts, controls all City disbursements and prepares reports on revenues, expenditures, debt and the financial condition of the City. The Controller serves ex-officio as controller of the School District.

The City's financial management functions are carried out by the Department of Finance, headed by the Director of Finance who is appointed by the Mayor, subject to confirmation by City Council. The Department of Finance is responsible for the treasury functions of revenue and tax collection, certain real estate functions, the investment of City funds, and debt management, and for preparing and monitoring the operating and capital budgets. The City Treasurer serves as ex-officio treasurer of the School District where his sole responsibility is the collection of taxes.

The legislative power of the City is vested by the Charter in the City Council, which consists of nine members, all of whom are elected by district to four-year terms that are staggered so that four members are elected at the same time as the Mayor. Members may be re-elected for subsequent and consecutive terms without limitation. Under the Charter, the members of the City Council elect, by majority vote, one member to serve as President. The President of Council presides at meetings of City Council, appoints all committees, and refers proposed legislation to the proper committee.

City Officials.

LUKE RAVENSTAHL, Mayor - Mr. Ravenstahl became the 59th Mayor of Pittsburgh on September 1, 2006 following the death of Mayor Bob O'Connor and was elected to a full term as Mayor on

November 3, 2009. Mr. Ravenstahl was elected to City Council on November 4, 2003 and was elected President of City Council in December 2005. Mayor Ravenstahl is a graduate of North Catholic High School and received his B.A. Degree in Business Administration from Washington and Jefferson College in December 2002.

MICHAEL LAMB, City Controller - Mr. Lamb was elected Controller of the City of Pittsburgh in November of 2007, and took office on January 7, 2008. Prior to being elected City Controller, Michael was the Prothonotary of Allegheny County, the chief record keeper of the Court of Common Pleas. Prior to working in the Prothonotary's office, Michael Lamb served as a research and legislative assistant to Pittsburgh City Council and was the Assistant Regional Director of the Pennsylvania Higher Education Assistance Agency.

SCOTT KUNKA, Director of Finance - Mr. Kunka was appointed Director of the Office of Management and Budget in March 2006 and as Director of Finance in November 2006. He is responsible for overseeing the operating and capital budgets. Previously, Mr. Kunka held positions in the Controller's Office, Office of Management and Budget and Department of General Services, and as the Budget Director for City Council.

DANIEL REGAN, ESQ., City Solicitor - Mr. Regan serves as counsel for the City of Pittsburgh. He is responsible for rendering legal opinions and advice to the Mayor, City officials, City Council, and the administrative units of City government. The City Solicitor also functions as Solicitor for the Comprehensive Municipal Trust Fund Board. Mr. Regan was appointed to his position in December 18, 2009 following a partnership in the Pittsburgh law firm Caputo & Caputo, P.C.

DARLENE M. HARRIS, President of City Council – Ms. Harris was elected in a special election in November 2006 to represent District 1 following the appointment of Mr. Ravenstahl as Mayor in 2006. She was elected President of City Council in January 2010. Councilwoman Harris serves as the Chairperson for the Committee on Hearings (held by the President of Council),

Members of Council

DOUG SHIELDS – Mr. Shields was elected to represent City Council District 5 and was sworn in on January 5, 2004. Councilman Shields serves as the Chairman for the Committee on Land Use and Economic Development

THERESA KAIL-SMITH – Mrs. Kail-Smith was elected to Pittsburgh City Council from District 2 in a special election and was sworn in on February 19, 2009. Councilwoman Kail-Smith serves as the Chairperson for the Committee on Public Safety Services.

PATRICK DOWD – Dr. Dowd was sworn in as the Member of Council from District 7 on January 7, 2008. Councilman Dowd currently serves as the Chairman for the Committee on Intergovernmental Affairs.

BRUCE KRAUS – Mr. Kraus was sworn in as the Member of Council from District 3 on January 7, 2008. Councilman Kraus serves as the Chairman for the Committee on Public Works

NATALIA RUDIAK – Ms. Rudiak was elected to Pittsburgh City Council November 3, 2009 and took office on January 5, 2010. Councilwoman Rudiak serves as the Chairperson for the Committee on Performance and Asset Management.

R. DANIEL LAVELLE – Mr. Lavelle was elected to City Council November 3, 2009 and took office on January 5, 2010. Councilman Lavelle serves as the Chairman for the Committee on Urban Recreation.

WILLIAM PEDUTO – Mr. Peduto was elected to City Council in 2001. Councilman Peduto serves as the Chairman for the Committee on Finance and Law

RICKY BURGESS – Mr. Burgess was sworn in as the Member of Council from District 9 on January 7, 2008. He is currently the President Pro Tem for City Council, and currently serves as the Chairman for the Committee on Human Resources

City Departments and Services.

The Charter provides that all units of the City government, except those mandated by the Charter as described below, may be established, revised, or abolished by ordinance, which may be introduced by the Mayor or City Council. Under the Charter, the Mayor appoints the heads of all major administrative units, subject to the approval of City Council. The Charter also provides that the Mayor shall, subject to the approval of City Council, appoint the City Solicitor, the members of all boards and commissions, and, except as otherwise required by law, all board members of authorities. Under the Charter, a member of City Council must serve on each authority board, but no member may serve concurrently on more than one board.

The Charter mandates the establishment of a 15-member Human Relations Commission, which is directed to investigate, report, hold hearings and otherwise enforce the rights of citizens in connection with unlawful discrimination. The Charter also mandates the appointment by the Mayor, subject to the approval of City Council, of City Magistrates who preside in the City's Magistrate Courts, which are part of the Commonwealth's unified judiciary system. The Mayor is required to designate a Chief Magistrate to administer the Magistrate Courts.

The City Solicitor acts as counsel for the City and its officials, although the City Controller, City Council and the Human Relations Commission are empowered to retain their own counsel. The Department of Personnel and the Civil Service Commission administer all the City's personnel policies, civil service requirements and the City's Workforce Investment Act (formerly JTPA) Program. The Department of Personnel and the Civil Service Commission are also responsible for City payroll, benefits, and workers' compensation matters. The Department of City Planning makes recommendations to the Mayor and City Council regarding the allocation of resources for the orderly development and redevelopment of the City. It also assists the Department of Finance in formulating the City's Capital Improvement Program, undertakes planning studies and administers zoning requirements.

The Department of Public Safety, created in 1985, carries out the traditional police, fire and emergency medical service functions, as well as the enforcement of building codes. The Department of Public Works exercises responsibility for the maintenance of all the City's streets, sewers, parks, bridges and steps, for the construction of minor public works capital improvements, and operates sanitation services and is responsible for engineering and the design of projects in the City's Capital Improvement Program. The Department of Parks and Recreation provides recreational opportunities to the City's residents.

COMMONWEALTH FISCAL OVERSIGHT

Background

Changes in the economic geography of the City, its population and demographics occurring over several decades have eroded the tax base that supports necessary municipal services, while significant growth has occurred in sectors wholly or substantially exempt from local tax, such as hospitals and universities, financial institutions and utilities. In addition, although the City's major economic and physical transformation continued, the translation of various economic development initiatives into higher tax revenues (real estate, earned income, business privilege, and parking) has not yet been fully realized.

As a matter of administration policy, since 1994 there had been no increase in the rate of earned income tax on residents or in the tax rate on real estate, although the rate was modified in 2001 by the adoption of a unitary tax rate structure. Debt refinancings and other one-time revenue and cost cutting measures were used to balance the annual operating budgets. The working capital fund of $109 million created by the 1995 capital lease agreement between the City and the Pittsburgh Water and Sewer Authority and the sale of tax liens provided a fiscal cushion through 2003.

Notwithstanding workforce reductions and efficiencies in service delivery, structural deficits persisted and grew over time as recurring revenues were outpaced by expenditure increases averaging 3-4% per year. Many of these annual cost increases were beyond the fiscal control of the City as they related to legacy costs, such as pension and retiree health care benefits and workmen's compensation claims, and to historic debt service costs.

Act 47. As part of its fiscal recovery and tax restructuring strategy, on or about December 29, 2003, the City successfully sought to be declared a "distressed" municipality by the Secretary of the Department of Community and Economic Development ("DCED") under the Municipalities Financial Recovery Act ("Act 47"). Act 47 requires the Secretary of DCED (the "Secretary") to appoint a Coordinator to "prepare and administer a plan designed to relieve the financial distress" of the City. The Act 47 Coordinator is charged with the duty of developing and implementing a plan, which includes, among other things, assurance that "the recommendations in the plan are being accomplished by the dates set in the plan." In January 2004, the Secretary made the dual appointment of the law firm of Eckert Seamans Cherin & Mellot, LLC and Public Financial Management, Inc. as Act 47 Coordinators (collectively, the "Act 47 Coordinators"). A total of 19 municipalities in the Commonwealth of Pennsylvania had been granted relief under Act 47 prior to the City's petition.

Act 11. The Pennsylvania General Assembly also reacted to the City's financial crisis by enacting the Intergovernmental Cooperation Authority Act for Cities of the Second Class ("Act 11"), which is likewise intended to help the City recover from its financial crisis and to bring long-term fiscal health and stability to the City. For its implementation, Act 11 establishes the Intergovernmental Cooperation Authority for Cities of the Second Class (the "ICA"), which is charged with fiscal oversight and approval of a financial plan for the City, which includes projected revenues and expenditures of the principal operating funds of the City for five (5) fiscal years. In accordance with Act 11, the City and the ICA entered into an Intergovernmental Cooperation Agreement (the "Cooperation Agreement") on September 21, 2004.

The ICA has five members. The President Pro Tem Pore and the Minority Leader of the Senate, the Speaker and the Minority Leader of the House of Representatives, and the Governor each appoint one member who serves at their respective pleasures. The Pennsylvania Secretary of Administration and Budget, and the City's Finance Director are ex officio, nonvoting members of the ICA.

The Pennsylvania General Assembly contemplated that the Act 47 Coordinators and the ICA would operate concurrently and equally in their separate legal capacities to assist the City in its return to fiscal stability.

A recovery plan prepared by the Act 47 Coordinator (the "Act 47 Plan") was approved and adopted by City Council on June 29, 2004 and approved by the Mayor of the City on June 30, 2004. The Act 47 Plan was revised and the revised plan was adopted by City Council on June 30, 2009 and approved by the Mayor of the City on June 30, 2009. The Amended Recovery Plan prepared by the Act 47 Coordinator is a framework of financial management strategies for 2009 and beyond, to address critical issues such as pending legacy costs of debt, pensions and post retirement benefits while maintaining a sustainable capital plan and positive operating results. The revised Act 47 Plan is available at:
http://www.city.pittsburgh.pa.us/council/assets/09_Ord16_Final_Amended_ACT47_Recovery_Plan_6-30-09.pdf.

In accordance with Act 11, the City and the ICA entered into an Intergovernmental Cooperation Agreement (the "Cooperation Agreement") on September 21, 2004. Similarly, the ICA approved the City's 2005 Operating and Capital Budgets and Five-Year Financial Forecast and Performance Plan (the "Financial Plan") on December 21, 2004. The Financial Plan took into account the Act 47 Coordinator's implementation of the recommendations and the provisions of the Act 47 Plan with respect to financial requirements and collective bargaining workforce rules and recommendations critical to the City's sustainable financial recovery. The Cooperation Agreement and the Financial Plan were duly adopted by City Ordinance. The Financial Plan established operating and capital budgets for fiscal year 2005 and budgetary forecasts for fiscal years 2006 through 2009.

A copy of the Cooperation Agreement is available at http://www.pghica.org/.

Certain Provisions of Act 11.

Under Act 11, after the Financial Plan is approved, the City is required to implement the Financial Plan.

If the ICA determines, based upon reports and information submitted by the City, that the City's actual revenues and expenditures vary from those estimated in the Financial Plan, the ICA shall require the City to provide such additional information as the ICA deems necessary to explain the variation.

In response to the request for additional information concerning the variation, the Mayor of the City shall provide to the ICA reports describing actual or current estimates of revenues and expenditures compared to budgeted revenues and expenditures for such period reflected in its cash flow forecast. Each such report shall indicate any variance between actual or current estimates and budgeted revenues, expenditures and cash for the period covered by such report.

Additionally, if, after the approval of the Financial Plan, the City executes a collective bargaining agreement, which is not in compliance with the Financial Plan, the City shall submit to the ICA a proposed revision to the Financial Plan which demonstrates that revenues sufficient to pay the costs of the collective bargaining agreement will be available in the affected fiscal years of the Financial Plan.

If the City fails to submit to the ICA a revision to a Financial Plan, report or other information required to be filed pursuant to Act 11, the ICA, in addition to all other rights which the ICA may have at law or in equity, shall have the right by mandamus to compel the City and the officers, employees and agents thereof to file with the ICA the Financial Plan, revision to a Financial Plan, report or other information which the City has failed to file.

Certain Provisions of the Cooperation Agreement.

Under the provisions of the Cooperation Agreement, if the ICA determines – based upon reports submitted by the City, as well as reports necessitated by changed conditions or unexpected events which may affect the City's adherence to its then-current Financial Plan – that the City's actual revenues and expenditures vary from the Financial Plan, the ICA shall notify the City, in writing, of its determination that a variance exists. In response, the City shall within ten (10) days after the request by the ICA, provide the ICA such additional information as the ICA deems necessary to explain the variance. The Cooperation Agreement provides that a "variance" for this purpose, which would change the reporting requirement from quarterly to monthly, shall be deemed to have occurred as of the end of a reporting period based on the reports submitted for such period if: (i) a net adverse change of more than one percent (1%) of the revenues or expenses for such fiscal year is reasonably projected to occur; or (ii) the actual net cash flows of the City for that fiscal year are reasonably projected to be less than ninety-eight percent (98%) of the net cash flows originally forecast at the time of the adoption of the budget.

In the event that the ICA, by a majority vote, determines that the City's written explanation for the variance is unsatisfactory, the ICA shall certify such non-compliance with the Secretary of the Budget and shall notify the City. Upon receipt of the prescribed notice, the City's Director of Finance and the Controller shall certify to the ICA forthwith the amount of New Revenue, and shall cause such certified amount to be aggregated, transferred and deposited as directed by the ICA in trust for the exclusive benefit of the City in an account designated as the "New Revenue Account" established under the Cooperation Agreement.

"New Revenue" is defined as "in the aggregate, any revenues received by the City with respect to any taxes or fees from any source whatsoever which are not solely derived by virtue of existing taxing or legislative power possessed by the City under its Home Rule Charter or applicable law, it being the intent of this provision that New Revenue shall not include taxes or fees, including any increases thereof, which the City presently levies or has the power to levy. New Revenue shall not be reduced, diminished or offset by any existing taxes or fees which may be eliminated or reduced in connection with the City's financial recovery. New Revenues shall not include (1) any moneys received by the City as grants from public or private entities, whether for profit or non profit, as a conduit for third parties, 2) any revenues pledged or held as security for bonded indebtedness or related insurance existing on the effective date of Act 11 and approved by the ICA as part of the City's Financial Plan . . . ."

New Revenue received after the date of initial deposit into the New Revenue Account shall also be deposited to the credit of the New Revenue Account.

Under the Cooperation Agreement, the City further agreed that as soon as they become available, it shall provide to the ICA copies of all significant or requested reports, documents, budgetary and financial planning data and any other information prepared by or on behalf of the City regarding the revenues, expenditures, budgets, costs, plans, operations, estimates and any other financial or budgetary matters of the City.

Additionally, if, after the approval of the Financial Plan, the City executes a collective bargaining agreement which is not in compliance with the plan, the City shall as soon as practicable (but in no event later than fifteen (15) Days after the execution by the City of such contract) submit to the ICA a proposed revision to the Financial Plan which demonstrates to the reasonable satisfaction of the ICA that revenues sufficient to pay the costs of the contract will be available in the affected fiscal years of the Financial Plan.

Both Act 47 and Act 11 have specific provisions relating to the content and form of any approved Financial Plan. Similarly, both provide mechanisms for intercepting and escrowing of certain funds (with the exception of funds for capital projects under contract, disaster relief funds, pension fund disbursements, and funds pledged to repay bonds and notes) due the City from the Commonwealth in the event the City fails to adhere to the Act 47 Plan or permits a certain financial variance from the ICA approved Financial Plan.

New Tax Structure.

In 2004, legislation was passed eliminating the occupational privilege tax payable by residents and nonresident employees at $10 per year and replaced it with the Emergency and Municipal Services Tax, now named the Local Services Tax, payable by residents and nonresident employees at $1 per week, exempting those earning less than $12,000 per year and authorized the City to levy a gross payroll tax at the rate of 0.55% on all non-charitable businesses. The legislation also required the City to eliminate the 2 mill mercantile tax and to reduce the City's business privilege tax from 6 mills to 2 mills for 2005 and 2006, 1 mill for 2007 through 2009 and eliminating it in 2010.

Termination of Oversight. Under Act 47, termination of municipal financial distress status may be initiated either by the Secretary of DCED or by the City. This process is designed to determine whether or not the conditions which led to the earlier determination of distressed status have been addressed adequately, including the elimination of accrued deficits and municipal operations for a period of at least one year under a positive current operating fund balance.

Under Act 11, the ICA was established for a minimum term of seven years. If after seven years the City has had annual operating budgets and financial plans which satisfy prescribed standards, the ICA's existence and the status of the City as an "assisted city" may be terminated.

Under both Act 11 and Act 47, the core functions and management of the City remain the responsibility of the Mayor and City Council. As confirmed in the Cooperation Agreement, the City retains all of its powers and authority granted under the Home Rule Charter of the City of Pittsburgh, except as specifically set forth in the Cooperation Agreement.

Extraordinary Contracts. The Cooperation Agreement established a new requirement that the City provide notice to the ICA of the intention to enter into any "Extraordinary Contract." The term Extraordinary Contract is defined to mean, among other things, any agreement which relates to the borrowing of money by the City. Prior to entering into any Extraordinary Contract, the City must deliver to the ICA: (i) a summary of the terms of such Extraordinary Contract; and (ii) a written statement by the City's Director of Finance stating whether or not in the opinion of said officer the performance of the Extraordinary Contract would be consistent with the Financial Plan of the City then in effect. In the case of a bond purchase agreement, the City is required to provide such information regarding the agreement not less than three days prior to the execution of the agreement. The Cooperation Agreement provides that the ICA may make comments and suggestions with respect to such Extraordinary Contracts, which comments and suggestions the City is obligated to consider prior to its execution of the Extraordinary Contract. The Cooperation Agreement does not, however, grant the ICA the power to approve or disapprove Extraordinary Contracts.

Reporting Requirements. On an ongoing basis, the City will be subject to the financial reporting requirements described in Act 11 and Act 47, and to the continuing financial oversight of the ICA. The financial reporting requirements now in effect provide, among other things, that within 45 days after the end of each fiscal quarter, the City will provide reports to the ICA describing actual or current estimates of revenues and expenditures compared to budgeted revenues and expenditures for the quarter as reflected in its cash flow forecast.

REVENUE SOURCES OF THE CITY

General

In 2009, Real Estate Taxes accounted for approximately 29.91% of the receipts of the General Fund, followed by Earned Income Tax at 15.82%, Business Privilege Tax at 2.1% and all other taxes at 33.76%. The remaining 18.41% of receipts was from miscellaneous non-tax revenue. Under the City's new tax structure, it is expected that Real Estate Taxes will continue to be the City's most significant source of revenue. The Business Privilege Tax was lowered by two-thirds in 2005, reduced by fifty percent for 2007 through 2009 and was eliminated in 2010. Payroll Preparation Tax revenues are expected to offset the loss of Business Privilege Tax revenues in the coming years.

Real Estate Taxes

The City has the power to levy and collect ad valorem taxes, without limitation as to rate or amount, on all taxable real estate located within the City. The City shares the real estate tax base with the County of Allegheny (the "County") and the School District of Pittsburgh (the "School District"), separate taxing bodies. A ten-year history of real estate tax rates levied by the City, the County and the School District is presented in Table 1 below.

TABLE 1
CITY OF PITTSBURGH
REAL ESTATE TAX RATES OF THE CITY
AND OVERLAPPING JURISDICTIONS
(mills)

Year	Land	Building	Total City (1)	School District	County (2)	Total
2000	184.5	32.00	59.000	59.700	25.500	144.200
2001 (3)	10.8	10.8	10.8	13.92	4.72	29.41
2002	10.8	10.8	10.8	13.92	4.69	29.41
2003	10.8	10.8	10.8	13.92	4.69	29.41
2004	10.8	10.8	10.8	13.61	4.69	29.10
2005	10.8	10.8	10.8	13.92	4.69	29.41
2006	10.8	10.8	10.8	13.92	4.69	29.41
2007	10.8	10.8	10.8	13.92	4.69	29.41
2008	10.8	10.8	10.8	13.92	4.69	29.41
2009	10.8	10.8	10.8	13.92	4.69	29.41
2010	10.8	10.8	10.8	13.92	4.69	29.41

(1) Determined by multiplying the respective assessed valuation by the millage rate and dividing by the total assessed valuation.
(2) Includes levy by Allegheny County Institution District (the "Institution District").
(3) Four changes took place that affected the 2001 real estate tax rates: (i) the County conducted a property revaluation program that resulted in an approximate 57% increase in taxable property values for the City; (ii) the County changed the ratio of assessed value to market value from 25% to 100%; (iii) the City changed from a bifurcated (land and building) tax rate to a single, unified tax rate for both land and buildings; and (iv) the School District raised its effective millage rate by approximately 27%.

Sources: City; School District; County.

Table 2 below sets forth information regarding assessed values, tax rates and budgeted and actual levies and assessments from 2000 to 2009.

Table 2

CITY OF PITTSBURGH, PENNSYLVANIA

ASSESSED VALUE, TAX RATE, LEVY, AND COLLECTIONS

LAST TEN YEARS

($'s In Thousands)

Fiscal Year	Assessed valuation of land and buildings	Land millage	Building millage	Original net levy	Adjusted net levy (1)	Budgeted	(3) Receipts	Percent of original net levy collected	Percent of adjusted net levy collected	Percent of budget collected	Collection Budget	Collection Receipts	Percent of budget collected
2000	2,125,768	184.50	32.00	125,422	119,649	112,010	110,644	88.2	92.5	98.8	4,500	2,967	65.9
2001	13,346,238	10.80	10.80	144,139	127,784	115,900	118,150	81.9	92.9	101.9	3,500	2,689	76.8
2002	14,677,667	10.80	10.80	158,454	131,245	121,500	123,692	78.1	94.2	102.0	4,300	4,359	101.0
2003	13,578,918	10.80	10.80	146,652	131,484	123,132	123,015	83.9	93.6	99.9	3,139	1,069	34.1
2004	13,237,682	10.80	10.80	142,966	127,864	122,500	119,918	83.9	93.8	97.9	5,500	4,435	80.6
2005	13,234,645	10.80	10.80	142,934	126,124	124,000	124,906	87.4	99.0	100.7	4,500	3,173	70.5
2006	13,371,108	10.80	10.80	143,649	129,451	121,000	127,114	88.5	98.2	105.1	3,758	6,622	176.2
2007	13,325,234	10.80	10.80	144,972	128,926	121,257	127,505	88.0	98.9	105.2	2,741	289	10.5
2008	13,254,877	10.80	10.80	142,526	129,768	122,300	127,273	88.8	98.1	104.1	3,245	3,697	113.9
2009	13,348,821	10.80	10.80	145,967	128,830	123,673	125,104	85.7	97.1	101.2	3,201	4,972	155.3

Notes:

(1) Represents net levy as of December 31 of the tax year (i.e., net of exonerations, discounts, and additions granted in that year).

(2) In 2001, assessed value percent of market value increased to 100% and a unified millage rate was enacted.

(3) 2001 through 2008 receipts are net of refunds.

Table 3 below shows the ten largest real estate taxpayers in the City as of December 31, 2009.

TABLE 3
CITY OF PITTSBURGH
TEN LARGEST REAL ESTATE TAXPAYERS
DECEMBER 31, 2009

TAXPAYER	LAND ASSESSMENT	BUILDING ASSESSMENT	TOTAL ASSESSMENT	PERCENTAGE OF TOTAL TAX LEVIED
1) 500 Grant St. Associates One Mellon Bank Center	$22,967,400	$318,851,800	$341,819,200	2.56%
2) Buncher Company	32,421,700	159,318,674	191,740,374	1.44%
3) Market Associates Limited Partnership (PPG)	14,590,400	170,409,600	185,000,000	1.39%
4) PNC Corporation	10,000,000	165,000,000	175,000,000	1.31%
5) 600 GS Properties LP	17,368,500	149,944,700	167,313,200	1.25%
6) Oxford Development	5,297,100	110,813,200	116,110,300	0.87%
7) Grant Liberty Development Group	9,020,600	100,979,400	110,000,000	0.82%
8) Liberty Avenue Holding LLC	4,000,000	45,210,000	49,210,000	0.37%
9) Hertz Gateway Center LP	13,603,700	32,096,300	45,700,000	0.34%
10) Harrah's Forest City Associates	16,244,500	22,792,400	39,036,900	0.29%

Source: City Finance Department.

Real Estate Assessments

The City has the power to levy and collect ad valorem taxes on all taxable real estate within its boundaries without limitation as to rate or amount. The City does not have a statutory limit on real estate taxes.

In recent years, changes have occurred to the system by which real estate taxes are assessed by the County. These changes have affected revenues from taxable real property in the City.

Beginning in 2001, the County changed the ratio of assessed value to market value to 100% from 25%. As a result of the County's related assessment, land values in the City significantly increased. To lessen the burden on residential property owners while maintaining an adequate tax base, the City determined to change from a bifurcated system of taxation (where land was taxed at a higher rate than buildings) to a unified system. Thus in February of 2001, the City of Pittsburgh amended its City Code to provide for a unified tax rate of 10.8 mills, while also enacting a Homestead Exemption (which allowed qualifying homeowners to exempt the first $10,000 of property value from taxation) to lessen the burden the unified system would have on neighborhoods where the land values did not significantly increase.

Currently, the County is using 2002 as a "base year" for assessments (i.e. generally setting a property's assessment value at its worth in 2002, with exceptions for situations such as improvements having been made to the property). The Pennsylvania Supreme Court ruled on April 29, 2009 that the base year method for property valuation as applied by Allegheny County violates the uniformity clause of the State Constitution and as such is unconstitutional. A reassessment was ordered and to be overseen by Judge R. Stanton Wettick. The County and Judge Wettick agreed to a reassessment schedule, to be complete by January 1, 2012 and is anticipated to provide a boost in future revenue. In addition, there have been, and will continue to be, appeals to assessed values. The county of Allegheny filed property appeals on behalf of property owners whose property values increased due to successful appeals by municipalities during 2003 through 2006. The net result was a significant increase in refunds issued in 2007, which began to decrease in 2008 and 2009. City real estate tax refunds for 2005, 2006, 2007, 2008 and 2009 were approximately $3.6 million, $3.0 million, $4.3 million, $1.9 million, and $1.8 million, respectively.

The City makes tax abatements available for commercial and industrial properties for the assessment increase attributable to rehabilitation and abates new construction at varying degrees. The abatements have not had a substantial impact on the City's revenues.

On January 1, 2010, the City entered into an agreement with Jordan Tax Service to outsource properties with delinquent taxes of one year or more for aggressive collection services. The City coordinates with Jordan to lien eligible properties that are subject to Treasurer's sales.

Non-Real Estate Taxes

In addition to ad valorem taxes on real estate, the City is empowered by the Local Tax Enabling Act and the Home Rule Charter and Optional Plans Law to levy taxes for general revenue purposes, on persons, transactions, occupations, privilege, and upon the transfer of real property or interest therein. All non-real estate taxes, except the Deed Transfer Tax, which is payable at the time of transfer, are payable annually, by April 15, quarterly or monthly depending on the tax.

The City currently levies the following non-real estate taxes:

Earned Income Tax – The Earned Income Tax or "Wage-Tax" is levied at the rate of 1.25% on the wages or net profits earned by residents of the City. The majority of the tax payments are deducted from payrolls and remitted by employers to the City.

Business Privilege Tax – The Business Privilege Tax was levied at the rate of 1 mill during 2007 through 2009 on the gross receipts of businesses operating in the City. Under the City's Act 47 Recovery Plan, the tax was eliminated in 2010.

Parking Tax – A tax equal to 37.5% of the consideration paid for each parking transaction is levied on the patrons of non-residential parking places in the City. There is a no planned reduction for this tax in 2010.

Amusement Tax – This tax is levied at the rate of 5% on the admission price paid by patrons of all manner and forms of amusement. Nonprofit charitable performing arts groups were granted exempt status in 2008.

Deed Transfer Tax – The Deed Transfer Tax is levied on real property sales within the City at the rate of 2% of the gross sales price.

Local Services Tax – This $52 tax is levied upon each individual whose principal place of employment is located in the City, regardless of residence. Legislative action requires collection at $1 per week, remitted according to a calendar quarter, with an exemption for wage earners making less than $12,000 per year.

Facility Usage Fee – The Facility Usage Fee is levied on all non-resident individuals who use the City's sport stadiums or arena to engage in an athletic event or otherwise render a performance for which they receive remuneration. The fee is assessed at 3% of payroll amounts generated as a result of the business activity.

Institution Service Privilege – This 6 mill tax is levied on certain receipts of non-profit, non-charitable organizations providing a service within the City.

A. *Payroll Preparation Tax* – ***This tax is imposed on all for-profit companies in an amount equal to .55% of the total wages of all employees who perform work in the City.***

RAD Tax Revenues

The Allegheny Regional Asset District (the "RAD"), a special purpose area wide unit of local government created in 1993 to provide supplemental sources of revenue for local governments in the southwestern region of Pennsylvania, imposes a 1% regional sales tax (the "RAD Tax") on sales of products and services in the County that are subject to the Pennsylvania State Sales Tax. The proceeds of the RAD Tax are distributed as follows: one-half to the RAD, one-fourth to the County and one-fourth to all other eligible municipalities, including the City.

For 2008 and 2009, the City's share of the RAD Tax proceeds, which are classified as General Fund revenues, amounted to $12,765,256 and $11,745,489, respectively. From its share of RAD Tax proceeds, the City pledged $7.5 million through 2014 to provide for debt service payments on certain Urban Redevelopment Authority of Pittsburgh bonds issued to create a $60 million development fund.

In addition to the City's share of RAD Tax proceeds, the RAD provides support payments to the City with respect to certain regional assets located in the City.

Other Revenues

Locally generated non-tax revenues primarily include federal and state grants, licenses and fees, charges for the provision of services, fines and forfeits, investment earnings and revenues from City self-supporting trust funds. These revenues generated $95,911,782 in 2008 and $78,724,895 in 2009.

APPENDIX E

CONSULTING ENGINEER'S REPORT

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The Pittsburgh Water
and Sewer Authority

Allegheny County, Pennsylvania

Consulting Engineer's Annual Report

March 2010

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The Pittsburgh Water and Sewer Authority
Allegheny County, Pennsylvania

Consulting Engineer's Annual Report

March 2010

Prepared by: Charles J. Jordan, P.E.

Approved by: John R. Balewski, P.E.

Project No.: 09-3548-RET-01

CHESTER ENGINEERS

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THE PITTSBURGH WATER AND SEWER AUTHORITY
CONSULTING ENGINEER'S ANNUAL REPORT
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PITTSBURGH WATER AND SEWER AUTHORITY CONSULTING ENGINEER'S ANNUAL REPORT

EXECUTIVE SUMMARY

This annual report, prepared for The Pittsburgh Water and Sewer Authority (Authority), presents a review of the Water and Sewer Systems' operations and the status of the Capital Improvements Program (CIP) for Fiscal Year 2009.

A summary of the conclusions and recommendations as contained herein are as follows:

1. The existing Water and Sewer Systems have been properly maintained and are in adequate operating condition. However, the systems are in need of certain improvements and/or replacements which are being carried out under the Authority's CIP. The Operating Budget for 2010, as adopted by the Authority Board of Directors at a regular meeting on December 11, 2009 and reviewed herein, is sufficient for maintaining proper operations in 2010.
2. Work has continued during the past year on the CIP implemented in 1984. Current capital project fund resources were made available in June 2005 through the issuance of additional bonds (2005 Bond Issue), in March of 2008 through the advanced refunding of the 2002 and 2005 Bonds (2007 Depository Agreement Fund) and in June of 2008 through the issuance of additional bonds (2008 Construction Fund). Details as to the use of these funds are included in Exhibits "A", "B", "C", "D", "E", "F", "G", "H", AND "I". In 2009, the Authority secured additional CIP funds from the Pennsylvania Infrastructure Investment Authority (PENNVEST). During 2009, four projects were funded from PENNVEST.
3. During 2010, work should continue on the projects identified in the CIP. In addition to current ongoing projects, other projects will have to be undertaken for the replacement of old and worn facilities, emergencies, and new facilities, which may include projects being undertaken by the City of Pittsburgh, the Urban Redevelopment Authority (URA) and the Sports and Exhibition Authority (S&EA).
4. During 2002, the Authority established a Capital Improvements Committee to oversee the capital projects of the Authority. This includes reviewing amendments to the Capital Improvement Program, reviewing change orders and work directives and evaluating projects presented to the Authority by the City of Pittsburgh, URA and S&EA. In 2010, the Authority will prepare a 40 year capital plan for both the water and sewer system. This plan will identify

the long term needs of the Authority through the creation of eight five-year capital plans.

5. A comparison regarding the status of the CIP as of December 2008 and December 2009 is indicated in Table 1.

Table 1
Capital Improvement Program
Bond Fund Status Report - 2008 vs. 2009

	December 2008	December 2009
Completed Contracts	$468,734,773.50	$488,543,235.67
Active Contracts	140,076,059.86	111,531,474.14
TOTAL	608,810,833.36	600,074,709.81
TOTAL BUDGET	$610,701,476.41	$648,707,082.58
Percent of Budget	99.7%	92.5%
Funds Paid from Construction Fund	$505,436,856.72	$526,462,351.07
Percent of Budget	82.8%	81.2%

6. Current deposits in the Authority's 2005 Bond Fund are at $4,130,763.76 and deposits in the 2008 Construction Fund are at $79,086,239.25. It is estimated that these funds will carry the Capital Improvements Program through late 2012 based on the current Capital Expenditure Plan.
7. Current deposits in the Authority's 2005 Bond Fund and 2008 Construction Fund are well in excess of $7,000,000. As a result, there is no need for the Authority to deposit any funds into the Renewal and Replacement Fund during the next fiscal year. The 2010 Operating Budget adopted in December 2009 included a 5% Distribution Infrastructure System Charge (DISC). The DISC will be implemented to reinvest in the system to replace and repair aging infrastructure and enhance customer service through improved water supply and water quality. DISC is a mechanism to recover the revenue requirement associated with increased annual capital expenditures. The DISC mechanism is a system charge added to customer bills to fund specific distribution, sewer conveyance, water supply and filtration projects, in addition to funds provided through the Capital Improvement Program funded by bond proceeds.

8. Projected 2009 end-of-year Revenues and Operating Expenses as presented in this report indicate that the Authority will satisfy the 2009 Rate Covenant Test as provided for in the Trust Indenture.
9. It is the Consulting Engineer's opinion, based upon estimated 2010 Revenues, Operating Expenses, and Operating Cash Reserves, that the existing schedule of rates will provide sufficient funds in 2010 to cover operating expenses and to satisfy the Rate Covenant Test as provided for in the Trust Indenture.

A summary of the Rate Covenant Test is indicated in Table 2.

Table 2
Debt Service Coverage Factor

	Projected 2009	Budget 2010
Cash – Beginning of Year		29,358,786
Water Collections		84,595,000
Interest Earnings		4,493,937
Fund Transfer		1,000,000
PENNVEST Projects		3,000,000
Tap Fee Collections		1,145,000
Sewage Collections		48,700,000
Other Collections		1,500,000
Total Available Funds		173,792,723
Operating Expenses		100,599,057
Capital Projects		7,500,000
Net Available for Debt Service		65,693,666
Debt Service Requirements		48,976,094
Coverage Factor		1.34

PITTSBURGH WATER AND SEWER AUTHORITY CONSULTING ENGINEER'S ANNUAL REPORT

HISTORY AND BACKGROUND

General

In February 1984, the City of Pittsburgh established The Pittsburgh Water and Sewer Authority (Authority) under the provisions of the Commonwealth of Pennsylvania. The City charged the Authority with the responsibility of carrying out a major Capital Improvements Program (CIP) recommended in a comprehensive study report entitled "Evaluation of the Water and Sewer Systems of the City of Pittsburgh," dated December 9, 1983.

Initial Authority Operation

The Authority took over operations of the Water and Sewer Systems on May 1, 1984 pursuant to the terms of a Lease and Management Agreement between the City of Pittsburgh and the Authority. Under this agreement, the City leased the Water and Sewer Systems to the Authority for a term of fifty years with renewal provisions. The Authority was authorized to operate and maintain the Water and Sewer Systems, construct all necessary improvements, establish and collect rates and charges for its service, and finance its operations and improvements through revenue collections and sale of bonds and notes payable solely from the Authority's revenues. The Authority appointed and designated the City as the Authority's agent to manage, operate, and maintain the Water and Sewer Systems for the term of the lease, subject to the general supervision, direction, and control of the Authority.

First Bond Issue

On April 19, 1984 the Authority Board adopted a major CIP by Resolution No. 19 of 1984. The Program was designed to maintain a satisfactory level of service to the Water and Sewer Systems' current users, to improve operating efficiency of the Water and Sewer Systems, and to address future user requirements. In July 1984, the Authority issued $93,600,000 Daily Adjustable Demand Water and Sewer System Revenue Bonds, Series of 1984 in order to implement the initial phase of this program. From proceeds of this bond issue, $78,777,000 was deposited into the Construction Fund for the initial phase of the CIP. In June 1986, the Authority issued an additional $134,700,000 Revenue Bonds, Series of 1986. From the 1986 Bond Issue, $115,000,000 was available to continue the program. An additional $7,000,000 was made available for capital

improvements by Resolution No. 72 of 1993, adopted August 18, 1993. These additional funds were provided through a transfer from the Debt Service Reserve Fund in accordance with Section 6.04 of the Trust Indenture, which provided for the required funds for Debt Service Reserve Fund to be in the form of cash, a letter of credit or other credit instrument, a surety bond or a combination thereof. The Authority Board elected to replace the monies in the fund with a surety bond. As a result, $7,000,000 was transferred to the Construction Fund for capital improvements, and the balance of monies were transferred to the Debt Service Fund.

1993 Bond Issue and Refinancing

In 1993, the Authority issued two series of Water and Sewer System Revenue Bonds to: (i) advance refund all of the outstanding previously issued bonds, (ii) provide additional funds for capital improvements to the Authority's Water and Sewer Systems, and (iii) pay all fees and expenses incurred in connection with issuance of the 1993 Bonds. Series A of 1993 Bonds, in the aggregate principal amount of $278,970,000 was for the advanced refunding of outstanding bonds and Series B of 1993 Bonds, in the aggregate principal amount of $10,785,000, was for additional capital improvements.

The new Trust Indenture, dated October 15, 1993 and applicable to the Series A and B of 1993 Bond Issues, eliminated the requirements for a fund balance to be maintained in the "Renewal and Replacement Fund" unless determined necessary annually by the Consulting Engineer. Therefore, the $2,009,523 which was being maintained in the Fund under the previous Trust Indenture was transferred to the "Prior Bonds Construction Fund" for use for capital improvements. From the Series B of 1993 Bond Issue, $9,990,477 was deposited into the 1993 Bond Construction Fund for additional capital improvements.

1995 Bond Issue

In 1995, the Authority recognized that the funding for the CIP implemented in 1984 was almost depleted. In order to ensure a continued supply of safe drinking water and proper sewer service to the Authority's current and future users and to address future demands on the Water and Sewer Systems, a new CIP was developed and adopted.

The Authority also negotiated a Capital Lease Agreement with the City of Pittsburgh, which terminated the Lease and Management Agreement and provided for the Authority to acquire the Water and Sewer Systems from the City.

The Authority issued additional bonds in 1995 to fund the 1995 CIP and to pay certain obligations of the Authority to the City of Pittsburgh under the Capital Lease Agreement. Water and Sewer System First Lien Revenue Bonds, Series A of 1995 in the aggregate principal amount of $89,850,000 were issued on July 15, 1995 to pay for capital improvements as identified in a new CIP. On July 15, 1995, the Authority issued Water

and Sewer System Subordinate Revenue Bonds, Series B of 1995, in the aggregate principal amount of $103,020,000 in order to pay the obligation of the Authority to the City of Pittsburgh under the Capital Lease Agreement. From the 1995 Series A Bonds, $80,000,000 was deposited into the Series A 1995 Capital Project Fund to fund the new CIP of the Authority.

1998 Bond Issue and Refinancing

Early in 1998, additions to the CIP were proposed that addressed future needs of the Authority. These centered on covering Highland Reservoir No. 1, City of Pittsburgh and Urban Redevelopment Authority projects, and improvements to the water distribution and sewerage systems.

The Authority issued 1998 Series A, B, and C Water and Sewer Revenue Bonds on March 2, 1998. The 1998 Series A Bonds were used to provide for the refunding of the Authority's outstanding 1995 Series A Bonds. The 1998 Series B Bonds were used to fund additions to the CIP, and the 1998 Series C Bonds were used to refund the Authority's outstanding 1995 Series B Bonds. The Series B Bonds enabled $36,001,908 to be deposited in the 1998 Capital Projects Fund, funding the CIP into the year 2000.

2002 Bond Issue

At the end of 2000, the capital project funds of the Authority were largely spent with only about $345,000 in reserve for the construction of capital projects. The Authority had anticipated this draw down of funds and had begun work to issue additional bonds in early 2002. The Capital Projects Fund provided through this issue provided $90,494,400 to provide for the construction of capital projects and to meet the needs of emergencies that may require the use of capital funds.

2003 Bond Refinancing

During the fourth quarter of 2003, the Authority issued revenue refunding bonds in the amount of $167.4 million for the purpose of partially refunding the 1993 Bond Issue. The 2003 Refunding Bonds, with an average yield of 3.8%, generated a reduction in annual debt service payment of approximately $4.0 million for 2004.

2005 Bond Issue

In June of 2005, the Authority issued first lien revenue bonds in the amount of $50,385,000 to provide for continuation of the capital improvements program and to meet the needs of emergencies that may require the use of capital funds. The 2005 Revenue Bonds, with an average yield of 4.23%, created an increase in annual debt service payments of approximately $3.2 million for the first 12 years.

2007 Bond Advance Refunding

Pursuant to Resolution No. 23 of 2007, adopted on February 9, 2007, the Authority issued Water and Sewer System First Lien Revenue Refinancing Bonds Series A of 2007 $43,720,000 (Fixed Rate) W, Series B-1 of 2007 $57,585,000 (Variable Rate Demand), and Series B-1 of 2007 $57,590,000 (Variable Rate Demand). The 2007 Bond Issue refunded the 2002 Bonds and the 2005 Bonds. The 2007 Bond Advance Refunding also resulted in a deposit of $6,319,014 into the 2007 Depository Agreement Fund. These funds are available for capital projects and were exhausted in December 2009.

2008 Bond Advance Refunding

In June of 2008, and pursuant to Resolution No. 54 of 2008, adopted on April 11, 2008, the Authority issued (Variable Rate Demand) Water and Sewer System First Lien Revenue Bonds, Series of 2008 consisting of:

- $145,495,000 (Variable Rate Demand) Water and Sewer First Lien Revenue Refunding Bonds, Series B of 2008
- $71,225,000 (Variable Rate Demand) Water and Sewer Subordinate Revenue Refunding Bonds, Series D-2 of 2008, $51,910,000

On the same date and resolution, the Authority issued (Variable Rate Demand) Water and Sewer System Subordinate Revenue Refunding Bonds, Series of 2008 consisting of:

- $51,910,000 (Variable Rate Demand) Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1 of 2008
- $51,885,000 (Variable Rate Demand) Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-2 of 2008

On the same date and resolution, the Authority issued (Fixed Rate) Water and Sewer System First Lien revenue Refunding Bonds consisting of:

- $68,970,000 (Fixed Rate) Water and Sewer System First Lien Revenue Refunding Bonds, Series A of 2008 Taxable.
- $24,665,000 (Fixed Rate) Water and Sewer System First Lien Revenue Refunding Bonds, Series D-1 of 2008.

The 2008 Bond Issue refunded the Authority's 1998A Bonds, 1998C Bonds, certain maturities of the 2007 B-1 and 2007 B-2 Bonds, advanced refunding of certain maturities of the 1998B Bonds, and provided $98,062,183.58 for the continuation of the capital improvements program and to meet the needs of emergencies that may require the use of capital funds.

The issuance of the 2008 Bonds resulted in no rate increase and initially leveled the Authority's debt service requirements at approximately $42,000,000 until 2040. Due to

the crisis that hit the financial sector in last quarter of 2008, the debt service for 2009 increased to $51,716,888. The 2010 debt service budget is $48,976,094.

Pursuant to Resolution 93 of 2009 and 99 of 2009, the Authority authorized the remarketing of the Water and Sewer System First Lien Revenue Refunding Bonds, Series B of 2008 and Variable Rate Demand Water and Sewer System Subordinate Revenue Refunding Bonds Series C-1 of 2008. These actions extended liquidity facilities for these bonds.

PENNVEST Funding

Act 16 of 1988 established the Pennsylvania Infrastructure Investment Authority (PENNVEST) to assist local governments in financing sewer and water projects. The PENNVEST program provides loans and grants for acquisition, construction, improvement, expansion, extension, repair, and/or rehabilitation of all or part of any water or sewage system. Funding under the PENNVEST program is primarily in the form of low-interest, twenty-year loans.

To date, the Authority has secured 11 PENNVEST loans totaling $52,261,172. Five water projects, five sewage projects and one storm sewer project have been funded through this program. A total of $18,338,340.12 of the projects have been completed. By early January 2010, the Authority closed the loans of three sewage projects and two water projects totaling $36,809,297.

Summary of Funding Sources

Because of the various bond issues and PENNVEST loans that have been secured, a total of $626,899,582 has been made available for capital improvements since the establishment of the Authority in 1984. Table 3 summarizes the sources of these funds:

Table 3
Sources of Capital Improvement Funds

Source	Amount
1984 Bond Issue	$ 78,777,000
1986 Bond Issue	115,000,000
Transfer from Debt Service Reserve Fund	7,000,000
Transfer from Renewal and Replacement Fund	2,009,523
1993 Series B Bond Issue	9,990,477
1995 Series A Bond Issue	80,000,000
1998 Series B Bond Issue	36,001,908
2002 Bond Issue	90,494,400

Table 3
Sources of Capital Improvement Funds (continued)

Source	Amount
2005 Bond Issue	49,799,037
2007 Depository Agreement Fund	7,503,881
2008 Construction Fund	98,062,184
Sub-Total (Bond Funds)	$574,638.410
PENNVEST Funds	52,261,172
TOTAL (Total Funds)	$626,899,582

WATER SYSTEM

The water supply and distribution system consists of a 117 million gallon per day (mgd) rapid sand type treatment plant that was placed into service in 1969, 1,200 miles of mains and service lines, 30,000 valves, 8,000 fire hydrants, nine pumping stations, four reservoirs, and twelve 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 four to six days of normal water usage.

The sole source of water for the Water System is the Allegheny River. The Pennsylvania Department of Environmental Resources (now DEP) issued a Water Allocation Permit to the Authority in March 1989. This permit allows for water withdrawal of up to 100 mgd from the river. The DEP has advised that the permitted allocation would be reevaluated in the future should the Authority's demand increase as a result of growth within the City or through the sale of water to surrounding municipalities. The current average water withdrawal from the Allegheny River is approximately 70.1 mgd, and the maximum withdrawal made on any one day was approximately 91.0 million gallons during the past year.

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 customers within the City.

The Pennsylvania-American Water Company provides service to approximately 30,150 customers in the southern and western sections of the City while two small areas, one in the eastern part and the other in the western end of the City, are served by the Wilkinsburg-Penn Joint Water Authority and the West View Water Authority, respectively. In each of these areas, the distribution system elements (waterlines, valves, hydrants, etc.) are owned and maintained by the respective independent water purveyor.

In addition, the Authority, through interconnections with other systems, provides water for supply and/or emergency use to several adjacent municipalities.

SEWER SYSTEM

The wastewater collection system is part of a regional system that provides service to about 550,000 people, nearly 325,000 of whom live within the City. The total drainage area served by the regional system is approximately 80 square miles. The City of Pittsburgh comprises about 55 square miles, or nearly 70 percent of the total drainage area. The Sewer System comprises 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 the Allegheny County Sanitary Authority (ALCOSAN) interceptors located along the rivers for conveyance to ALCOSAN's wastewater treatment facility for treatment prior to discharge into the Ohio River. The ALCOSAN treatment facility is operating in compliance with the National Pollutant Discharge Elimination System (NPDES) under Permit No. 0025984.

The Sewer System also is utilized by twenty-four 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 do not provide for sharing Sewer System maintenance and reconstruction costs.

The Sewer System is designed so that during wet weather, a portion of the collected stormwater 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 is in satisfactory operating condition and has adequate capacity for the dry weather wastewater flows. However, during wet weather events the Sewer System has often been taxed beyond its capacity and has resulted in overflows, bypassing, and flooding.

The U.S. Environmental Protection Agency (EPA) has adopted regulations regarding overflows from combined sewers during 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 stormwater runoff that enter the combined Sewer System. The EPA regulations require owners of any sewer system having CSOs to acquire NPDES discharge permits for each site. The owner's of these systems implemented the EPA's "Nine Minimum Control Measures" in January of 1997.

Essentially all of the Authority sewers are combined sewers, and there are well over 100 CSOs within the system. The most efficient and cost-effective method of eliminating or

controlling the CSOs is unknown. However, the Authority has undertaken the task of inventorying and monitoring CSOs and the sewer collection and conveyance system in an effort to evaluate the impact of the CSO discharges on receiving streams. The Authority has commissioned detailed studies from two engineering consultants in an effort to develop a long-term control plan (LTCP) for addressing all CSO related issues. The Authority entered into an administrative consent order during 2004 in order to address the EPA regulations and extend deadlines for compliance. This subject is discussed further later in this report.

ADVICE AND RECOMMENDATIONS AS TO MAINTENANCE, REPAIR, AND OPERATION

Water System

The Pittsburgh Water and Sewer Authority (Authority) is directly responsible for the operation and maintenance of the Water System, including intake, treatment, pumping, distribution, storage, and metering. The overall procedures and programs established and currently being followed by the Authority in the operation of the Water System is satisfactory and should be continued during the coming fiscal year.

The Authority has renovated and replaced treatment equipment, chemical feed equipment, pumps, motors, waterlines, valves, hydrants, and storage tanks under the current Capital Improvements Program (CIP). These projects have been implemented at a cost of hundreds of millions of dollars. In order to realize the full life of these improvements and to maintain and improve the condition of the existing system, the Authority has used outside consultants to develop a computerized maintenance program that will enable tracking and reporting of scheduled and unscheduled maintenance and repairs of pumps, motors, valves, mechanical equipment, and electrical and control systems at the treatment plant and pumping stations.

In 2009, the following work was performed in repair and replacement of capital facilities outside of normal operations:

Water Distribution System

- Performed preventive maintenance on 2,659 gate valves.
- Repaired 361 water main leaks.
- Repaired 261 service line leaks.
- Repaired or replaced 6,726 residential water meters.

Water Pump Stations

Bruecken Pump Station

- A Duquesne Light power outage was repaired on February 12, 2009.
- Several RTU communication failures were corrected by PWSA personnel.
- Pump No. 2 went into lock-out, but the condition was corrected by PWSA personnel.
- Pumps and motors for Pumps No. 3 & No. 6 were removed and sent out for repairs.
- On June 25, 2009, No. 4 GA valve malfunctioned, but PWSA electricians corrected the problem.
- On June 17, 2009, a thunderstorm caused Pump No. 2 to go into lockout which caused a line break on Rising Main No. 1
- On July 2, July 5, July 9, and July 10, 2009, the station experienced ATV failures which were corrected by PWSA personnel
- On August 7 and 8, 2009, the station experienced a basement flood alarm.
- On August 13, 2009, a power outage caused Pump #7 to go into lock out. PWSA corrected the problem and restored operations
- On October 24, 2009, the basement flood alarm was tripped, but the problem was corrected.

Fox Chapel Pump Station

- Valve No. 1 was slow to close. PWSA personnel corrected the condition.
- Pump No. 1 would not shut down. PWSA personnel corrected the problem.
- A hole in the tank was repaired.
- After outage on March 2, 2009, PWSA personnel restored service.

Herron Hill Pump Station

- Repaired No. 6 electric check valve. Replaced thrust bearings on Pumps No. 1 and No. 4.
- The bonnet on Pump No. 4 was removed and the bearings were replaced and repacked.
- After outage on March 2, 2009, PWSA personnel restored service.
- After outage on April 28, 2009, PWSA personnel restored service.
- To repair 20 inch pump line, Pump No. 5 was taken out of service.
- After outage on June 2, 2009, PWSA personnel restored service.
- On several occasions, Pumps No. 1 and No. 2 went into lockout caused by power failures. PWSA personnel corrected the problems.
- Pump #3 was operating against a closed valve. Condition was corrected.
- Pump No. 2 valve would not fully open. PWSA personnel corrected the problem.

Howard Street Pump Station

- Repaired malfunctioning Pump No. 6 ball valve.
- PWSA corrected no-start condition on Pump No. 1.
- Corrected lock-out condition on Pumps No. 1, No. 2 and No. 6.
- Pump No. 2 was disassembled and bearings and packing were replaced.
- Communications were lost on June 9, 2009. PWSA personnel corrected the problem.
- On October 16, 2009, Pump No. 1 would not shutdown. PWSA personnel corrected the problem.
- On October 26, 2009, Pump No. 5 was running against a closed valve. PWSA personnel corrected the problem.

Mission Street Pump Station

- Pump No. 3 was returned to service.
- The 16-inch GA valve was rebuilt.
- A RTU communication failure was corrected by PWSA personnel.
- On November 28, 2009, a power outage caused Pumps No. 1, No. 2 and No. 3 to go into lockout. PWSA personnel corrected the problem.

Saline Pump Station

- Power outage from storm was corrected by PWSA electrician.
- On March 13, 2009, Pump No. 3 would not shutdown. PWSA personnel corrected the problem.
- Several communications errors were corrected by PWSA personnel.
- Pump No. 2 GA valve malfunctioned. PWSA personnel corrected the problem.
- On June 7 and June 24, 2009, the station experienced power outages. PWSA personnel corrected the problems.
- On several occasions, Pump No. 2 ran against a closed valve. PWSA personnel corrected the problem.
- On October 17, 2009, Pump No. 2 went into lockout due to a power failure. PWSA personnel corrected the problem.
- On November 19, 2009, the capacitor on Pump No. 3 was replaced.

Lincoln Pump Station

- In February, Pump No. 3 cone valve malfunctioned. PWSA personnel corrected the problem.
- On September 15, 2009, the tank PLC timed out. PWSA personnel corrected the problem.
- On October 14, Pump No. 1 was running against a closed valve. PWSA personnel corrected the problem.
- A RTU communication failure was corrected by PWSA personnel.

- On December 17, 2009, Pump No. 1 started but valve did not open. PWSA personnel corrected the problem.
- On December 20, 2009, Pump No. 3 was running against a closed gate valve. PWSA personnel corrected the problem by repairing the limit switch.
- On December 23, 2009, PWSA personnel disassembled and repaired the operating cylinder for cone valve No. 1.

Herron Hill Tank Pump Station

- On August 12, 2009, the 16-inch distribution supply valve was repaired.
- Several RTU communication failures were corrected by PWSA personnel.

Highland Pump Station

- In August 2009, Pump No. 2 motor failed. The motor was removed and a new one installed. Failed motor sent back to manufacturer for analysis.
- Several RTU communications failures were corrected by PWSA personnel.
- On December 9, 2009, the station experienced a power failure that caused Pump No. 1 motor and auto transformer to burn out. Pump No. 1 was out of service while being repaired.
- On December 9, 2009, the 150 HP motor for Pump No. 2 has been rewound, aligned, tested and reset and is back in service for emergency use only.

Aspinwall Pump Station

- On May 23 and May 27, 2009, the station experienced power outages.
- On June 17, 2009, the 60-inch main was isolated for repairs. PWSA personnel used Pump No. 1 to maintain the system.
- On August 22, 2009, the UPS back-up (Circa 1975) malfunctioned and caused the entire SCADA system to freeze up. PWSA personnel corrected the problem.

- On September 22 and November 11, 2009, the plant experienced a power outage causing all pumps at the station to go into lockout. PWSA personnel restored service.

Coral and Pacific Pump Station

- Pump No. 2 was replaced.
- On September 16, 2009, pump station went off-line. The sump pump failed causing flooding. The spare pump was installed on September 29, 2009.
- The hatch door retrofit was completed.

Ross Pump Station

- No repairs reported.

Water Storage Tanks and Reservoirs

- No repairs reported.

Highland No. 1 Microfiltration Plant

- Experienced emergency shutdowns on January 19, March 21, April 9, July 17, and October 10, 2009. PWSA personnel restored operation.
- On June 11, 2009, communications were lost. PWSA personal restored operation.
- On June 16 and June 17, 2009, the plant was down due to power outages. PWSA personnel restored operation.
- The plant experienced several C/2 metering problems. PWSA personnel corrected the problem.
- The Y-strainer on the CIP pump was replaced.
- On August 11, 2009, communications were lost. PWSA personal restored operation.
- PWSA personnel repaired and corrected a low output signal.
- On October 30, 2009, the strainer was disassembled and debris removed and strainer put back in service.
- On November 1, November 23, and November 28, 2009, the plant shut down without cause. PWSA personal restored operation

- On December 27, 2009, five racks went off-line and the plant experienced rapid fluctuations with Cl_2 residual. PWSA personnel corrected the problem.

Water Treatment Plant

- Both sodium hypochlorite feed lines were cleaned out and jetted.
- Rapid Sand Filter Nos. 12, 14, 15, 17 and 18 were capped.
- Replaced all power supply valves in the Rapid Sand area.
- Rapid mixers were installed.

As Consulting Engineer for the Authority, Chester Engineers recommends the following actions be undertaken in the coming year to further enhance the Authority's ability to provide a reliable source of potable water to its customers:

1. The Authority should continue its inspection of water storage facilities within the existing water system.
2. The Authority should continue to update the computerized Supervisory Control and Data Acquisition (SCADA) Control System for the water system. An annual maintenance program should be instituted to keep this technology up to date and in good working order.
3. The Authority should aggressively continue tracking "lost and unaccounted for" water through increased leak detection efforts, a routine annual meter replacement program, installation of meters on unmetered uses, and scheduled regular calibrations of large meters (both internal and point-of-sale). The Operations and Engineering Departments should continue to combine resources and develop a detailed long-range program for tracking and controlling "lost and unaccounted for" water.
4. The Authority should continue updating and calibrating the existing computerized hydraulic water model of the Water System. The updated model is an efficient and effective tool for evaluating current and future needs in the water system.
5. The Authority should evaluate existing electrical motor control centers and other electrical equipment at its pump stations and plan for replacement of outdated equipment.
6. The Authority should continue its investigation of the clarification and filtration processes at its Aspinwall Water Treatment Plant.
7. The Authority should develop a Master Plan for Water and a Master Plan for Sewer. The plans should identify areas within and outside the City limits where water and sewer expansion could occur.

It is the engineer's opinion that sufficient funds are provided in the proposed 2009 Operating Budget of the Authority to continue the current procedures and programs for operation, maintenance, and routine repair of the Water System.

Sewer System

The Authority assumed operation and maintenance responsibilities for the Sewer System in 1999.

In conjunction with developing the computerized maintenance program for the Water System, the Authority has developed a similar computerized system to track and report inspection, cleaning, and maintenance activities related to sewer lines, manholes, and catch basins throughout the sewer system.

The Authority owns and operates equipment for cleaning, flushing, and internally televising sewer lines on an as-needed basis. The equipment is used to identify needed repairs and/or replacements throughout the system. When required, Authority efforts are supplemented by the use of outside contractors to promptly address problem areas in the Sewer System.

The funding included in the Authority's 2010 Operating Budget will provide for the proper maintenance, routine repair, and operation of the Sewer System during the coming fiscal year.

Regulatory Agency Orders and Problem Areas

2004 Consent Order and Agreement (COA)

During 2004, the Authority and City of Pittsburgh jointly executed a COA with the Pennsylvania Department of Environmental Protection (DEP) and the Allegheny County Health Department (ACHD). This COA closely resembles COAs that were proposed and executed between the regulatory agencies and the other 82 communities that currently convey sewage to the Allegheny County Sanitary Authority (ALCOSAN) for treatment. The intent of the order is to develop a regional Long Term Control Plan (LTCP) for addressing combined and sanitary sewer overflows and ultimately improve water quality within Western Pennsylvania.

The COA requires that the Authority extensively inventory and inspect the entire sewer collection and conveyance system over a three year period. In addition, flow monitoring must be performed and deficiencies identified as a result of the sewer system inspections must be corrected.

As previously noted, the Authority has commissioned two engineering consultants to perform detailed system investigations and flow monitoring

within the COA schedule. The Consultants have also been tasked with developing a LTCP for the Authority so that it may adequately comply with the requirements of the COA.

In 2006, the Authority engaged two Consultants for COA Program Management. Tasks involved with this project include manhole inspection and mapping, catch basin inspection and mapping, dye testing, and regulatory support. The project is approximately 90% complete.

Nine Mile Run

The Authority entered into a Consent Order and Agreement (COA) with the DEP on May 22, 2000 concerning problems identified in the Nine Mile Run Interceptor. PWSA was ordered to complete necessary repairs of its Nine Mile Run Interceptor sewer and to provide access to maintain the interceptor by November 30, 2004.

The Authority completed comprehensive mapping of the system and developed a plan for rehabilitating the sewer. Rehabilitation of the Upper Nine-Mile Run Interceptor was completed in August 2002 at a cost of $1,210,908.65. Rehabilitation of the Lower Nine-Mile Run Interceptor was completed in June 2005 at a total cost of $2,500,094.07.

The requirements of the Nine Mile Run COA were incorporated into the 2004 COA and this project is considered complete.

Saw Mill Run Corrective Action Plan and Streets Run Corrective Action Plan

Corrective Action Plans (CAPs) were developed for the Saw Mill Run and Streets Run Watersheds to address sewer surcharging problems. CAPs are agreements to perform a series of tasks to eliminate sewer problems. The DEP imposed sewer tap restrictions in both of these watersheds and the Authority has undertaken a series of projects to correct surcharging problems in these watersheds. Projects range from small sewer separation projects to lining and replacement of sewers. Like the Nine Mile Run COA, these watershed specific CAPs were incorporated into the 2004 COA. Upon execution of the COA, all tap restrictions were lifted.

Sewage Pumping Stations

The Authority has also received orders to address problems at its four sewage pumping stations. These stations have been identified as having chronic bypassing problems that must be addressed. The first stage in this

process was to install flow monitoring devices at each of the pumping stations. These devices were ordered and placed into operation during January 2002. Flow monitoring results have been tabulated and reviewed. The Authority has entered into an Engineering Services Agreement to develop rehabilitation plans for each station, and the costs are included in the current Capital Expenditure Plan. The design of the improvements is approximately 80% complete. The Authority is also negotiating with ALCOSAN and the West Mifflin Sanitary Sewer Municipal Authority (WMSSMA) to eliminate two pump stations in the Lincoln Place section of the City. The pump stations can be eliminated by construction of a gravity sewer to the WMSSMA Thompson Run Trunk Sewer and treatment at the Thompson Run Treatment Plant. This will eliminate the long term maintenance costs associated with the pump stations.

Future Needs

In addition to routine maintenance and the work that has taken place through the Capital Improvement Program (CIP) in the past, both the water and sewerage systems are in need of repair, replacement, and improvement.

A broad list of projects was prepared for the 2002 CIP that included needs throughout the water and sewerage systems. Because of the extensive nature of the list, it was prioritized into five levels. Projects identified as having the highest priority level were included in the list of projects to be funded through the 2002 Bonds.

A Capital Expenditure Plan was developed in November 2004 and included a list of projects for inclusion in the CIP Bond issued in 2005. The Plan included brief project descriptions, classifications, estimated costs, and ratings to identify critical projects through 2009.

A Capital Expenditure Plan was developed in March 2008 and included a list of projects for inclusion in the CIP Bond issued in 2008. The Plan included brief project descriptions, classifications, estimated costs, and ratings to identify critical projects through June of 2012. Of key importance is the continued funding of projects related to upgrades at the Water Treatment Plant and COA, including the Combined Sewer Overflow (CSO) program and COA Program Management.

With respect to upgrades at the Water Treatment Plant, the Authority awarded a Study and Design contract to perform an investigation of the clarification and filtration processes at its Aspinwall Water Treatment Plant and to prepare a report of their findings. The current budget for this phase is $2,208,000.

The study resulted in a comprehensive treatment plant improvement plan to meet the following major project goals:

- Develop a strategy to position the plant for meeting current and potentially more stringent future regulatory requirements.
- Evaluate the filters and identify optimization strategies.
- Evaluate alternatives to collect, store and treat backwash water.
- Evaluate existing facilities and identify potential improvements.
- Evaluate retrofit and new facilities.
- Evaluate costs and schedule of implementing various improvements.
- Minimize footprint of new facilities due to limited real estate.
- Utilize not more than a maximum daily discharge to ALCOSAN of 1 mgd.

The report's recommendations included the following plant improvements:

- Replacement of the clarifier chain and scraper equipment
- Rehabilitation of the rapid sand filters
- Construction of a filter backwash recycling system

In 2009, rehabilitation of Clarifier No. 4 was completed. Through PENNVEST funding, construction contracts were awarded for the rehabilitation of Clarifiers 1, 2 and 3 and for the Filter Backwash Recycle System.

In 2002, two contracts for the preparation of the Long Term Control Plan (LTCP) were awarded. The contract value for these contracts is now $15,589,285. As of December 31, 2008, a total of $13,763,987.94 has been paid toward completing this work. The two contracts, originally scheduled to be completed by May 1, 2005, were extended to April 30, 2008. At the completion of this study phase, the Authority will have a proposed plan and schedule to meet its CSO obligations, as well as an estimate of the cost of implementation. The plan is under review by the PWSA Engineering staff.

In 2006, two contracts totaling $4,900,000.00 were awarded for the COA Compliance Program Management. As of December 31, 2009, a total of $4,240,939.92 has been paid toward completing this work. In July 2008, the PWSA authorized additional dye testing in the amount of $550,000.00. This increased the value of the two contracts to $5,450,000.00. At the completion of this work, the Authority will have met several of their obligations outlined in the COA.

Many future projects identified in the 2007 Annual Report were funded via the 2008 Construction Fund issued in June of 2008. A partial list of projects not funded by the 2008 Construction Fund and for future CIP funding consideration is as follows:

- Water Distribution System
  - Waterline replacement in areas with chronic breaks (currently funded, but will require additional CIP funding).
  - Inspecting river crossings.
  - Miscellaneous small fire protection projects (currently funded, but will require additional CIP funding).
- Pumping and Storage
  - Rehabilitating booster pump stations.
  - Inspecting and painting water storage tanks not included in 2008 Construction Fund or PENNVEST Program.
  - Replacing pump station switchgear and motor control centers not included in 2008 Construction Fund.
- Water Treatment Plant
  - Repair and upgrade clearwell (currently under study).
  - Replacing switchgear and motor control centers not included in 2008 Construction Fund.
  - Sedimentation basin fencing/security upgrades.
- Miscellaneous
  - Engineering computer upgrades.
  - GIS hardware.
- Sewer System
  - Sewer rehabilitation contracts (currently funded, but will require additional CIP funding).
  - Sewer internal inspection contracts (currently funded, but will require additional CIP funding).
  - Sewer line point repairs (currently funded, but will require additional CIP funding).
  - Sewer separation where economically feasible.
  - Eliminating small CSOs.
  - MS4 Stormwater compliance (currently funded, but will require additional CIP funding).

CAPITAL ADDITIONS

General

The initial Capital Improvements Program (CIP) was recommended in a report entitled "Evaluation of the Water and Sewer Systems of the City of Pittsburgh," dated December 9, 1983, prepared by Green International, Inc. This program has been continually reviewed and modified as required to reflect changing conditions in order to maintain a satisfactory level of service to current users, to improve operating efficiency, and to address future requirements.

The CIP was developed to ensure a continued supply of safe drinking water and proper sewer service to the Authority's current and future users and to address future demands on both the Water and Sewer Systems. In developing this program, the following factors and conditions were considered:

- Identification of improvements not currently funded.
- Rehabilitation and/or replacement of existing facilities that exceed their useful lives.
- Improvements required for sale of water to communities within the region.
- Water and Sewer system improvements required in association with planned City of Pittsburgh capital improvement projects, Urban Redevelopment Authority planned redevelopment projects, and Sports & Exhibition Authority projects.
- Improvements required under current and anticipated safe drinking water standards.
- Implementation of combined sewer overflow controls (CSOs) as required by the U.S. Environmental Protection Agency.
- Compliance with the 2004 COA.

The Authority has provided $610,696,927 through various Revenue Bond Issues to fund the CIP since 1984 to ensure that the above noted objectives are met.

Table 4 presents a summary of the CIP Budget by major components for both the Water System and the Sewer System.

Table 4
Capital Improvements Program Budget

	Funds Budgeted
WATER SYSTEM	
Distribution System	17,488,296.56
Pumping and Storage	10,543,202.05
Treatment Plant	8,178,860.26
TOTAL WATER SYSTEM	36,210,358.87
SEWER SYSTEM	
Sanitary Sewer	905,991.66
Combined Sewer	33,455,438.51
Pump Station	3,901,621.83
TOTAL SEWER SYSTEM	38,263,052.00
CITY AND URA PROJECTS	11,126,313.07
ENGINEERING & CONSTRUCTION MANAGEMENT	18,462,558.45
TOOLS AND EQUIPMENT	4,899,377.44
IT / GIS	221,596.88
CONTINGENCIES	48,478,682.94
TOTAL 2005 BOND ISSUE	52,084,432.74
TOTAL 2007 DEPOSITORY AGREEMENT FUND	7,503,881.33
TOTAL 2008 CONSTRUCTION FUND	98,073,625.58
COMPLETED BOND ISSUES	419,273,308.00
TOTAL BOND FUNDS APPROPRIATED	576,935,247.65
COMPLETED CONTRACTS – ACTIVE	33,758,679.31
TOTAL COMPLETE	610,693,926.96

Exhibits "A", "B", "C", and "D" attached to this report, provide details by individual projects that are included in the active CIP as of December 31, 2009.

As of December 31, 2009, contracts have been completed having a value of approximately $610,696,926.96. Current active contracts are valued at approximately $436,703,821.66. Figure 1 shows the monthly status and progress of the program since January 1, 1999 through December 2009. It is noted that this graph also indicates the accumulated amounts paid by month from the 2002 Bond Issue, 2005 Bond Issue, 2007 Depository Agreement Fund, and 2008 Construction Fund.

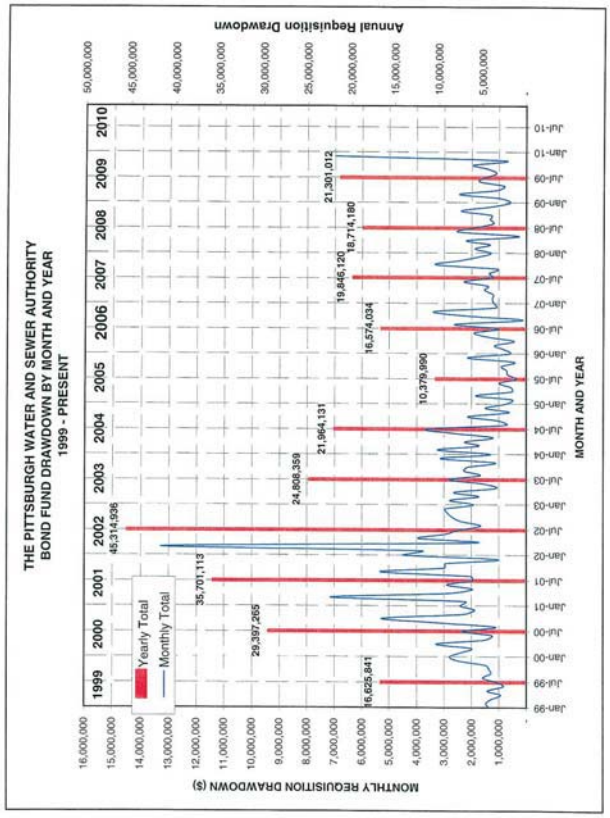

Table 5 presents a summary of the status of the 2005 Bond Issue, 2007 Depository Agreement Fund, and 2008 Construction Fund as of December 1, 2008 and December 31, 2009.

Table 5
Capital Improvement Program
2002, 2005, 2007, and 2008 Fund Status Reports - 2008 vs. 2009

	December 2008	December 2009
2005 Bond Fund		
Completed Contracts	$16,053,534.90	$24,417,225.56
Current Budgeted Projects	35,453,120.09	27,667,207.18
TOTALS	51,506,654.99	52,084,432.74
Percent of Budget (1)	100.00%	100.00%
2007 Depository Agreement Fund		
Completed Contracts	$0.00	$7,503,881.33
Current Budgeted Projects	6,319,014.16	0.00
TOTALS	$6,319,014.16	$7,503,881.33
Percent of Budget (1)	100.00%	100.00%
2008 Construction Fund		
Completed Contracts	$0.00	$1,813,107.41
Current Budgeted Projects	98,062,183.58	96,260,518.17
TOTALS	$98,062,183.58	$98,073,625.58
Percent of Budget (1)	100.00%	100.00

Exhibit "A" provides budget details on each individual project paid from the 2005 Bond Issue. A copy of the 2005 Bond Issue Status Report as of December 31, 2009 is attached as Exhibit "E".

Exhibit "B" provides details on each active and closed individual project paid from the 2007 Depository Agreement Fund. A copy of the 2007 Depository Agreement Fund Status Report as of December 31, 2009 is attached as Exhibit "F".

Exhibit "C" provides details on each active and closed individual project paid from the 2008 Construction Fund. A copy of the 2008 Construction Fund Status Report as of December 31, 2009 is attached as Exhibit "G".

Contract Awards and Authorizations for Bidding

During 2009, the Authority awarded nearly $38.3 million in construction contracts for water treatment, water distribution, and sewage collection facilities. A summary of these contract awards is shown in Table 6.

Table 6
2009 Contract Awards

Resolution No.	Project No.	Description	Original Contract Value
01-09	R-B2.09004-21	Waldeck Street 15-inch Sewer Lining	34,477.44
22-09	R-A2.08014-21	Howard St. Pump Station Replacement of Pump Nos. 6&7	729,500.00
28-09	R-A2.08012-21	Brashear Water Tanks Rehabilitation	1,187,500.00
30-09	R-E1.08130-21	Water and Sewer Castings Purchase	625,228.25
31-09	P-B2.08034-21	PennVest – Sewer Rehabilitation Gunite	1,559,803.00
42-09	P-B2.08034-22	PennVest – Sewer Lining Contract	1,193,175.00
43-09	P-B2.08034-23	PennVest – Sewer Improvement – Various Locations	947,395.00
44-09	R-B2.08112-21	COA Sewer Inspection	220,220.00
45-09	R-A1.08103-21	Darragh Street 12" Waterline Relay from Allequippa Street to Terrace Street	244,474.00
46-09	R-E1.08138-21	Purchase of Trench Shoring Equipment	505,686.00
47-09	R-B2.08114-21	Manhole Catch Basin and Point Repair Contract	1,270,025.00
62-09	R-B2.09019-21	15 inch Sewer Lining, from Glen Arden Dr. to Dallas Ave.	28,406.40
65-09	P-A1.09005-21	60-inch Water Transmission Main Improvement	3,439,115.00
66-09	P-A2.09007-21	Squirrel Hill Tank Improvements	680,999.00
67-09	P-A3.09008-21	Clarifier Nos. 1, 2, & 3 – General & Mechanical Work	2,263,788.00
68-09	P-A3.09008-22	Clarifier Nos. 1, 2, & 3 – Electrical Work	407,231.00
69-09	P-B2.09006-21	COA Critical Sanitary Sewer Inspection, Contract #1	218,852.50
70-09	P-B2.09006-22	COA Critical Sanitary Sewer Inspection, Contract #2	228,568.50
71-09	P-B2.09006-23	COA Non-Critical Sanitary Sewer Inspection, Contract #1	441,850.00
72-09	P-B2.09006-24	COA Non-Critical Sanitary Sewer Inspection, Contract #2	433,880.00
73-09	P-B2-09006-25	Manhole, Catch Basin, and Point Repair Contract	1,476,395.00
74-09	P-B2.09006-26	Sewer Lining Contract	693,474.00
75-09	P-B2.09006-27	Sewer Rehabilitation Gunite Contract	1,207,445.00
76-09	P-B2.09006-28	Sewer Improvement Contract – McBride Avenue, Mifflin Road & Keefe Street and Rodgers & Homeland Street	1,507,777.90
77-09	P-B2.09006-29	Sewer Improvement Contract, Browns Hill Sanitary Sewer	237,720.00
78-09	P-B2.09006-30	Sewer Improvement Contract, 44th and Davison Street	1,076.885.00
79-09	R-B2.08117-21	Sewer Improvement Contract, Various Locations	1,118,300.00
80-09	R-B2.08120-21	Sewer Construction – Chapin Street	223,415.00
89-09	R-B2.09019-22	15-inch Sewer Lining Project, Borough Street from Spring Garden Avenue to City Line	24,751.20
100-09	P-A1.09018-21	Valve and Hydrant Replacement Contract	1,395,220.00

Table 6
2009 Contract Awards (continued)

Resolution No.	Project No.	Description	Original Contract Value
101-09	P-A2.09015-21	Water Tank Rehabilitation of Herron Hill tank	548,950.00
102-09	P-A3.09014-21	Filter Backwash Recycle System, General/Mechanical Contract	4,569,000.00
103-09	P-A3.09014-22	Filter Backwash Recycle System – Electrical Contract	333,000.00
104-09	P-B2.09011-21	Sewer Lining Contract	1,494,600.00
105-09	P-B2.09011-22	Manhole, Catch Basin & Point Repair Contract	1,564,100.00
106-09	P-B2.09011-23	Sewer Point Lining Contract	509,130.00
107-09	R-A2.08108-21	Highland No. 2, Water Reservoir Floating Cover, Replacement	2,044,568.00
133-09	R-A1.08103-23	Waterline Replacement Contract	1,497,430.00
151-09	R-A3.08137-21	Chemical Containment Walls	98,375.00
		TOTAL CONTRACT VALUE	38,280,710.19

2009 Requisitions

Table 7 shows the total drawdown of capital funds during fiscal year 2009 from the 2005 Bond Issue, the 2007 Depository Agreement Fund, and the 2008 Construction Fund. This information is presented for each month of the year 2009.

Table 7
2009 Requisition Drawdown by Month

Month	2005 Bond Issue	2007 Depository Agreement Fund	2008 Construction Fund
January	$ 196,907.17	$ 209,816.09	$ 166,089.65
February	436,031.79	438,146.19	102,536.57
March	221,669.18	244,957.76	1,976,643.85
April	595,922.51	216,239.04	248,093.75
May	243,705.31	74,558.59	481,935.90
June	504,165.26	492,260.89	716,766.35
July	568,603.87	178,505.33	764,684.27
August	77,058.24	416,073.93	595,946.16
September	226,331.35	324,226.96	852,166.12
October	285,329.77	63,989.72	1,589,809.02
November	373,727.39	56,635.35	364,229.04
December	469,111.35	2,476,186.98	4,051,951.36
TOTAL	$4,198,563.19	$5,191,596.83	$11,910,852.04

Pennvest Financing

To date, the Authority has applied for and obtained 11 PENNVEST loans for a variety of water, sewage, and stormwater projects at various locations in the City of Pittsburgh. Of the 11 loans, six are complete.

By early January 2010, the Authority closed the remaining five loans of three sewage projects and two water projects totaling $36,809,297. All of the projects are under construction.

At least three additional application cycles will occur in 2010 during which the PWSA may make application. Depending on Federal Stimulus Funds, additional application cycles may be added.

Table 8 presents a list of the projects for which PENNVEST funding has been obtained. A copy of the PENNVEST Program Budget as of December 31, 2009 is attached as Exhibit "D" and a copy of the PENNVEST Status Report as of December 31, 2009 is attached as Exhibit "H".

Table 8
PENNVEST Loans
Annual Debt Payment (Principal and Interest)

Loan No.	Project Name	PENNVEST Loan Amount	Debt Service Payment Start Date	Estimated Annual Debt Service[1]
71911	Railside Street Sanitary Sewer Ext.	$ 158,399.23	February 2002	$ 9,456.00
58066	Ollie St. & Overbrook Blvd. Storm Sewer	800,963.48	May 2002	47,449.44
25074	Water System Improvements No. 1	3,940,113.91	January 2003	216,217.80
71217	Streets Run Interceptor	3,505,100.00	May 2003	105,965.61
12587	Water System Improvements No. 2	5,112,263.50	January 2004	296,981.16
12608	Water System Improvements No. 3	4,821,500.00	July 2004	266,085.65
71362	Sewer System Improvements – Phase I	*4,672,410.00	May 1, 2011	To be determined
27772	Sewer System Improvements – Phase II	*10,264,250.00	March 1, 2011	To be determined
27784	Sewer System Improvements – Phase III	*4,865,613.00	May 1, 2011	To be determined
12696	Water System Improvements – Phase V	*8,613,546.00	May 1, 2011	To be determined
83126	Water System Improvements – Phase VI	*8,393,478.00	October 1, 2011	To be determined
	TOTAL PENNVEST	$55,147,623.21		$942,155.66

* Loan amount at time of closing. Final loan amount to be determined by Pennvest.

[1] PENNVEST loans are typically awarded with two interest rates: an initial rate for the first five years of debt payment and a second rate for the remaining fifteen years of payment. The Annual Debt Payment presented here is at the current interest rate.

RENEWAL AND REPLACEMENT FUND

Initial bond issues of the Authority created the "Renewal and Replacement Fund" to be held in trust by the Trustee to be used by the Authority for extraordinary maintenance and repair of the Water and Sewer Systems or to pay the cost of Capital Additions. These Trust Indentures provided that the Consulting Engineer shall annually establish the amount, if any, to be on deposit in this Fund.

The previous Trust Indenture provided that so long as the aggregate amount of funds on deposit in the Construction Fund(s) and the Renewal and Replacement Fund were not less than $7,000,000, the Authority was not required to make any deposits into the Renewal and Replacement Fund. It further required that if this aggregate amount was less than $7,000,000, the Authority shall transfer, on or before the first day of each month, a sum of $100,000 from the Revenue Fund to the Renewal and Replacement Fund until the aggregate amounts equal $7,000,000. In addition, if the aggregate amounts on deposit in these two funds were less than $5,000,000, the Authority shall, on each September 1, transfer to the Renewal and Replacement Fund all surplus moneys remaining in the Revenue Fund after all payments required to be made on such September 1 have been made until such time as the aggregate amounts on deposit in these funds are equal to not less than $5,000,000.

Section 6.06 of the Trust Indenture dated October 15, 1993 eliminated the requirements of the Revenue and Replacement Fund unless determined necessary annually by the consulting engineer. Since the balance available in current Construction Funds exceeds $70,000,000 there is no need for the Authority to deposit any funds into the Renewal and Replacement Fund during the next fiscal year.

FINDINGS ON CURRENT CONDITIONS

The Pittsburgh Water and Sewer Authority (Authority) is beginning the twenty-fifth year of a Capital Improvements Program (CIP) that was recommended as a result of an "Evaluation of the Water and Sewer Systems of the City of Pittsburgh" conducted in 1983. This evaluation report indicated that the Water and Sewer Systems were in adequate operating condition, although both systems exhibited the need for certain improvements and replacements to ensure continued adequate service to the existing users and to meet foreseeable future demands.

As Consulting Engineer for the Authority, we find that both the Water and Sewer Systems are in adequate operating condition and are, in general, being adequately maintained. As discussed previously in this report, we recommend that the preventive maintenance program developed by the Authority be fully implemented to ensure full realization of the life of the improvements that have been part of the CIP.

An annual facilities inspection program was instituted several years ago as part of the annual report process. With the assistance of Authority staff, we have inspected treatment, pump station, and storage facilities within the operating Water and Sewer Systems. Facilities Inspection Reports are included in Exhibit "I" of this Report. These Inspection Reports provide valuable information that can be used to develop future capital programs for repair, maintenance, and replacement of facilities.

With implementation of these programs and continuation of the CIP, the systems should be capable of continuing to provide uninterrupted service to the users and provide for future demands.

At the beginning of 2001, the Authority entered into a contract with U. S. Water, L.L.C. to provide professional consulting services in connection with the operations and management of the Authority. The main focus of U. S. Water's services was the development of a five-year Business Plan to assess the overall operation of the Authority, make recommendations, and to help guide the Authority's management staff. Under their leadership, a Five-Year Capital Expenditure Plan and a Capital Investment Program Policy and Procedures Manual were also developed and implemented by the Authority.

U. S. Water completed its on-site consultation in June 2004, leaving in its place a system to constantly monitor and improve upon the Authority's operations.

An analysis of the fiscal year 2009 Budget and the projected operating results for 2009 along with the adopted Budget[2] for 2010 (with respect to the requirements of the Trust Indenture) follows.

It is the Consulting Engineer's opinion that the adopted 2010 Operating Budget as included in this report will provide sufficient funds for the proper operation and maintenance of both the water and sewer systems during the next fiscal year, and that the coverage requirement of the trust indenture will be met.

ESTIMATE ON REVENUES AND CURRENT EXPENSES

General

Section 7.11 of the Trust Indenture, dated as of October 15, 1993, provides that the Consulting Engineer shall include in his annual report:

> "His estimate of Receipts and Revenues and Current Expenses for the next Fiscal Year and his recommendation as to any necessary revision of water and sewer rates, rents or other charges."

[2] The Operating Budget for 2009 was adopted at the December 12, 2008 monthly meeting of the Board of Directors.

Chester Engineers has worked with The Pittsburgh Water and Sewer Authority (Authority) staff in developing the 2010 Operating Budget for the Authority as contained herein. The Operating Budget was adopted at the Authority Board monthly meeting of December 11, 2009.

Estimated Receipts and Revenues

Determination of the Total Funds Available in 2010 for Operating Expenses and Debt Service Requirements are based on the following:

1. Revenue Fund Cash as of January 1, 2010.
2. Operating Revenues from water sales, collection of delinquent sewage treatment fees, and miscellaneous charges.
3. Interest Earnings on the following funds:
   - Construction Funds.
   - Debt Service Funds.
   - Debt Service Reserve Funds.
   - Revenue Fund.
4. Transfer from the Capital Projects Fund to reimburse the Authority for labor and expenses of the Authority's engineering staff working on Capital Improvement Projects (CIP) during the year.
5. Transfer from the Capital Projects Fund to reimburse Authority operating funds for the funding of capital projects.

Table 9 presents the Actual 2006, 2007, 2008, Projected 2009, and Adopted 2010 Budget of Total Funds Available.

A rate increase was adopted by Resolution No. 14 on February 10, 2006. This rate increase was implemented in two steps. The first step of the increase was a 6.7 percent increase that became effective March 1, 2006. The second step was a 5.4 percent increase effective January 1, 2007. The 2007 rates were effect in 2009 and are still in effect. The charges for metered consumption are as noted on page 31 of the report. No rate increase is expected for 2010, however, Effective January 1, 2010, customers will see a 5% Distribution Infrastructure System Charge (DISC) added to their monthly bill for water and sewer conveyance.

Table 9
Total Funds Available

	Actual 2005	Actual 2006	Actual 2007	Actual 2008	Budget 2009	Unaudited 2009	Budget 2010
WATER COLLECTIONS	$ 81,600,000	$ 83,954,000	$ 87,140,000	$ 85,599,760	$ 89,000,000	$ 86,624,490	$ 85,100,000
DISC	-	-	-	-	-	-	4,500,000
Customer Refunds	(1,412,390)	(1,412,390)	(2,002,776)	(414,240)	(507,000)	(498,866)	(505,000)
SEWAGE COLLECTIONS	33,836,000	35,116,648	37,728,455	38,457,863	46,400,000	44,793,556	48,900,000
Less Collection Agency Commission - 20%	(544,039)	(310,577)	(262,012)	(215,767)	(200,000)	(15,683)	(200,000)
TAP FEE COLLECTIONS	859,544	1,423,875	1,312,070	2,457,395	1,700,000	1,822,649	1,145,000
OTHER COLLECTIONS	538,993	538,993	1,366,523	1,137,312	1,300,000	1,118,471	1,500,000
INTEREST EARNINGS							
• Capitalized Interest Funds	39	28,941	-	-	4,103,937	-	4,343,937
• Capital Project Funds	323,290	1,846,118	1,500,809	-	200,000	1,386,804	-
• Debt Service Funds	195,363	707,160	727,592	-	720,000	447,112	-
• Debt Service Reserve Funds	379,565	275,101	201,332	-	-	21,384	-
• Revenue Fund	119,745	918,052	1,135,665	646,864	600,000	100,425	150,000
• Other Funds	106,480	405,755	441,087		-	59,550	-
• Interest in Trusteed Funds	2,000,000	-	-		-		
PENNVEST PROJECTS	1,724,813	1,724,813	269,066		3,000,000	-	3,000,000
TRANSFER FROM CONSTRUCTION FUND							
Engineering Department Reimbursement	945,000	1,158,458	1,430,186	1,461,395	1,200,000	1,250,341	1,000,000
Reimbursement for Capital Projects	-	-	-	-	-	-	-
TOTAL SOURCES OF FUNDS	$ 120,672,403	$ 126,374,947	$ 130,987,997	$ 129,130,582	$ 147,516,937	$ 137,110,213	$ 148,933,937
REVENUE FUND CASH	$ 20,616,264	$ 26,235,144	$ 35,023,212	$ 41,661,420	$ 41,721,352	$ 41,913,817	$ 29,358,786
TOTAL AVAILABLE FUNDS	$ 141,288,667	$ 152,610,091	$ 166,011,209	$ 170,792,002	$ 189,238,289	$ 179,024,030	$ 178,292,723

METERED QUARTERLY WATER AND SEWER RATES

Meter Size (Inches)	Minimum Monthly Charge: Monthly Minimum Usage (1,000 gallons)	January 1, 2009	January 1, 2010
5/8 or 5/8 x3/4	1	$ 14.67	$ 14.67
3/4	2	25.59	25.59
1	5	49.91	49.91
1-1/4	7	77.66	77.66
1-1/2	10	97.97	97.97
2	17	152.68	152.68
3	40	328.83	328.83
4	70	584.90	584.90
6	175	1,411.06	1,411.06
8	325	2,435.11	2,435.11
10 or larger	548	4,179.33	4,179.33

	Rate per 1,000 Gallons January 1, 2008	January 1, 2009
Residential	$ 7.50	$ 7.50
Commercial	7.19	7.19
Industrial	6.74	6.74
Health and Education	9.83	9.83
Wholesale or Resale:		
Daily Consumption:		
0 to 3,000,000 gallons	3.69	3.69
3,000,001 gallons and over	3.64	3.64

Current Expenses

Table 10 presents the Actual 2006, 2007, and 2008, Projected 2009, and Adopted 2010 Budget of Operating Expenses.

Of particular note on this table is line item "Sewage" for 2010. This reflects an expense of $3,950,000 per month for 12 months as noted in the 2010 Operating Budget. Prior to 2004, the Authority purchased delinquent collections from ALCOSAN for $4,000,000 annually. In 2004, the Authority began paying ALCOSAN current treatment charges thereby creating a sewage collection expense of $47,400,000. By doing so, the Authority is in a position to improve delinquent sewer collections and better plan for the future.

Rate Covenant Calculations

Table 11 presents the Actual 2006, 2007, and 2008, the projected 2009 and the budgeted 2010 Coverage Factors based upon Revenues and Earnings, Operating Expenses and Debt Service Requirements.

Table 12 presents the Actual 2006, 2007, 2008, budgeted 2009, unaudited 2009, and budgeted 2010 Expenses.

Table 10
Expenses

	Actual 2006	Actual 2007	Actual 2008	Budget 2009	Unaudited 2009	Budget 2010
WATER EXPENSES						
Total Wages, Salaries and Expenses						
Administration	$ 7,726,045	$ 8,870,493	$ 8,152,278	$ 8,835,153	$ 8,691,463	$ 9,235,848
Operations	22,492,299	24,985,625	26,772,815	29,000,690	27,302,339	28,458,837
Engineering	1,002,817	1,152,314	1,217,138	1,387,814	1,097,751	1,387,372
Employee Benefits	2,222,847	2,332,963	2,628,720	3,315,000	2,927,606	3,167,000
Total Wages, Salaries and Expenses	33,444,008	37,341,395	38,770,961	42,538,657	40,019,159	42,249,057
CITY EXPENSES						
Water Indirect Costs	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000
Sewer Direct Costs	2,300,000	2,300,000	2,300,000	2,300,000	2,300,000	2,300,000
Sewer Indirect Costs	3,000,000	5,500,000	5,500,000	4,500,000	4,500,000	4,000,000
TOTAL CITY EXPENSES	7,150,000	9,650,000	9,650,000	8,650,000	8,650,000	8,150,000
SUBSIDY NON-CITY WATER SUBSIDY	809,258	670,291	1,057,135	1,300,000	1,602,691	1,300,000
DELINQUENT SEWAGE CHARGES	-	-	-	-	-	-
Sewage	35,116,648	37,728,455	38,253,695	47,400,000	44,793,535	48,900,000
TOTAL OPERATING EXPENSES	76,519,914	85,390,141	87,731,791	99,888,657	95,065,385	100,599,057
CAPITAL EXPENDITURES						
Capital Projects Fund	-	-	-	-	-	-
Self Insured Escrow	-	-	-	-	-	-
DISC	-	-	-	-	-	-
PENNVEST Projects	1,206,414	-	-	3,000,000	-	4,500,000
TOTAL CAPITAL EXPENDITURES	1,206,414	-	-	3,000,000	-	3,000,000
						7,500,000
DEBT SERVICE EXPENSES						
Principal on Bonds	16,780,000	16,505,000	14,730,000	13,820,000	13,820,000	15,620,000
Interest on Bonds	25,278,307	25,071,361	18,982,491	29,567,156	36,640,221	32,142,094
Trustee Fees	89,620	96,695	134,685	270,943	207,708	300,000
PENNVEST Loan Payments	926,472	964,856	966,687	960,270	976,845	964,000
Reimbursements from Municipalities	(96,973)	(156,931)	(52,492)	(50,000)	72,114	(50,000)
TOTAL DEBT SERVICE EXPENSES	42,977,426	42,480,981	34,761,371	44,568,349	51,716,888	48,976,094
TOTAL EXPENSES	$ 120,703,754	$ 127,871,122	$ 122,493,162	$ 147,457,006	$ 146,782,273	$ 157,075,151

Table 11
Debt Service Coverage Factor

	Actual 2006	Actual 2007	Actual 2008	Budget 2009	Unaudited 2009	Budget 2010
Cash	$ 26,235,144	$ 35,023,212	$ 41,661,420	$ 41,721,352	$ 41,913,817	$ 29,358,786
Water Collections	82,541,610	85,137,224	85,185,520	88,493,000	86,125,624	84,593,000
Interest Earnings	4,181,127	4,006,485	-	5,623,937	2,015,275	4,493,937
Transfer - Engineering from CIP	1,158,458	1,430,186	1,461,395	1,200,000	1,250,341	1,000,000
Transfer - Reimbursement from CIP	-	-	-	-	-	-
PENNVEST Projects	1,724,813	269,066	-	3,000,000	-	3,000,000
Tap Fee Collections	1,423,875	1,312,070	2,457,395	1,700,000	1,822,649	1,145,000
Sewage Collections	34,806,071	37,466,443	38,242,096	46,200,000	44,777,853	48,700,000
Other Collections	538,993	1,366,523	1,137,312	1,300,000	1,118,471	1,500,000
TOTAL AVAILABLE FUNDS	$ 152,610,091	$ 166,011,209	$ 170,145,138	$ 189,238,289	$ 179,024,030	$ 173,792,723
OPERATING EXPENSES	76,519,914	85,390,141	87,731,791	99,888,657	95,065,385	100,599,057
CAPITAL PROJECTS	1,206,414	-	-	3,000,000	-	7,500,000
NET AVAILABLE FOR DEBT SERVICE	$ 74,883,763	$ 80,621,068	$ 82,413,347	$ 86,349,632	$ 83,958,645	$ 65,693,666
DEBT SERVICE REQUIREMENTS	42,977,426	42,480,981	34,761,371	44,568,349	51,716,888	48,976,094
COVERAGE FACTOR	1.74	1.90	2.37	1.94	1.62	1.34

Table 12
Total Income vs. Total Operating Costs

	Actual 2006	Actual 2007	Actual 2008	Unaudited 2009*	Projected 2010	Projected 2011	Projected 2012	Projected 2013
TOTAL COSTS								
• Operating Expenses	$ 77,726,328	$ 85,390,141	$ 87,731,791	$ 95,065,385	$ 108,099,057	$ 111,342,029	$ 114,682,290	$ 118,122,758
• Debt Service	42,977,426	42,480,981	34,761,371	51,716,888	48,976,094	48,976,094	48,976,094	48,976,094
Total Operating Costs	$ 120,703,754	$ 127,871,122	$ 122,493,162	$ 146,782,273	$ 157,075,151	$ 160,318,123	$ 163,658,384	$ 167,098,852
INCOME								
• Revenue	$ 121,654,827	$ 125,614,989	$ 127,346,406	$ 133,976,467	$ 142,940,000	$ 150,087,000	$ 157,591,350	$ 165,470,918
• Recurring Interest	4,181,127	4,006,485	-	2,015,275	4,493,937	3,909,725	3,909,725	3,401,461
Total Income	$ 125,835,954	$ 129,621,474	$ 127,346,406	$ 135,991,742	$ 147,433,937	$ 153,996,725	$ 161,501,075	$ 168,872,378
Total Income as a Percent of Total Operating Costs	104.3%	101.4%	104.0%	92.6%	93.9%	96.1%	98.7%	101.1%

* Based on unaudited expenditures

The Authority's Trust Indenture requires that water rates be established in order to provide a minimum Coverage Factor (ratio of net funds available for Debt Service to actual Debt Service Requirements) of 1.20.

As can be seen from Table 11, the projected Coverage Factor for 2009 is 1.90 and the 2010 Coverage Factor based on the adopted budget is 1.79. Based upon the above analysis, it is the Consulting Engineer's opinion that the existing water and sewer rates, together with available cash and interest earnings, will provide sufficient funds to cover operating expenses and to satisfy the Rate Covenant Test during 2010, as provided for in the Authority's Trust Indenture.

It is noted that since 1999, Operating Revenues (Water Sales and Miscellaneous Charges) plus recurring Interest Revenues (Interest Income from the Debt Service Funds and Debt Service Revenue Funds) have fallen from where they addressed approximately 105.9 percent of the Authority Total Expenses (Operating Expenses and Debt Service Requirements) in 1999 to 86.6 percent in 2003. Since 2004 this ratio is increasing. As a result of increased revenues, which offset the operating costs, 100 percent of the Operating Costs in 2010 should be covered by revenues.

Figure 2 shows this ratio for 1999 to 2012.

Figure 2
Income as a Percentage of Total Operating Costs

The Authority has been able to maintain the required Coverage Factor and satisfy the financial obligations as a result of the past buildup of cash reserves and the interest earnings on the Authority's Construction Funds. As Construction Funds are spent, interest income from these funds will be reduced.

EXHIBIT A
CAPITAL IMPROVEMENT PROGRAM BUDGET
2005 BOND ISSUE
AS OF DECEMBER 31, 2009

THE PITTSBURGH WATER AND SEWER AUTHORITY
CAPITAL IMPROVEMENT PROGRAM - ACTIVE FUNDS
BUDGET AS OF DECEMBER 31, 2009

		2005 Bond Issue
WATER SYSTEM		
A1 Water - Distribution System	$	4,970,416.09
A2 Water - Pumping & Storage		1,062,026.76
A3 Water - Treatment Plant		3,930,709.99
TOTAL WATER SYSTEM	**$**	**9,963,152.84**
SEWER SYSTEM		
B1 Sewer - Sanitary Sewer	$	905,991.66
B2 Sewer - Combined Sewer		26,171,613.12
B4 Sewer - Pump Station		541,621.83
B5 Sewer - CSO		-
TOTAL SEWER SYSTEM	**$**	**27,619,226.61**
C1 CITY/URA/SEA/PORT AUTHORITY	**$**	**3,326,313.07**
D1 ENGINEERING	**$**	**9,093,909.93**
E1 TOOLS AND EQUIPMENT	**$**	**1,009,191.13**
F1 IT/GIS	**$**	**221,596.88**
Z1 CONTINGENCY	**$**	**851,042.28**
TOTAL	**$**	**52,084,432.74**

A1 WATER - DISTRIBUTION SYSTEM — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
TER READING (AMR) PROGRAM	15,000.00	0.00	0.00	225,180.84	240,180.84	240,180.84
d Water System Upgrade	1,148,988.00	8,000.00	0.00	183,993.21	1,340,981.21	0.00
d Water - CM	79,167.00	0.00	0.00	16,069.00	95,236.00	0.00
d Water - Const.	0.00	0.00	0.00	0.00	0.00	0.00
d Water - Const. - 2005Bon	1,069,821.00	8,000.00	0.00	167,924.21	1,245,745.21	0.00
ant Replacement Contract	552,000.00	0.00	0.00	555,780.73	1,107,780.73	0.00
	15,000.00	0.00	0.00	5,128.78-	9,871.22	0.00
Management	37,000.00	0.00	0.00	45,400.02	82,400.02	2,060.54
	500,000.00	0.00	0.00	515,509.49	1,015,509.49	0.00
ad Waterline	590,000.00	0.00	0.00	8,960.55-	581,039.45	0.00
Design & Survey	40,000.00	0.00	0.00	13,198.78-	26,801.22	0.00
CM	50,000.00	0.00	0.00	28,509.99-	21,490.01	0.00
Construction	500,000.00	0.00	0.00	32,748.22	532,748.22	0.00
pling	0.00	0.00	0.00	20,182.30	20,182.30	0.00
pling - Engineering	0.00	0.00	0.00	20,182.30	20,182.30	0.00
e Fire Hydrants	0.00	0.00	0.00	37,068.00	37,068.00	0.00
e Fire Hydrants	0.00	0.00	0.00	37,068.00	37,068.00	0.00
construction	0.00	0.00	0.00	906,434.59	906,434.59	0.00
t Survey	0.00	0.00	0.00	15,887.81	15,887.81	0.00
t - CM	0.00	0.00	0.00	73,608.24	73,608.24	0.00
construction	0.00	0.00	0.00	816,938.54	816,938.54	0.00
lay Various Locations	0.00	0.00	0.00	139,556.68	139,556.68	0.00
Survey	0.00	0.00	0.00	24,702.18	24,702.18	0.00
urvey	0.00	0.00	0.00	21,911.44	21,911.44	0.00
urvey	0.00	0.00	0.00	23,078.39	23,078.39	0.00
urvey	0.00	0.00	0.00	16,154.05	16,154.05	0.00
St Survey	0.00	0.00	0.00	21,312.26	21,312.26	0.00
vey	0.00	0.00	0.00	32,398.36	32,398.36	0.00
e Hydrants	0.00	0.00	0.00	115,000.00	115,000.00	0.00
e Hydrants	0.00	0.00	0.00	115,000.00	115,000.00	0.00
12" Waterline Relay	0.00	0.00	0.00	209,158.85	209,158.85	0.00
2" Waterline Relay	0.00	0.00	0.00	209,158.85	209,158.85	0.00
terline Relay	0.00	0.00	0.00	273,033.44	273,033.44	0.00
terline Relay - Constructio	0.00	0.00	0.00	273,033.44	273,033.44	0.00
	2,305,988.00	8,000.00	0.00	2,656,428.09	4,970,416.09	3,549,095.40

A2 WATER - PUMPING AND STORAGE

BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
et Boiler Replacement	562,000.00	0.00	0.00	146,803.41-	415,196.59	0.00
oiler - Eng	25,000.00	0.00	0.00	20,096.20-	4,903.80	0.00
oiler - CM	37,000.00	0.00	0.00	0.00	37,000.00	0.00
oiler	500,000.00	0.00	0.00	126,707.21-	373,292.79	0.00
Station Valve Replacement	100,000.00	0.00	0.00	25,158.00-	74,842.00	0.00
Station Valve Replacement	100,000.00	0.00	0.00	25,158.00-	74,842.00	0.00
nspection	0.00	0.00	0.00	129,742.08	129,742.08	0.00
Water Tank Inspection	0.00	0.00	0.00	19,162.15	19,162.15	0.00
ter Tank Inspection	0.00	0.00	0.00	23,219.62	23,219.62	0.00
k Inspection	0.00	0.00	0.00	44,646.13	44,646.13	0.00
Inspection	0.00	0.00	0.00	12,661.18	12,661.18	0.00
k Inspection	0.00	0.00	0.00	25,000.00	25,000.00	0.00
Tank Inspection	0.00	0.00	0.00	0.00	0.00	0.00
Inspection	0.00	0.00	0.00	3,000.00	3,000.00	0.00
l Tank Inspection	0.00	0.00	0.00	2,053.00	2,053.00	0.00
. Refurbish Motor #2	0.00	0.00	0.00	187,830.00	187,830.00	0.00
. Refurbish Motor #2	0.00	0.00	0.00	187,830.00	187,830.00	0.00
uecken Motor No. 5	0.00	0.00	0.00	105,394.91	105,394.91	0.00
uecken Motor No. 5 - CM	0.00	0.00	0.00	7,649.91	7,649.91	0.00
uecken Motor No. 5	0.00	0.00	0.00	97,745.00	97,745.00	0.00
Station Valve Replacement	0.00	0.00	0.00	50,000.00	50,000.00	0.00
Station Valve -Constructio	0.00	0.00	0.00	50,000.00	50,000.00	0.00
pgrade - Design	0.00	0.00	0.00	26,282.23	26,282.23	26,282.23
#2 Replacement	0.00	0.00	0.00	7,500.00	7,500.00	0.00
ernal	0.00	0.00	0.00	7,500.00	7,500.00	0.00
#6 & 7 Replacement - Desig	0.00	0.00	0.00	65,238.95	65,238.95	0.00
#6 & 7 Replacement - Desig	0.00	0.00	0.00	65,238.95	65,238.95	65,238.95
	662,000.00	0.00	0.00	400,026.76	1,062,026.76	1,062,026.76

A3 WATER - TREATMENT PLANT

BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
provements	3,764,670.00	0.00	0.00	3,434,031.64-	330,638.36	0.00
esign - Contract #1	300,000.00	0.00	0.00	0.00	300,000.00	0.00
p - Eng	22,500.00	0.00	0.00	8,138.36	30,638.36	0.00
p - CM	237,170.00	0.00	0.00	237,170.00-	0.00	0.00
nstruction - Contract #1	3,205,000.00	0.00	0.00	3,205,000.00-	0.00	0.00
ASH HANDLING - STUDY	0.00	0.00	0.00	419,554.69	419,554.69	0.00
ASH HANDLING - STUDY	0.00	0.00	0.00	419,554.69	419,554.69	419,554.69
ASH HANDLING DESIGN	0.00	0.00	0.00	530,445.31	530,445.31	0.00
ASH HANDLING DESIGN	0.00	0.00	0.00	530,445.31	530,445.31	530,445.31
ash - Standby Power Design	0.00	0.00	0.00	520,000.00	520,000.00	0.00
ash - Standby Power Design	0.00	0.00	0.00	520,000.00	520,000.00	520,000.00
ash / Clarification I&D	0.00	0.00	0.00	738,000.00	738,000.00	0.00
ash / Clarification I&D	0.00	0.00	0.00	738,000.00	738,000.00	738,000.00
ater Stations	186,100.00	0.00	0.00	177,090.05	363,190.05	0.00
ater - Eng	15,000.00	0.00	0.00	53,600.00	68,600.00	0.00
ater Stations - CM	11,100.00	0.00	0.00	11,100.00-	0.00	0.00
ater Stations - Const	150,000.00	0.00	0.00	132,026.99	282,026.99	0.00
Site Survey	10,000.00	0.00	0.00	2,563.06	12,563.06	0.00
im Design	18,000.00	0.00	0.00	0.00	18,000.00	0.00
im Design	18,000.00	0.00	0.00	0.00	18,000.00	18,000.00
gn	226,523.00	0.00	0.00	50,117.00-	176,406.00	0.00
gn	226,523.00	0.00	0.00	50,117.00-	176,406.00	176,406.00
	167,627.00	0.00	0.00	167,627.00-	0.00	0.00
t	2,265,230.00	0.00	0.00	2,265,230.00-	0.00	0.00
b	0.00	0.00	0.00	560,000.00	560,000.00	0.00
b - Design	0.00	0.00	0.00	30,000.00	30,000.00	0.00
b - CM	0.00	0.00	0.00	80,000.00	80,000.00	0.00
b - Construction	0.00	0.00	0.00	450,000.00	450,000.00	0.00
g Screen - Engineering	0.00	0.00	0.00	77,475.58	77,475.58	77,475.58
g Screen - CM	0.00	0.00	0.00	0.00	0.00	0.00
g Screen - General	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	197,000.00	197,000.00	0.00
	0.00	0.00	0.00	197,000.00	197,000.00	0.00
	6,628,150.00	0.00	0.00	2,697,440.01-	3,930,709.99	3,567,519.94

B1 SEWER - SANITARY SEWER

BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
Sewer Inspection	620,000.00	0.00	0.00	285,991.66	905,991.66	0.00
- CM	100,000.00	0.00	0.00	168,400.18	268,400.18	0.00
- Const	520,000.00	0.00	0.00	113,645.48	633,645.48	0.00
- Engineering	0.00	0.00	0.00	3,946.00	3,946.00	0.00
	620,000.00	0.00	0.00	285,991.66	905,991.66	905,991.66

B2 SEWER - COMBINED SEWER

BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
itation Gunite Contract	1,074,000.00	0.00	0.00	483,584.62	1,557,584.62	0.00
unite Contract - Const	1,074,000.00	0.00	0.00	483,584.62	1,557,584.62	0.00
ment Contract	1,366,690.21	0.00	0.00	69,990.65	1,436,680.86	0.00
Management	100,000.00	0.00	0.00	83,389.00	183,389.00	183,389.00
	1,266,690.21	0.00	0.00	13,398.35-	1,253,291.86	1,216,690.21
Line Point Repair Contrac	949,395.00	14,569.85	0.00	194,962.09	1,158,926.94	0.00
Line Point Repair Contrac	949,395.00	14,569.85	0.00	194,962.09	1,158,926.94	0.00
r Point Repair	850,000.00	0.00	0.00	678,767.57	1,528,767.57	0.00
r Point Repair	850,000.00	0.00	0.00	678,767.57	1,528,767.57	0.00
g, TVing, & MH Inspection	764,606.65	0.00	0.00	90,260.58	854,867.23	0.00
g TVing & MH Inspection-CM	97,500.00	0.00	0.00	74,009.19	171,509.19	0.00
g TVing & MH Inspection-CO	667,106.65	0.00	0.00	16,251.39	683,358.04	0.00
PROJECT	1,000,000.00	0.00	0.00	18,656.57	1,018,656.57	0.00
COE / BAKER	0.00	0.00	0.00	7,461.37	7,461.37	0.00
PWSA MISC COSTS	140,800.00	0.00	0.00	68,956.00-	71,844.00	0.00
CONSTRUCTION	800,000.00	0.00	0.00	32,461.37-	767,538.63	0.00
- CM	59,200.00	0.00	0.00	112,612.57	171,812.57	0.00
Region One (M & E)	3,309,454.56	0.00	0.00	0.00	3,309,454.56	0.00
Region One (M & E)	3,309,454.56	0.00	0.00	0.00	3,309,454.56	0.00
Region Two (Baker)	3,135,550.01	0.00	0.00	0.00	3,135,550.01	0.00
Region Two (Baker)	3,135,550.01	0.00	0.00	0.00	3,135,550.01	0.00
Var Loc	605,739.00	0.00	0.00	106,652.59	712,391.59	0.00
Eng	25,000.00	0.00	0.00	21,694.05-	3,305.95	0.00
CM	40,014.00	0.00	0.00	21,130.45	61,144.45	0.00
Const	540,725.00	0.00	0.00	107,216.19	647,941.19	0.00
Contract	1,074,000.00	0.00	0.00	512,077.94-	561,922.06	0.00
Contract - CM	74,000.00	0.00	0.00	7,937.56-	66,062.44	0.00
Contract - Construction	1,000,000.00	0.00	0.00	504,140.38-	495,859.62	0.00
Belguim St Sewer	2,255,400.00	88,721.39	0.00	952,882.89-	1,391,238.50	0.00
Design	0.00	0.00	0.00	15,838.50	15,838.50	0.00
im - CM	155,400.00	0.00	0.00	100,000.00-	55,400.00	0.00
et - CM	0.00	0.00	0.00	45,000.00	45,000.00	0.00
im - Const	2,100,000.00	0.00	0.00	1,425,000.00-	675,000.00	0.00
et - Const	0.00	0.00	0.00	600,000.00	600,000.00	0.00
s TWP Release of Retainage	0.00	88,721.39	0.00	88,721.39-	0.00	0.00
Sewer	577,000.00	0.00	0.00	569,717.28-	7,282.72	0.00
- Eng	40,000.00	0.00	0.00	32,717.28-	7,282.72	0.00
- CM	37,000.00	0.00	0.00	37,000.00-	0.00	0.00
- Const	500,000.00	0.00	0.00	500,000.00-	0.00	0.00
e Program Management	4,900,000.00	0.00	0.00	550,000.00	5,450,000.00	0.00
ct 1	2,600,000.00	0.00	0.00	310,000.00	2,910,000.00	0.00
ct 2	2,300,000.00	0.00	0.00	240,000.00	2,540,000.00	0.00
ng	40,000.00	0.00	0.00	102,381.38	142,381.38	0.00
- Flow Monitoring	0.00	0.00	0.00	7,920.41	7,920.41	0.00
- Flow Monitoring	40,000.00	0.00	0.00	16,972.79-	23,027.21	0.00
terceptor - Flow Monitorin	0.00	0.00	0.00	25,838.55	25,838.55	0.00
Flow Monitoring	0.00	0.00	0.00	69,235.72	69,235.72	0.00
- Flow Monitoring	0.00	0.00	0.00	16,359.49	16,359.49	0.00
Contract	750,000.00	0.00	0.00	186,698.45-	563,301.55	0.00
Contract - Construction	675,000.00	0.00	0.00	161,072.03-	513,927.97	0.00
Contract - CM	75,000.00	0.00	0.00	25,626.42-	49,373.58	0.00
Contract	1,000,000.00	0.00	0.00	16,052.00	1,016,052.00	0.00
Contract - CM	100,000.00	0.00	0.00	1,349.78	101,349.78	0.00
Contract - Design	0.00	0.00	0.00	12,994.72	12,994.72	0.00
Contract - Construction	900,000.00	0.00	0.00	1,707.50	901,707.50	0.00
Sewer Inspection	600,000.00	0.00	0.00	20,044.17	620,044.17	0.00
Sewer Inspection - CM	100,000.00	0.00	0.00	210,998.22	310,998.22	0.00
Sewer Inspection - Design	0.00	0.00	0.00	5,077.73	5,077.73	0.00

B2 SEWER - COMBINED SEWER — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
Sewer Inspection - Const	500,000.00	0.00	0.00	196,031.78-	303,968.22	0.00
spection	0.00	0.00	0.00	1,300,000.00	1,300,000.00	0.00
spection - CM	0.00	0.00	0.00	350,000.00	350,000.00	0.00
spection - Construction	0.00	0.00	0.00	950,000.00	950,000.00	0.00
wer Replacement @ PAW Plant	0.00	0.00	0.00	406,510.79	406,510.79	0.00
wer Replacement @ PAW Plant	0.00	0.00	0.00	406,510.79	406,510.79	0.00
	24,251,835.43	103,291.24	0.00	1,816,486.45	26,171,613.12	24,353,929.35

B4 SEWER - PUMP STATION — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
Sewage Pump Stations	368,975.32	0.00	0.00	74,890.00	443,865.32	0.00
Sewage Pump Station - 2005	368,975.32	0.00	0.00	74,890.00	443,865.32	443,865.32
	140,600.00	0.00	0.00	140,600.00-	0.00	0.00
M	140,600.00	0.00	0.00	140,600.00-	0.00	0.00
t - Contract #1	854,700.00	0.00	0.00	854,700.00-	0.00	0.00
t - Contract #1	854,700.00	0.00	0.00	854,700.00-	0.00	0.00
Const	850,000.00	0.00	0.00	850,000.00-	0.00	0.00
Const	850,000.00	0.00	0.00	850,000.00-	0.00	0.00
Const	200,000.00	0.00	0.00	200,000.00-	0.00	0.00
Const	200,000.00	0.00	0.00	200,000.00-	0.00	0.00
hrbach - Flow Monitoring	60,000.00	0.00	0.00	56,809.08-	3,190.92	0.00
hrbach - Flow Monitoring	60,000.00	0.00	0.00	56,809.08-	3,190.92	3,190.92
Pump Station Survey	0.00	0.00	0.00	7,060.92	7,060.92	0.00
Pump Station Survey	0.00	0.00	0.00	7,060.92	7,060.92	7,060.92
Force Main Construction	0.00	0.00	0.00	0.00	0.00	0.00
Force Main Construction	0.00	0.00	0.00	0.00	0.00	0.00
Force Main Survey	0.00	0.00	0.00	87,504.67	87,504.67	0.00
Force Main Survey	0.00	0.00	0.00	87,504.67	87,504.67	87,504.67
	2,474,275.32	0.00	0.00	1,932,653.49-	541,621.83	541,621.83

C1 CITY / URA / SEA / PORT AUTHORITY — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
y Park	2,300,000.00	0.00	0.00	1,160,000.00-	1,140,000.00	0.00
y Park - Consultant Design	180,000.00	0.00	0.00	60,000.00-	120,000.00	0.00
y Park - Construction	1,850,000.00	0.00	0.00	900,000.00-	950,000.00	0.00
y Park - CM	270,000.00	0.00	0.00	200,000.00-	70,000.00	0.00
. Housing	0.00	0.00	0.00	400,000.00	400,000.00	0.00
. Housing	0.00	0.00	0.00	400,000.00	400,000.00	0.00
squehanna Street	0.00	0.00	0.00	200,000.00	200,000.00	0.00
squehanna Street	0.00	0.00	0.00	200,000.00	200,000.00	0.00
N REDEVELOPMENT	0.00	0.00	0.00	10,000.00	10,000.00	10,000.00
LINGS	0.00	0.00	0.00	839,567.54	839,567.54	839,567.54
IAL DEVELOPMENT	940,000.00	0.00	0.00	203,254.47-	736,745.53	736,745.53
	3,240,000.00	0.00	0.00	86,313.07	3,326,313.07	3,326,313.07

D1 ENGINEERING — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
005	50,000.00	0.00	0.00	205,000.00	255,000.00	255,000.00
vate Development - 2005	26,905.25	102,768.40	0.00	519,843.39	649,517.04	649,517.04
ring Services	2,000,000.00	0.00	0.00	2,000,000.00-	0.00	0.00
Services	311,667.26	0.00	0.00	0.00	311,667.26	0.00
Serviices	311,667.26	0.00	0.00	0.00	311,667.26	0.00
oject Engineering Services	640,000.00	0.00	0.00	1,912,012.64	2,552,012.64	0.00
affing - ATSCE	420,000.00	0.00	0.00	843,369.11	1,263,369.11	0.00
affing - Kimball	90,000.00	0.00	0.00	535,392.17	625,392.17	0.00
affing - URS	130,000.00	0.00	0.00	533,251.36	663,251.36	0.00
views	125,000.00	0.00	0.00	209,313.53	334,313.53	0.00
per Reviews	125,000.00	0.00	0.00	209,313.53	334,313.53	0.00
s Design Services - ATSCE	133,000.00	0.00	0.00	111,050.24	244,050.24	0.00
s Design Services	48,000.00	0.00	0.00	29,317.67	77,317.67	0.00
SAP Testing & Project Setup	30,000.00	0.00	0.00	311.93	30,311.93	0.00
	30,000.00	0.00	0.00	21,349.62	51,349.62	0.00
of Monthly Reports	25,000.00	0.00	0.00	41,871.04	66,871.04	0.00
Procedure Manual	0.00	0.00	0.00	18,199.98	18,199.98	0.00
ring Dept Reimbursement	943,605.00	0.00	0.00	0.00	943,605.00	0.00
ring Dept Reimbursement	943,605.00	0.00	0.00	0.00	943,605.00	0.00
M Services - ATSCE	100,000.00	0.00	0.00	7,716.83-	92,283.17	0.00
	25,000.00	0.00	0.00	987.55-	24,012.45	0.00
ion	25,000.00	0.00	0.00	10,506.11	35,506.11	0.00
s Design	25,000.00	0.00	0.00	233.41	25,233.41	0.00
gement	25,000.00	0.00	0.00	17,468.80-	7,531.20	0.00
Update & Calibration	180,000.00	0.00	0.00	33,450.25	213,450.25	0.00
	180,000.00	0.00	0.00	33,450.25	213,450.25	0.00
rojects - ATSCE	60,000.00	0.00	0.00	240,875.02	300,875.02	0.00
de Works	10,000.00	0.00	0.00	695.78-	9,304.22	0.00
n	20,000.00	0.00	0.00	100,750.36	120,750.36	0.00
iverfront Housing	10,000.00	0.00	0.00	38,398.31	48,398.31	0.00
lings	10,000.00	0.00	0.00	70,366.72	80,366.72	0.00
erace	10,000.00	0.00	0.00	5,884.39-	4,115.61	0.00
	0.00	0.00	0.00	36,446.74	36,446.74	0.00
l Bridge Utility Relocation	0.00	0.00	0.00	1,493.06	1,493.06	0.00
Dept Reimbursement	0.00	0.00	0.00	2,588,644.00	2,588,644.00	0.00
ring Dept Reimbursement	0.00	0.00	0.00	1,158,458.00	1,158,458.00	0.00
ring Dept Reimbursement	0.00	0.00	0.00	1,430,186.00	1,430,186.00	0.00
ation Architectural Service	0.00	0.00	0.00	581,417.85	581,417.85	0.00
ation Architectural Service	0.00	0.00	0.00	131,417.85	131,417.85	0.00
Improvements	0.00	0.00	0.00	450,000.00	450,000.00	0.00
r Implementation	0.00	0.00	0.00	27,073.93	27,073.93	0.00
r Implementation	0.00	0.00	0.00	27,073.93	27,073.93	0.00
	4,570,177.51	102,768.40	0.00	4,420,964.02	9,093,909.93	9,093,909.93

E1 TOOLS AND EQUIPMENT — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
Repaving Sewer Risers & Lid	96,610.75	0.00	0.00	0.00	96,610.75	0.00
Repaving Sewer Risers & Lid	96,610.75	0.00	0.00	0.00	96,610.75	0.00
er Meters	0.00	0.00	0.00	91,712.50	91,712.50	0.00
er Meters	0.00	0.00	0.00	91,712.50	91,712.50	0.00
Repaving Sewer Riser & Lids	0.00	0.00	0.00	139,586.00	139,586.00	0.00
Repaving Sewer Riser & Lids	0.00	0.00	0.00	139,586.00	139,586.00	0.00
ll Meters	0.00	0.00	0.00	681,281.88	681,281.88	0.00
ll Meters	0.00	0.00	0.00	4,072.88	4,072.88	0.00
ll Meters	0.00	0.00	0.00	677,209.00	677,209.00	0.00
	96,610.75	0.00	0.00	912,580.38	1,009,191.13	1,009,191.13

F1 IT / GIS — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
nformation Management Syste	0.00	0.00	0.00	3,300.00	3,300.00	0.00
	0.00	0.00	0.00	3,300.00	3,300.00	0.00
Support	70,000.00	0.00	0.00	70,000.00-	0.00	0.00
Support	70,000.00	0.00	0.00	70,000.00-	0.00	0.00
at Conversion	80,000.00	0.00	0.00	4,634.12-	75,365.88	0.00
at Conversion	80,000.00	0.00	0.00	4,634.12-	75,365.88	0.00
GPS Survey	0.00	0.00	0.00	139,631.00	139,631.00	0.00
GPS Survey	0.00	0.00	0.00	139,631.00	139,631.00	0.00
	0.00	0.00	0.00	3,300.00	3,300.00	0.00
	0.00	0.00	0.00	3,300.00	3,300.00	0.00
	150,000.00	0.00	0.00	71,596.88	221,596.88	221,596.88

Z1 CONTINGENCY — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
BOND 2005	5,000,000.00	1,921,336.09	0.00	6,070,293.81-	851,042.28	851,042.28
	5,000,000.00	1,921,336.09	0.00	6,070,293.81-	851,042.28	851,042.28

EXHIBIT B
CAPITAL IMPROVEMENT PROGRAM BUDGET
2007 DEPOSITORY AGREEMENT FUND BUDGET
AS OF DECEMBER 31, 2009

THE PITTSBURGH WATER AND SEWER AUTHORITY
CAPITAL IMPROVEMENT PROGRAM - ACTIVE FUNDS
BUDGET AS OF DECEMBER 31, 2009

		2007 Depository Agreement Fund
WATER SYSTEM		
A1 Water - Distribution System	$	1,751,041.97
A2 Water - Pumping & Storage		25,420.70
A3 Water - Treatment Plant		2,073,150.27
TOTAL WATER SYSTEM	**$**	**3,849,612.94**
SEWER SYSTEM		
B1 Sewer - Sanitary Sewer	$	-
B2 Sewer - Combined Sewer		1,055,175.55
B4 Sewer - Pump Station		-
B5 Sewer - CSO		-
TOTAL SEWER SYSTEM	**$**	**1,055,175.55**
C1 CITY/URA/SEA/PORT AUTHORITY	**$**	**-**
D1 ENGINEERING	**$**	**54,794.52**
E1 TOOLS AND EQUIPMENT	**$**	**440,186.31**
F1 IT/GIS	**$**	**-**
Z1 CONTINGENCY		
Contingency	$	919,244.84
SLG Redemption		725,954.79
GIC Funds Rec'd		440,782.33
Accrued Interest		18,130.05
TOTAL Z1 CONTINGENCY	**$**	**2,104,112.01**
TOTAL	**$**	**7,503,881.33**

A1 WATER - DISTRIBUTION SYSTEM — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
& Fire Hydrant Contract	0.00	0.00	0.00	691,074.67	691,074.67	0.00
& Fire Hydrant - Design	0.00	0.00	0.00	10,344.30	10,344.30	0.00
& Fire Hydrant - CM	0.00	0.00	0.00	85,775.69	85,775.69	0.00
ant-Dechlorination Equipmen	0.00	0.00	0.00	8,264.40	8,264.40	0.00
& Fire Hydrant - CONST	0.00	0.00	0.00	586,690.28	586,690.28	0.00
terline Relay	0.00	0.00	0.00	304,962.48	304,962.48	0.00
terline Relay - CM	0.00	0.00	0.00	48,696.23	48,696.23	0.00
terline Relay - Constructio	0.00	0.00	0.00	256,266.25	256,266.25	0.00
Blvd Waterline Replacement	0.00	0.00	0.00	755,004.82	755,004.82	0.00
Blvd Waterline Replacement	0.00	0.00	0.00	755,004.82	755,004.82	0.00
	0.00	0.00	0.00	1,751,041.97	1,751,041.97	1,751,041.97

A2 WATER - PUMPING AND STORAGE — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
MFP - CM	0.00	0.00	0.00	25,420.70	25,420.70	25,420.70
	0.00	0.00	0.00	25,420.70	25,420.70	25,420.70

A3 WATER - TREATMENT PLANT — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
r No. 4 Collector Equipment	0.00	0.00	0.00	56,515.01	56,515.01	56,515.01
r No. 4 Collector Equipment	0.00	0.00	0.00	937,431.20	937,431.20	937,431.20
g Screen - Engineering	0.00	0.00	0.00	48,888.97	48,888.97	48,888.97
g Screen - CM	0.00	0.00	0.00	110,726.90	110,726.90	110,726.90
g Screen - General	0.00	0.00	0.00	818,918.19	818,918.19	818,918.19
g Screen - Electrical	0.00	0.00	0.00	100,670.00	100,670.00	100,670.00
	0.00	0.00	0.00	2,073,150.27	2,073,150.27	2,073,150.27

B2 SEWER - COMBINED SEWER — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
er Line Point Repair	0.00	0.00	0.00	957,291.52	957,291.52	0.00
r Line Point Repair	0.00	0.00	0.00	203,429.09	203,429.09	0.00
r Line Point Repair - CONST	0.00	0.00	0.00	753,862.43	753,862.43	0.00
et Sewer Lining	0.00	0.00	0.00	43,420.26	43,420.26	0.00
et Sewer Lining	0.00	0.00	0.00	1,768.59	1,768.59	0.00
et Sewer Lining - CM	0.00	0.00	0.00	3,760.71	3,760.71	0.00
et Sewer Lining - CONST	0.00	0.00	0.00	37,890.96	37,890.96	0.00
rive	0.00	0.00	0.00	54,463.77	54,463.77	0.00
rive - CM	0.00	0.00	0.00	3,878.59	3,878.59	0.00
ining - CM	0.00	0.00	0.00	2,426.79	2,426.79	0.00
rive - Construction	0.00	0.00	0.00	26,250.16	26,250.16	0.00
ining - Construction	0.00	0.00	0.00	21,908.23	21,908.23	0.00
	0.00	0.00	0.00	1,055,175.55	1,055,175.55	97,884.03

D1 ENGINEERING — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
C1A, C1B, C1C	0.00	0.00	0.00	54,794.52	54,794.52	0.00
A C1B C1C Accurued Interest	0.00	0.00	0.00	54,794.52	54,794.52	0.00
	0.00	0.00	0.00	54,794.52	54,794.52	54,794.52

E1 TOOLS AND EQUIPMENT — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
Repaving Sewer Risers & Lid	0.00	0.00	0.00	440,186.31	440,186.31	0.00
ving Sewer Risers & Lids-CO	0.00	0.00	0.00	440,186.31	440,186.31	0.00
	0.00	0.00	0.00	440,186.31	440,186.31	440,186.31

Z1 CONTINGENCY — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
BOND 2007	6,319,014.16	0.00	0.00	5,399,769.32-	919,244.84	919,244.84
	6,319,014.16	0.00	0.00	5,399,769.32-	919,244.84	919,244.84

EXHIBIT C
CAPITAL IMPROVEMENT PROGRAM BUDGET
2008 CONSTRUCTION FUND BUDGET
AS OF DECEMBER 31, 2009

THE PITTSBURGH WATER AND SEWER AUTHORITY
CAPITAL IMPROVEMENT PROGRAM - ACTIVE FUNDS
BUDGET AS OF DECEMBER 31, 2009

		2008 Construction Fund
WATER SYSTEM		
A1 Water - Distribution System	$	10,766,838.50
A2 Water - Pumping & Storage		9,455,754.59
A3 Water - Treatment Plant		2,175,000.00
TOTAL WATER SYSTEM	**$**	**22,397,593.09**
SEWER SYSTEM		
B1 Sewer - Sanitary Sewer	$	-
B2 Sewer - Combined Sewer		6,228,649.84
B4 Sewer - Pump Station		3,360,000.00
B5 Sewer - CSO		-
TOTAL SEWER SYSTEM	**$**	**9,588,649.84**
C1 CITY/URA/SEA/PORT AUTHORITY	**$**	**7,800,000.00**
D1 ENGINEERING	**$**	**9,313,854.00**
E1 TOOLS AND EQUIPMENT	**$**	**3,450,000.00**
F1 IT/GIS	**$**	**-**
Z1 CONTINGENCY	**$**	**45,523,528.65**
TOTAL	**$**	**98,073,625.58**

A1 WATER - DISTRIBUTION SYSTEM — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
TER READING (AMR) PROGRAM	400,000.00	0.00	0.00	0.00	400,000.00	400,000.00
& Hydrant Replacement	1,500,000.00	0.00	0.00	1,500,000.00-	0.00	0.00
& Hydrant Replacement	1,500,000.00	0.00	0.00	1,500,000.00-	0.00	0.00
Replacement Program	5,000,000.00	0.00	0.00	0.00	5,000,000.00	0.00
Replacement Program	5,000,000.00	0.00	0.00	0.00	5,000,000.00	0.00
e Hydrants	200,000.00	0.00	0.00	0.00	200,000.00	0.00
e Hydrants	200,000.00	0.00	0.00	0.00	200,000.00	0.00
lays	1,000,000.00	0.00	0.00	2,663,690.94	3,663,690.94	0.00
lays	1,000,000.00	0.00	0.00	37,740.94	1,037,740.94	0.00
2-inch WL Relay	0.00	0.00	0.00	5,000.00	5,000.00	0.00
WL Lewis to Woodruff	0.00	0.00	0.00	8,000.00	8,000.00	0.00
placement Contract - Eng	0.00	0.00	0.00	2,300.00	2,300.00	0.00
2-inch WL Relay - CM	0.00	0.00	0.00	30,000.00	30,000.00	0.00
WL Lewis to Woodruff - CM	0.00	0.00	0.00	35,000.00	35,000.00	0.00
placement Contract - CM	0.00	0.00	0.00	150,000.00	150,000.00	0.00
e Waterline - CM	0.00	0.00	0.00	13,300.00	13,300.00	0.00
2-inch WL Relay - Const	0.00	0.00	0.00	285,000.00	285,000.00	0.00
WL Lewis to Woodruff - Cons	0.00	0.00	0.00	350,000.00	350,000.00	0.00
placement Contract - Const	0.00	0.00	0.00	1,500,000.00	1,500,000.00	0.00
e Waterline - Construction	0.00	0.00	0.00	247,350.00	247,350.00	0.00
tions and Mapping	1,200,000.00	0.00	0.00	1,200,000.00-	0.00	0.00
tions and Mapping	1,200,000.00	0.00	0.00	1,200,000.00-	0.00	0.00
smission Main Improvements	0.00	0.00	0.00	3,147.56	3,147.56	0.00
sion Main	0.00	0.00	0.00	0.00	0.00	0.00
sion Main - Eng	0.00	0.00	0.00	3,147.56	3,147.56	0.00
truction - Waterline Reloc	0.00	0.00	0.00	1,500,000.00	1,500,000.00	0.00
truction Waterline	0.00	0.00	0.00	1,500,000.00	1,500,000.00	0.00
	9,300,000.00	0.00	0.00	1,466,838.50	10,766,838.50	7,103,147.56

A2 WATER - PUMPING AND STORAGE — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
pgrade - Engineering	0.00	0.00	0.00	28,873.89	28,873.89	28,873.89
pgrade - CM	135,000.00	0.00	0.00	135,000.00-	0.00	0.00
pgrade - Construction	1,365,000.00	0.00	0.00	1,365,000.00-	0.00	0.00
ks Rehabilitation	0.00	0.00	0.00	1,470,000.00	1,470,000.00	0.00
ks Rehabilitation - CM	0.00	0.00	0.00	270,000.00	270,000.00	0.00
ks Rehabilitation	0.00	0.00	0.00	1,200,000.00	1,200,000.00	0.00
#6 & 7 - CM	0.00	0.00	0.00	74,000.00	74,000.00	74,000.00
incoln Pump Station	900,000.00	0.00	0.00	74,000.00-	826,000.00	0.00
incoln Pump Station	900,000.00	0.00	0.00	824,000.00-	76,000.00	0.00
Station 6 & 7 - CM	0.00	0.00	0.00	0.00	0.00	0.00
Station 6 & 7 - Const	0.00	0.00	0.00	750,000.00	750,000.00	0.00
Modeling Support	150,000.00	0.00	0.00	0.00	150,000.00	0.00
Modeling Support	150,000.00	0.00	0.00	0.00	150,000.00	0.00
aintaining and Improvements	3,000,000.00	0.00	0.00	2,970,000.00-	30,000.00	0.00
aintaining and Improvements	3,000,000.00	0.00	0.00	2,970,000.00-	30,000.00	0.00
2 Cover	3,000,000.00	0.00	0.00	0.00	3,000,000.00	0.00
2 Cover - Engineering	200,000.00	0.00	0.00	0.00	200,000.00	0.00
2 Cover - CM	200,000.00	0.00	0.00	0.00	200,000.00	0.00
2 Cover - Construction	2,600,000.00	0.00	0.00	0.00	2,600,000.00	0.00
ation Main Replacement	750,000.00	0.00	0.00	366,029.90-	383,970.10	0.00
ation Main - Engineering	62,500.00	0.00	0.00	11,145.16	73,645.16	0.00
ation Main - CM	62,500.00	0.00	0.00	0.00	62,500.00	0.00
ation Main - Construction	625,000.00	0.00	0.00	377,175.06-	247,824.94	0.00
or Rehabilitiation	0.00	0.00	0.00	825,000.00	825,000.00	0.00
or Rehabilitation	0.00	0.00	0.00	75,000.00	75,000.00	0.00
or Rehabilitation	0.00	0.00	0.00	750,000.00	750,000.00	0.00
ergency Pumping Plan	0.00	0.00	0.00	18,723.00	18,723.00	0.00
ergency Pumping Plan	0.00	0.00	0.00	18,723.00	18,723.00	0.00
trical Feed	0.00	0.00	0.00	49,187.60	49,187.60	0.00
trical Feed	0.00	0.00	0.00	49,187.60	49,187.60	0.00
MFP - CM	0.00	0.00	0.00	100,000.00	100,000.00	100,000.00
1 MFP - FILTER ELEMENTS	0.00	0.00	0.00	2,500,000.00	2,500,000.00	2,500,000.00
	9,300,000.00	0.00	0.00	155,754.59	9,455,754.59	8,245,784.49

A3 WATER - TREATMENT PLANT — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
ash / Clarification ENG	127,000.00	0.00	0.00	127,000.00-	0.00	0.00
ash / Clarification CM	1,095,000.00	0.00	0.00	1,095,000.00-	0.00	0.00
ash Equalization - ENG	160,000.00	0.00	0.00	160,000.00-	0.00	0.00
ash Equalization - CM	500,000.00	0.00	0.00	500,000.00-	0.00	0.00
ash Equalization - CONST	18,615,000.00	0.00	0.00	18,615,000.00-	0.00	0.00
ash / Clarification ELECTR	3,285,000.00	0.00	0.00	3,285,000.00-	0.00	0.00
	190,000.00	0.00	0.00	0.00	190,000.00	190,000.00
t	1,810,000.00	0.00	0.00	0.00	1,810,000.00	1,810,000.00
p Station Standby Power	7,765,000.00	0.00	0.00	7,765,000.00-	0.00	0.00
ndby Power - Engineering	115,000.00	0.00	0.00	115,000.00-	0.00	0.00
ndby Power - CM	250,000.00	0.00	0.00	250,000.00-	0.00	0.00
ndby Power - Construction	7,400,000.00	0.00	0.00	7,400,000.00-	0.00	0.00
1 Reservoir MFP Expansion	1,100,000.00	0.00	0.00	1,100,000.00-	0.00	0.00
1 MFP Expansion - CM	100,000.00	0.00	0.00	100,000.00-	0.00	0.00
1 MFP Expansion - Const.	1,000,000.00	0.00	0.00	1,000,000.00-	0.00	0.00
. Containment Walls	0.00	0.00	0.00	175,000.00	175,000.00	0.00
Containment Walls	0.00	0.00	0.00	10,000.00	10,000.00	0.00
Containment Walls - CM	0.00	0.00	0.00	15,000.00	15,000.00	0.00
Containment Walls - Const	0.00	0.00	0.00	150,000.00	150,000.00	0.00
	34,647,000.00	0.00	0.00	32,472,000.00-	2,175,000.00	2,175,000.00

B2 SEWER - COMBINED SEWER — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
levising and Cleaning	2,250,000.00	0.00	0.00	1,750,000.00-	500,000.00	0.00
levising and Cleaning	2,250,000.00	0.00	0.00	2,068,470.07-	181,529.93	0.00
levising & Cleaning - Eng	0.00	0.00	0.00	3,470.07	3,470.07	0.00
levising & Cleaning - CM	0.00	0.00	0.00	90,000.00	90,000.00	0.00
levising & Cleaning - Const	0.00	0.00	0.00	225,000.00	225,000.00	0.00
nagement	750,000.00	0.00	0.00	0.00	750,000.00	0.00
nagement	750,000.00	0.00	0.00	0.00	750,000.00	0.00
r Line Point Repair	2,250,000.00	0.00	0.00	750,000.00-	1,500,000.00	0.00
r Line Point Repair	2,250,000.00	0.00	0.00	2,247,366.33-	2,633.67	0.00
r Line Point Repair - Eng	0.00	0.00	0.00	2,366.33	2,366.33	0.00
r Line Point Repair - CM	0.00	0.00	0.00	200,000.00	200,000.00	0.00
r Line Point Repair - Const	0.00	0.00	0.00	1,295,000.00	1,295,000.00	0.00
litation - Gunite	750,000.00	0.00	0.00	466,350.16-	283,649.84	0.00
litation - Gunite	750,000.00	0.00	0.00	741,000.00-	9,000.00	0.00
Sewer Repair - Engineering	0.00	0.00	0.00	10,649.84	10,649.84	0.00
Sewer Repair - CM	0.00	0.00	0.00	44,000.00	44,000.00	0.00
Sewer Repair - Construction	0.00	0.00	0.00	220,000.00	220,000.00	0.00
litation - Lining	650,000.00	0.00	0.00	650,000.00-	0.00	0.00
litation - Lining	650,000.00	0.00	0.00	650,000.00-	0.00	0.00
ements - Planned	1,050,000.00	0.00	0.00	924,000.00	1,974,000.00	0.00
ements - Planned	1,050,000.00	0.00	0.00	309,300.00-	740,700.00	0.00
wer Const - Eng	0.00	0.00	0.00	10,000.00	10,000.00	0.00
ement Contract - CM	0.00	0.00	0.00	105,000.00	105,000.00	0.00
ement Contract - CONST	0.00	0.00	0.00	1,118,300.00	1,118,300.00	0.00
er Compliance	400,000.00	0.00	0.00	0.00	400,000.00	0.00
er Compliance	400,000.00	0.00	0.00	0.00	400,000.00	0.00
onitoring	45,000.00	0.00	0.00	0.00	45,000.00	0.00
onitoring	45,000.00	0.00	0.00	0.00	45,000.00	0.00
Sewer Extension	200,000.00	0.00	0.00	76,000.00	276,000.00	0.00
Sewer Extension Easement	10,000.00	0.00	0.00	0.00	10,000.00	0.00
Sewer Extension Engineering	12,000.00	0.00	0.00	0.00	12,000.00	0.00
Sewer Extension - CM	15,000.00	0.00	0.00	9,000.00	24,000.00	0.00
Sewer Extension - CONST	163,000.00	0.00	0.00	67,000.00	230,000.00	0.00
truction - Sewer Reloc	0.00	0.00	0.00	500,000.00	500,000.00	0.00
truction Sewer Reloc	0.00	0.00	0.00	500,000.00	500,000.00	0.00
	8,345,000.00	0.00	0.00	2,116,350.16-	6,228,649.84	1,971,000.00

B4 SEWER - PUMP STATION — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
Station Improvements	3,360,000.00	0.00	0.00	0.00	3,360,000.00	3,360,000.00
Rd Sewer Separation - CONS	90,000.00	0.00	0.00	90,000.00-	0.00	0.00
Rd Sewer Separation - CM	10,000.00	0.00	0.00	10,000.00-	0.00	0.00
	3,460,000.00	0.00	0.00	100,000.00-	3,360,000.00	3,360,000.00

C1 CITY / URA / SEA / PORT AUTHORITY — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
ousing	200,000.00	0.00	0.00	200,000.00-	0.00	0.00
ousing	200,000.00	0.00	0.00	200,000.00-	0.00	0.00
elopment Projects	875,000.00	0.00	0.00	875,000.00-	0.00	0.00
elopment Projects	875,000.00	0.00	0.00	875,000.00-	0.00	0.00
sing	4,000,000.00	0.00	0.00	2,000,000.00-	2,000,000.00	0.00
sing	4,000,000.00	0.00	0.00	3,300,000.00-	700,000.00	0.00
sing - Administrative	0.00	0.00	0.00	80,000.00	80,000.00	0.00
sing - Design	0.00	0.00	0.00	88,203.00	88,203.00	0.00
sing - Construction	0.00	0.00	0.00	1,131,797.00	1,131,797.00	0.00
echnology Center	1,350,000.00	0.00	0.00	1,350,000.00-	0.00	0.00
echnology Center	1,350,000.00	0.00	0.00	1,350,000.00-	0.00	0.00
N REDEVELOPMENT	4,450,000.00	0.00	0.00	2,000,000.00-	2,450,000.00	2,450,000.00
ERRACE	3,750,000.00	0.00	0.00	2,000,000.00-	1,750,000.00	1,750,000.00
IAL DEVELOPMENT	1,600,000.00	0.00	0.00	0.00	1,600,000.00	1,600,000.00
	16,225,000.00	0.00	0.00	8,425,000.00-	7,800,000.00	5,800,000.00

D1 ENGINEERING — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
ring Services - 2008 CF	1,250,000.00	0.00	0.00	1,010,000.00-	240,000.00	0.00
ring Services - 2008 CF	1,250,000.00	0.00	0.00	1,010,000.00-	240,000.00	240,000.00
	175,000.00	0.00	0.00	100,000.00-	75,000.00	0.00
	175,000.00	0.00	0.00	100,000.00-	75,000.00	0.00
te Development	435,000.00	23,459.00	0.00	0.00	458,459.00	0.00
te Development	435,000.00	0.00	0.00	236,739.88-	198,260.12	0.00
llocation W&S Facilities	0.00	0.00	0.00	17,500.00	17,500.00	0.00
ers Memorial	0.00	1,750.00	0.00	739.88	2,489.88	0.00
Street Scape	0.00	0.00	0.00	17,500.00	17,500.00	0.00
dline 3 PNC/Market Sq Pl	0.00	10,267.00	0.00	0.00	10,267.00	0.00
nector	0.00	0.00	0.00	200,000.00	200,000.00	0.00
Inlet Reconstruction	0.00	200.00	0.00	1,000.00	1,200.00	0.00
yatt Fire Hydrant Reloc.	0.00	982.00	0.00	0.00	982.00	0.00
mes - WL & MH Construction	0.00	4,250.00	0.00	0.00	4,250.00	0.00
Sports Complex	0.00	6,010.00	0.00	0.00	6,010.00	0.00
Staffing	1,800,000.00	0.00	0.00	0.00	1,800,000.00	0.00
Staffing - Chester Eng	800,000.00	0.00	0.00	0.00	800,000.00	0.00
Staffing - Kimball	464,000.00	0.00	0.00	0.00	464,000.00	0.00
Staffing - URS	536,000.00	0.00	0.00	0.00	536,000.00	0.00
iews	295,000.00	0.00	0.00	0.00	295,000.00	0.00
iews	295,000.00	0.00	0.00	196,450.15-	98,549.85	0.00
iews - 2009	0.00	0.00	0.00	196,450.15	196,450.15	0.00
gineer Additonal Services	350,000.00	0.00	0.00	0.00	350,000.00	0.00
gineer Additonal Services	125,000.00	0.00	0.00	15,000.00-	110,000.00	0.00
neous Design	70,000.00	0.00	0.00	0.00	70,000.00	0.00
p and Testing	40,000.00	0.00	0.00	0.00	40,000.00	0.00
Attendance	15,000.00	0.00	0.00	15,000.00	30,000.00	0.00
ion of Monthly Reports	100,000.00	0.00	0.00	0.00	100,000.00	0.00
Manager Additional Service	210,000.00	0.00	0.00	0.00	210,000.00	0.00
Manager Additional Service	85,000.00	0.00	0.00	0.00	85,000.00	0.00
	25,000.00	0.00	0.00	0.00	25,000.00	0.00
se Requisition Preparation	50,000.00	0.00	0.00	0.00	50,000.00	0.00
neous Design	50,000.00	0.00	0.00	0.00	50,000.00	0.00
Management for URA Project	700,000.00	0.00	0.00	314,000.00	1,014,000.00	0.00
Management for URA Project	340,000.00	0.00	0.00	330,000.00-	10,000.00	0.00
ustrial Development	100,000.00	0.00	0.00	0.00	100,000.00	0.00
e Run Development	100,000.00	0.00	0.00	0.00	100,000.00	0.00
Dwellings	10,000.00	0.00	0.00	0.00	10,000.00	0.00
pa Terrace	100,000.00	0.00	0.00	0.00	100,000.00	0.00
gh Technology Center	50,000.00	0.00	0.00	70,000.00	120,000.00	0.00
nna Street	0.00	0.00	0.00	50,000.00	50,000.00	0.00
Hill Housing	0.00	0.00	0.00	100,000.00	100,000.00	0.00
Heights	0.00	0.00	0.00	90,000.00	90,000.00	0.00
t Widening	0.00	0.00	0.00	314,000.00	314,000.00	0.00
ill Rd Intersection Recon	0.00	0.00	0.00	20,000.00	20,000.00	0.00
epartment Reimbursement	4,000,000.00	0.00	0.00	461,395.00	4,461,395.00	0.00
ing Dept Reimbursement	1,000,000.00	0.00	0.00	461,395.00	1,461,395.00	0.00
ing Dept Reimbursement	1,000,000.00	0.00	0.00	0.00	1,000,000.00	0.00
ing Dept Reimbursement	1,000,000.00	0.00	0.00	0.00	1,000,000.00	0.00
ing Dept Reimbursement	1,000,000.00	0.00	0.00	0.00	1,000,000.00	0.00
plication Upgrade	0.00	0.00	0.00	2,000.00	2,000.00	0.00
plication Upgrade	0.00	0.00	0.00	2,000.00	2,000.00	0.00
rvices	0.00	0.00	0.00	8,000.00	8,000.00	0.00
rvices	0.00	0.00	0.00	8,000.00	8,000.00	0.00
g Legal Fees	0.00	0.00	0.00	400,000.00	400,000.00	0.00
g Legal Fees	0.00	0.00	0.00	400,000.00	400,000.00	0.00
	9,215,000.00	23,459.00	0.00	75,395.00	9,313,854.00	7,196,395.00

E1 TOOLS AND EQUIPMENT — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
ring Sewer Risers and Lids	1,200,000.00	0.00	0.00	0.00	1,200,000.00	0.00
wer Castings	1,200,000.00	0.00	0.00	625,228.25-	574,771.75	0.00
East Jordan	0.00	0.00	0.00	431,519.75	431,519.75	0.00
Bingham & Taylor	0.00	0.00	0.00	125,608.50	125,608.50	0.00
Neenah	0.00	0.00	0.00	68,100.00	68,100.00	0.00
er Meters / UMEs	750,000.00	0.00	0.00	0.00	750,000.00	0.00
er Meters / UMEs	750,000.00	0.00	0.00	0.00	750,000.00	0.00
	2,100,000.00	0.00	0.00	1,100,000.00-	1,000,000.00	0.00
	2,100,000.00	0.00	0.00	1,216,438.01-	883,561.99	0.00
9 SPEC 7300 Dump Truck	0.00	0.00	0.00	116,438.01	116,438.01	0.00
Facility Improv / Fencing	1,500,000.00	0.00	0.00	1,000,000.00-	500,000.00	0.00
Facility Improv / Fencing	1,500,000.00	0.00	0.00	1,000,000.00-	500,000.00	0.00
	5,550,000.00	0.00	0.00	2,100,000.00-	3,450,000.00	1,250,000.00

Z1 CONTINGENCY — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
BOND 2008	2,008,166.58	0.00	0.00	43,515,362.07	45,523,528.65	45,523,528.65
	2,008,166.58	0.00	0.00	43,515,362.07	45,523,528.65	45,523,528.65

EXHIBIT D
PENNVEST PROGRAM BUDGET
AS OF DECEMBER 31, 2009

THE PITTSBURGH WATER AND SEWER AUTHORITY
CAPITAL IMPROVEMENT PROGRAM - ACTIVE FUNDS
BUDGET AS OF DECEMBER 31, 2009

		PENNVEST Financing
WATER SYSTEM		
A1 Water - Distribution System	$	6,340,706.24
A2 Water - Pumping & Storage		1,459,007.76
A3 Water - Treatment Plant		8,185,889.00
TOTAL WATER SYSTEM	**$**	**15,985,603.00**
SEWER SYSTEM		
B1 Sewer - Sanitary Sewer	$	-
B2 Sewer - Combined Sewer		17,452,050.90
B4 Sewer - Pump Station		-
B5 Sewer - CSO		-
TOTAL SEWER SYSTEM	**$**	**17,452,050.90**
C1 CITY/URA/SEA/PORT AUTHORITY	**$**	**-**
D1 ENGINEERING	**$**	**-**
E1 TOOLS AND EQUIPMENT	**$**	**-**
F1 IT/GIS	**$**	**-**
Z1 CONTINGENCY	**$**	**3,371,643.10**
TOTAL	**$**	**36,809,297.00**

A1 WATER - DISTRIBUTION SYSTEM — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
ase 5	4,200,045.00	0.00	0.00	0.00	4,200,045.00	0.00
- Administration	5,000.00	0.00	0.00	0.00	5,000.00	0.00
- Legal Fees	63,000.00	0.00	0.00	0.00	63,000.00	0.00
- Interest During Const	35,300.00	0.00	0.00	0.00	35,300.00	0.00
- Engineering	375,213.02	0.00	0.00	0.00	375,213.02	0.00
- 60" Main - Engineerin	31,216.98	0.00	0.00	0.00	31,216.98	0.00
- 60" Main - CM	251,200.00	0.00	0.00	0.00	251,200.00	0.00
- 60" Main - Const	3,439,115.00	0.00	0.00	0.00	3,439,115.00	0.00
ase 6	2,140,661.24	0.00	0.00	0.00	2,140,661.24	0.00
- Administration	2,000.00	0.00	0.00	0.00	2,000.00	0.00
- Legal Fees	65,000.00	0.00	0.00	0.00	65,000.00	0.00
- Interest During Const	38,000.00	0.00	0.00	0.00	38,000.00	0.00
- Engineering	503,541.24	0.00	0.00	0.00	503,541.24	0.00
- Valve & Hydrant - CM	136,900.00	0.00	0.00	0.00	136,900.00	0.00
- Valve & Hydrant - Con	1,395,220.00	0.00	0.00	0.00	1,395,220.00	0.00
	6,340,706.24	0.00	0.00	0.00	6,340,706.24	6,340,706.24

A2 WATER - PUMPING AND STORAGE — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
- Squirrel Hill Tank	792,899.00	0.00	0.00	0.00	792,899.00	0.00
Squirrel Hill Tank - CM	111,900.00	0.00	0.00	0.00	111,900.00	0.00
Squirrel Hill Tank-Cons	680,999.00	0.00	0.00	0.00	680,999.00	0.00
- Herron Hill Tank	666,108.76	0.00	0.00	0.00	666,108.76	0.00
- HerronHill Tank - Eng	5,158.76	0.00	0.00	0.00	5,158.76	0.00
- HerronHill Tank - CM	112,000.00	0.00	0.00	0.00	112,000.00	0.00
- HerronHill Tank - Con	548,950.00	0.00	0.00	0.00	548,950.00	0.00
	1,459,007.76	0.00	0.00	0.00	1,459,007.76	1,459,007.76

A3 WATER - TREATMENT PLANT — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
- WTP Clarifiers 1,2,3	2,941,489.00	0.00	0.00	0.00	2,941,489.00	0.00
- WTP Clarifiers - CM	270,470.00	0.00	0.00	0.00	270,470.00	0.00
Clarifiers - Gen Const	2,263,788.00	0.00	0.00	0.00	2,263,788.00	0.00
Clarifiers - Elec Const	407,231.00	0.00	0.00	0.00	407,231.00	0.00
- Filter Backwash	5,244,400.00	0.00	0.00	0.00	5,244,400.00	0.00
- Filter Backwash - CM	342,400.00	0.00	0.00	0.00	342,400.00	0.00
wash - Gen/Mec - Const	4,569,000.00	0.00	0.00	0.00	4,569,000.00	0.00
wash - Electric - Const	333,000.00	0.00	0.00	0.00	333,000.00	0.00
	8,185,889.00	0.00	0.00	0.00	8,185,889.00	8,185,889.00

B2 SEWER - COMBINED SEWER — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
ovements	4,302,373.00	0.00	0.00	0.00	4,302,373.00	0.00
Legal Fees	46,000.00	0.00	0.00	0.00	46,000.00	0.00
Interest During Const.	25,000.00	0.00	0.00	0.00	25,000.00	0.00
Administration	1,000.00	0.00	0.00	0.00	1,000.00	0.00
ple Street Survey	7,000.00	0.00	0.00	0.00	7,000.00	0.00
Engineering	219,000.00	0.00	0.00	0.00	219,000.00	0.00
ract - CM	112,000.00	0.00	0.00	0.00	112,000.00	0.00
ract - CM	94,000.00	0.00	0.00	0.00	94,000.00	0.00
Contract - CM	98,000.00	0.00	0.00	0.00	98,000.00	0.00
ract - Construction	1,559,803.00	0.00	0.00	0.00	1,559,803.00	0.00
ract - Construction	1,193,175.00	0.00	0.00	0.00	1,193,175.00	0.00
Contract -Construction	947,395.00	0.00	0.00	0.00	947,395.00	0.00
ase 2	8,640,847.90	0.00	0.00	0.00	8,640,847.90	0.00
ase 2 - Administration	5,000.00	0.00	0.00	0.00	5,000.00	0.00
ase 2 - Legal Fees	63,000.00	0.00	0.00	0.00	63,000.00	0.00
- Interest During Const	50,000.00	0.00	0.00	0.00	50,000.00	0.00
- Engineering	24,000.00	0.00	0.00	0.00	24,000.00	0.00
r Inspection #1 - CM	71,000.00	0.00	0.00	0.00	71,000.00	0.00
r Inspection #2 - CM	71,000.00	0.00	0.00	0.00	71,000.00	0.00
Sewer Inspection #1-CM	126,000.00	0.00	0.00	0.00	126,000.00	0.00
Sewer Inspection #2-CM	126,000.00	0.00	0.00	0.00	126,000.00	0.00
air - CM	147,000.00	0.00	0.00	0.00	147,000.00	0.00
ract - CM	70,000.00	0.00	0.00	0.00	70,000.00	0.00
e Contract - CM	131,000.00	0.00	0.00	0.00	131,000.00	0.00
McBride - CM	106,000.00	0.00	0.00	0.00	106,000.00	0.00
Browns Hill - CM	25,000.00	0.00	0.00	0.00	25,000.00	0.00
44th/Davison - CM	103,000.00	0.00	0.00	0.00	103,000.00	0.00
r Inspection #1 - Const	218,852.50	0.00	0.00	0.00	218,852.50	0.00
r Inspection #2 - Const	228,568.50	0.00	0.00	0.00	228,568.50	0.00
ewer Inspection 1-Const	441,850.00	0.00	0.00	0.00	441,850.00	0.00
ewer Inspection 2-Const	433,880.00	0.00	0.00	0.00	433,880.00	0.00
air - Construction	1,476,395.00	0.00	0.00	0.00	1,476,395.00	0.00
ract - Construction	693,474.00	0.00	0.00	0.00	693,474.00	0.00
e Contract-Construction	1,207,445.00	0.00	0.00	0.00	1,207,445.00	0.00
McBride - Construction	1,507,777.90	0.00	0.00	0.00	1,507,777.90	0.00
Browns Hill - Const	237,720.00	0.00	0.00	0.00	237,720.00	0.00
44th/Davison - Const	1,076,885.00	0.00	0.00	0.00	1,076,885.00	0.00
ase 3	4,508,830.00	0.00	0.00	0.00	4,508,830.00	0.00
- Administration	1,000.00	0.00	0.00	0.00	1,000.00	0.00
- Legal Fees	60,000.00	0.00	0.00	0.00	60,000.00	0.00
- Interest During Const	30,000.00	0.00	0.00	0.00	30,000.00	0.00
- Engineering	470,800.00	0.00	0.00	0.00	470,800.00	0.00
ract - CM	150,600.00	0.00	0.00	0.00	150,600.00	0.00
air - CM	177,200.00	0.00	0.00	0.00	177,200.00	0.00
g - CM	51,400.00	0.00	0.00	0.00	51,400.00	0.00
ract - Construction	1,494,600.00	0.00	0.00	0.00	1,494,600.00	0.00
air - Construction	1,564,100.00	0.00	0.00	0.00	1,564,100.00	0.00
g - Construction	509,130.00	0.00	0.00	0.00	509,130.00	0.00
	17,452,050.90	0.00	0.00	0.00	17,452,050.90	17,452,050.90

Z1 CONTINGENCY — BUDGET AS OF DECEMBER 31, 2009

	Original Budget	Supplements	Returns	Transfers	Current Budget	Distributable Budget
EST SSI PHASE 1	370,037.00	0.00	0.00	0.00	370,037.00	370,037.00
EST SSI PHASE 2	1,623,402.10	0.00	0.00	0.00	1,623,402.10	1,623,402.10
EST SSI PHASE 3	356,783.00	0.00	0.00	0.00	356,783.00	356,783.00
EST WSI PHASE 5	679,113.00	0.00	0.00	0.00	679,113.00	679,113.00
EST WSI PHASE 6	342,308.00	0.00	0.00	0.00	342,308.00	342,308.00
	3,371,643.10	0.00	0.00	0.00	3,371,643.10	3,371,643.10

EXHIBIT E
2005 BOND ISSUE STATUS REPORT
AS OF DECEMBER 31, 2009

THE PITTSBURGH WATER AND SEWER AUTHORITY
CAPITAL IMPROVEMENT PROGRAM
2005 BOND ISSUE
STATUS AS OF DECEMBER 31, 2009

AMOUNT BUDGETED	COMPLETED CONTRACTS	ACTUAL COST ACTIVE CONTRACTS	TOTAL COMPLETE AND ACTIVE	RETAINAGE HELD	REIMBURSE-MENTS	SAP POSTING ERROR	AMOUNT REQUISITIONED
$ 4,970,416.09	$ 2,851,071.99	$ 2,004,467.26	$ 4,855,539.25	$ -	$ 9,594.60	$ (71,232.99)	$ 4,936,366.84
1,062,026.76	934,876.85	39,020.75	973,897.60	-	-	-	973,897.60
3,930,709.99	1,231,637.68	2,383,979.16	3,615,616.84	26,209.90	35.26	-	3,589,442.21
$ 9,963,152.84	**$ 5,017,586.52**	**$ 4,427,467.17**	**$ 9,445,053.69**	**$ 26,209.90**	**$ 9,629.86**	**$ (71,232.99)**	**$ 9,499,706.64**
$ 905,991.66	$ 907,346.08	$ -	$ 907,346.08	$ -	$ -	$ 0.24	$ 907,345.84
26,171,613.12	9,566,930.29	15,994,245.08	25,561,175.37	47,802.27	1,038,787.09	(83,197.78)	26,635,357.97
541,621.83	97,756.51	287,522.92	385,279.43	-	-	-	385,279.43
-	-	-	-	-	-	-	-
$ 27,619,226.61	**$ 10,572,032.88**	**$ 16,281,768.00**	**$ 26,853,800.88**	**$ 47,802.27**	**$ 1,038,787.09**	**$ (83,197.54)**	**$ 27,927,983.24**
$ 3,326,313.07	**$ 200,000.00**	**$ 2,195,599.46**	**$ 2,395,599.46**	**$ -**	**$ 302,032.63**	**$ -**	**$ 2,697,632.09**
$ 9,093,909.93	**$ 8,078,100.03**	**$ 1,023,220.23**	**$ 9,101,320.26**	**$ -**	**$ 166,735.87**	**$ (20,361.08)**	**$ 9,247,695.05**
$ 1,009,191.13	**$ 327,909.25**	**$ 507,253.79**	**$ 835,163.04**	**$ -**	**$ -**	**$ -**	**$ 835,163.04**
$ 221,596.88	**$ 221,596.88**	**$ -**	**$ 221,596.88**	**$ -**	**$ -**	**$ -**	**$ 221,596.88**
$ 851,042.28							
$ 52,084,432.74	**$ 24,417,225.56**	**$ 24,435,308.65**	**$ 48,852,534.21**	**$ 74,012.16**	**$ 1,517,185.45**	**$ (174,791.60)**	**$ 50,429,776.94**

A1 WATER - DISTRIBUTION SYSTEM ACTIVE PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
Management	37,000.00	45,400.02	82,400.02	0.00	70,524.11	11,875.91	85.59
Management	37,000.00	43,339.48	80,339.48	0.00	70,524.11	9,815.37	87.78
	500,000.00	515,509.49	1,015,509.49	0.00	972,165.21	43,344.28	95.73
	500,000.00	515,509.49	1,015,509.49	0.00	972,165.21	43,344.28	95.73
onstruction	0.00	906,434.59	906,434.59	0.00	852,919.87	53,514.72	94.10
Survey	0.00	15,887.81	15,887.81	0.00	15,887.81	0.00	100.00
- CM	0.00	73,608.24	73,608.24	0.00	52,691.77	20,916.47	71.58
onstruction	0.00	816,938.54	816,938.54	0.00	784,340.29	32,598.25	96.01
Hydrants	0.00	115,000.00	115,000.00	0.00	108,858.07	6,141.93	94.66
Hydrants	0.00	115,000.00	115,000.00	0.00	108,858.07	6,141.93	94.66
	537,000.00	1,582,344.10	2,119,344.10	0.00	2,004,467.26	114,876.84	94.58

A1 WATER - DISTRIBUTION SYSTEM COMPLETED PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
ER READING (AMR) PROGRAM	15,000.00	225,180.84	240,180.84	0.00	240,180.84	0.00	100.00
Water - CM	79,167.00	16,069.00	95,236.00	0.00	95,236.00	0.00	100.00
Water - CM	79,167.00	16,069.00	95,236.00	0.00	95,236.00	0.00	100.00
Water - Const. - 2005Bond	1,069,821.00	175,924.21	1,245,745.21	0.00	1,245,745.21	0.00	100.00
Water - Const. - 2005Bond	1,069,821.00	175,924.21	1,245,745.21	0.00	1,245,745.21	0.00	100.00
	15,000.00	(5,128.78)	9,871.22	0.00	9,871.22	0.00	100.00
	15,000.00	(5,128.78)	9,871.22	0.00	9,871.22	0.00	100.00
d Waterline	590,000.00	(8,960.55)	581,039.45	0.00	581,039.45	0.00	100.00
esign & Survey	40,000.00	(13,198.78)	26,801.22	0.00	26,801.22	0.00	100.00
M	50,000.00	(28,509.99)	21,490.01	0.00	21,490.01	0.00	100.00
onstruction	500,000.00	32,748.22	532,748.22	0.00	532,748.22	0.00	100.00
ling	0.00	20,182.30	20,182.30	0.00	20,182.30	0.00	100.00
ling - Engineering	0.00	20,182.30	20,182.30	0.00	20,182.30	0.00	100.00
Fire Hydrants	0.00	37,068.00	37,068.00	0.00	37,068.00	0.00	100.00
Fire Hydrants	0.00	37,068.00	37,068.00	0.00	37,068.00	0.00	100.00
ay Various Locations	0.00	139,556.68	139,556.68	0.00	139,556.68	0.00	100.00
urvey	0.00	24,702.18	24,702.18	0.00	24,702.18	0.00	100.00
rvey	0.00	21,911.44	21,911.44	0.00	21,911.44	0.00	100.00
rvey	0.00	23,078.39	23,078.39	0.00	23,078.39	0.00	100.00
rvey	0.00	16,154.05	16,154.05	0.00	16,154.05	0.00	100.00
t Survey	0.00	21,312.26	21,312.26	0.00	21,312.26	0.00	100.00
ey	0.00	32,398.36	32,398.36	0.00	32,398.36	0.00	100.00
2" Waterline Relay	0.00	209,158.85	209,158.85	0.00	209,158.85	0.00	100.00
" Waterline Relay	0.00	209,158.85	209,158.85	0.00	209,158.85	0.00	100.00
erline Relay	0.00	273,033.44	273,033.44	0.00	273,033.44	0.00	100.00
erline Relay - Construction	0.00	273,033.44	273,033.44	0.00	273,033.44	0.00	100.00
	1,768,988.00	1,082,083.99	2,851,071.99	0.00	2,851,071.99	0.00	100.00

A2 WATER - PUMPING AND STORAGE ACTIVE PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
iler - CM	37,000.00	0.00	37,000.00	0.00	24,510.00	12,490.00	66.24
iler - CM	37,000.00	0.00	37,000.00	0.00	24,510.00	12,490.00	66.24
Inspection	0.00	25,000.00	25,000.00	0.00	0.00	25,000.00	0.00
Inspection	0.00	25,000.00	25,000.00	0.00	0.00	25,000.00	0.00
ecken Motor No. 5 - CM	0.00	7,649.91	7,649.91	0.00	7,649.91	0.00	100.00
ecken Motor No. 5 - CM	0.00	7,649.91	7,649.91	0.00	7,649.91	0.00	100.00
Station Valve Replacement	0.00	50,000.00	50,000.00	0.00	0.00	50,000.00	0.00
Station Valve -Construction	0.00	50,000.00	50,000.00	0.00	0.00	50,000.00	0.00
#2 Replacement	0.00	7,500.00	7,500.00	0.00	6,860.84	639.16	91.48
rnal	0.00	7,500.00	7,500.00	0.00	6,860.84	639.16	91.48
	37,000.00	90,149.91	127,149.91	0.00	39,020.75	88,129.16	30.69

A2 WATER - PUMPING AND STORAGE COMPLETED PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
iler - Eng	25,000.00	(20,096.20)	4,903.80	0.00	4,903.80	0.00	100.00
iler - Eng	25,000.00	(20,096.20)	4,903.80	0.00	4,903.80	0.00	100.00
iler	500,000.00	(126,707.21)	373,292.79	0.00	373,292.79	0.00	100.00
iler - Const	500,000.00	(126,707.21)	373,292.79	0.00	373,292.79	0.00	100.00
tation Valve Replacement	100,000.00	(25,158.00)	74,842.00	0.00	74,842.00	0.00	100.00
tation Valve Replacement	100,000.00	(25,158.00)	74,842.00	0.00	74,842.00	0.00	100.00
ater Tank Inspection	0.00	19,162.15	19,162.15	0.00	19,162.15	0.00	100.00
ater Tank Inspection	0.00	19,162.15	19,162.15	0.00	19,162.15	0.00	100.00
er Tank Inspection	0.00	23,219.62	23,219.62	0.00	23,219.62	0.00	100.00
er Tank Inspection	0.00	23,219.62	23,219.62	0.00	23,219.62	0.00	100.00
Inspection	0.00	44,646.13	44,646.13	0.00	44,646.13	0.00	100.00
Inspection	0.00	44,646.13	44,646.13	0.00	44,646.13	0.00	100.00
Inspection	0.00	12,661.18	12,661.18	0.00	12,661.18	0.00	100.00
Inspection	0.00	12,661.18	12,661.18	0.00	12,661.18	0.00	100.00
ank Inspection	0.00	0.00	0.00	0.00	0.00	0.00	●/O
ank Inspection	0.00	0.00	0.00	0.00	0.00	0.00	●/O
Inspection	0.00	3,000.00	3,000.00	0.00	3,000.00	0.00	100.00
Inspection	0.00	3,000.00	3,000.00	0.00	3,000.00	0.00	100.00
Tank Inspection	0.00	2,053.00	2,053.00	0.00	2,053.00	0.00	100.00
Tank Inspection	0.00	2,053.00	2,053.00	0.00	2,053.00	0.00	100.00
Refurbish Motor #2	0.00	187,830.00	187,830.00	0.00	187,830.00	0.00	100.00
Refurbish Motor #2	0.00	187,830.00	187,830.00	0.00	187,830.00	0.00	100.00
ecken Motor No. 5	0.00	97,745.00	97,745.00	0.00	97,745.00	0.00	100.00
ecken Motor No. 5	0.00	97,745.00	97,745.00	0.00	97,745.00	0.00	100.00
grade - Design	0.00	26,282.23	26,282.23	0.00	26,282.23	0.00	100.00
#6 & 7 Replacement - Design	0.00	65,238.95	65,238.95	0.00	65,238.95	0.00	100.00
#6 & 7 Replacement - Design	0.00	65,238.95	65,238.95	0.00	65,238.95	0.00	100.00
	625,000.00	309,876.85	934,876.85	0.00	934,876.85	0.00	100.00

A3 WATER - TREATMENT PLANT ACTIVE PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
SH HANDLING DESIGN	0.00	530,445.31	530,445.31	0.00	483,263.35	47,181.96	91.11
SH HANDLING DESIGN	0.00	530,445.31	530,445.31	0.00	483,263.35	47,181.96	91.11
sh - Standby Power Design	0.00	520,000.00	520,000.00	0.00	369,169.78	150,830.22	70.99
sh - Standby Power Design	0.00	520,000.00	520,000.00	0.00	369,169.78	150,830.22	70.99
sh / Clarification I&D	0.00	738,000.00	738,000.00	0.00	621,499.58	116,500.42	84.21
sh / Clarification I&D	0.00	738,000.00	738,000.00	0.00	621,499.58	116,500.42	84.21
ter - Eng	15,000.00	53,600.00	68,600.00	0.00	70,402.09	(1,802.09)	102.63
ter - Eng	15,000.00	53,600.00	68,600.00	0.00	70,402.09	(1,802.09)	102.63
ter Stations - CM	11,100.00	(11,100.00)	0.00	0.00	0.00	0.00	●/O
ter Stations - CM	11,100.00	(11,100.00)	0.00	0.00	0.00	0.00	●/O
ter Stations - Const	150,000.00	132,026.99	282,026.99	2,500.00	277,334.99	2,192.00	99.22
ter Stations - Const	150,000.00	132,026.99	282,026.99	2,500.00	277,334.99	2,192.00	99.22
	0.00	560,000.00	560,000.00	7,407.89	541,221.91	11,370.20	97.97
- Design	0.00	30,000.00	30,000.00	0.00	28,008.67	1,991.33	93.36
- CM	0.00	80,000.00	80,000.00	0.00	81,111.34	(1,111.34)	101.39
- Construction	0.00	450,000.00	450,000.00	7,407.89	432,101.90	10,490.21	97.67
itional Work	0.00	0.00	0.00	0.00	21,087.46	(21,087.46)	●/O
itional Work	0.00	0.00	0.00	0.00	21,087.46	(21,087.46)	●/O
	176,100.00	2,522,972.30	2,699,072.30	9,907.89	2,383,979.16	305,185.25	88.69

A3 WATER - TREATMENT PLANT COMPLETED PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
rovements	3,764,670.00	(3,434,031.64)	330,638.36	0.00	330,638.35	0.01	100.00
ign - Contract #1	300,000.00	0.00	300,000.00	0.00	299,999.99	0.01	100.00
- Eng	22,500.00	8,138.36	30,638.36	0.00	30,638.36	0.00	100.00
- CM	237,170.00	(237,170.00)	0.00	0.00	0.00	0.00	●/O
struction - Contract #1	3,205,000.00	(3,205,000.00)	0.00	0.00	0.00	0.00	●/O
SH HANDLING - STUDY	0.00	419,554.69	419,554.69	0.00	419,554.69	0.00	100.00
SH HANDLING - STUDY	0.00	419,554.69	419,554.69	0.00	419,554.69	0.00	100.00
Site Survey	10,000.00	2,563.06	12,563.06	0.00	12,563.06	0.00	100.00
Site Survey	10,000.00	2,563.06	12,563.06	0.00	12,563.06	0.00	100.00
m Design	18,000.00	0.00	18,000.00	0.00	18,000.00	0.00	100.00
m	226,523.00	(50,117.00)	176,406.00	0.00	176,406.00	0.00	100.00
	167,627.00	(167,627.00)	0.00	0.00	0.00	0.00	●/O
	2,265,230.00	(2,265,230.00)	0.00	0.00	0.00	0.00	●/O
Screen - Engineering	0.00	77,475.58	77,475.58	0.00	77,475.58	0.00	100.00
Screen - CM	0.00	0.00	0.00	0.00	0.00	0.00	●/O
Screen - General	0.00	0.00	0.00	0.00	0.00	0.00	●/O
	0.00	197,000.00	197,000.00	0.00	197,000.00	0.00	100.00
	0.00	197,000.00	197,000.00	0.00	197,000.00	0.00	100.00
	6,452,050.00	(5,220,412.31)	1,231,637.69	0.00	1,231,637.68	0.01	100.00

B1 SEWER - SANITARY SEWER COMPLETED PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
Sewer Inspection	620,000.00	285,991.66	905,991.66	0.20	907,346.08	(1,354.62)	100.15
- CM	100,000.00	168,400.18	268,400.18	0.00	269,754.80	(1,354.62)	100.50
- Const	520,000.00	113,645.48	633,645.48	0.20	633,645.28	0.00	100.00
- Engineering	0.00	3,946.00	3,946.00	0.00	3,946.00	0.00	100.00
	620,000.00	285,991.66	905,991.66	0.20	907,346.08	(1,354.62)	100.15

B2 SEWER - COMBINED SEWER ACTIVE PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
	1,266,690.21	(13,398.35)	1,253,291.86	0.00	1,158,401.82	94,890.04	92.43
	0.00	36,601.65	36,601.65	0.00	831,683.56	(795,081.91)	2,272.26
CONSTRUCTION	800,000.00	(32,461.37)	767,538.63	0.00	668,250.00	99,288.63	87.06
CONSTRUCTION	800,000.00	(32,461.37)	767,538.63	0.00	668,250.00	99,288.63	87.06
CONST 2 (OPTION)	0.00	0.00	0.00	0.00	54,166.50	(54,166.50)	●/O
CONST 2 (OPTION)	0.00	0.00	0.00	0.00	54,166.50	(54,166.50)	●/O
Region One (M & E)	3,309,454.56	0.00	3,309,454.56	0.00	3,128,033.41	181,421.15	94.52
Region One (M & E)	3,309,454.56	0.00	3,309,454.56	0.00	3,128,033.41	181,421.15	94.52
Region Two (Baker)	3,135,550.01	0.00	3,135,550.01	0.00	3,128,762.42	6,787.59	99.78
Region Two (Baker)	3,135,550.01	0.00	3,135,550.01	0.00	3,128,762.42	6,787.59	99.78
Belquin St Sewer	2,255,400.00	(864,161.50)	1,391,238.50	210,628.30	1,813,421.95	(632,811.75)	145.49
Giant Eagle Easement	0.00	0.00	0.00	0.00	83,800.32	(83,800.32)	●/O
Design	0.00	15,838.50	15,838.50	0.00	6,000.10	9,838.40	37.88
im - CM	155,400.00	(100,000.00)	55,400.00	0.00	50,089.78	5,310.22	90.41
et - CM	0.00	45,000.00	45,000.00	0.00	73,024.41	(28,024.41)	162.28
im - Const	2,100,000.00	(1,425,000.00)	675,000.00	122,461.30	459,599.91	92,938.79	86.23
et - Const	0.00	600,000.00	600,000.00	88,167.00	1,140,907.43	(629,074.43)	204.85
s TWP Release of Retainage	0.00	0.00	0.00	0.00	0.00	0.00	●/O
e Program Management	4,900,000.00	550,000.00	5,450,000.00	0.00	4,912,668.99	537,331.01	90.14
ct 1	2,600,000.00	310,000.00	2,910,000.00	0.00	2,550,704.40	359,295.60	87.65
ct 2	2,300,000.00	240,000.00	2,540,000.00	0.00	2,361,964.59	178,035.41	92.99
pection	0.00	1,300,000.00	1,300,000.00	276,794.17	1,130,539.99	(107,334.16)	108.26
pection - CM	0.00	350,000.00	350,000.00	0.00	374,494.60	(24,494.60)	107.00
pection - Construction	0.00	950,000.00	950,000.00	276,794.17	756,045.39	(82,839.56)	108.72
	15,667,094.78	939,978.78	16,607,073.56	487,422.47	15,994,245.08	125,406.01	99.24

B2 SEWER - COMBINED SEWER COMPLETED PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
itation Gunite Contract	1,074,000.00	483,584.62	1,557,584.62	0.00	1,557,584.62	0.00	100.00
unite Contract - Const	1,074,000.00	483,584.62	1,557,584.62	0.00	1,557,584.62	0.00	100.00
Management	100,000.00	83,389.00	183,389.00	0.00	183,389.00	0.00	100.00
Line Point Repair Contract	949,395.00	209,531.94	1,158,926.94	0.00	1,158,926.94	0.00	100.00
Line Point Repair Contract	949,395.00	209,531.94	1,158,926.94	0.00	1,158,926.94	0.00	100.00
r Point Repair	850,000.00	678,767.57	1,528,767.57	0.00	1,529,673.62	(906.05)	100.06
r Point Repair	850,000.00	678,767.57	1,528,767.57	0.00	1,529,673.62	(906.05)	100.06
g, TVing, & MH Inspection	764,606.65	90,260.58	854,867.23	0.00	854,867.23	0.00	100.00
g TVing & MH Inspection-CM	97,500.00	74,009.19	171,509.19	0.00	171,509.19	0.00	100.00
g TVing & MH Inspection-CON	667,106.65	16,251.39	683,358.04	0.00	683,358.04	0.00	100.00
COE / BAKER	0.00	7,461.37	7,461.37	0.00	7,461.37	0.00	100.00
COE / BAKER	0.00	7,461.37	7,461.37	0.00	7,461.37	0.00	100.00
PWSA MISC COSTS	140,800.00	(68,956.00)	71,844.00	0.00	71,844.00	0.00	100.00
PWSA MISC COSTS	140,800.00	(68,956.00)	71,844.00	0.00	71,844.00	0.00	100.00
- CM	59,200.00	112,612.57	171,812.57	0.00	171,812.57	0.00	100.00
- CM	59,200.00	112,612.57	171,812.57	0.00	171,812.57	0.00	100.00
Var Loc	605,739.00	106,652.59	712,391.59	0.00	712,391.59	0.00	100.00
Eng	25,000.00	(21,694.05)	3,305.95	0.00	3,305.95	0.00	100.00
CM	40,014.00	21,130.45	61,144.45	0.00	61,144.45	0.00	100.00
Const	540,725.00	107,216.19	647,941.19	0.00	647,941.19	0.00	100.00
Contract	1,074,000.00	(512,077.94)	561,922.06	0.00	561,922.06	0.00	100.00
Contract - CM	74,000.00	(7,937.56)	66,062.44	0.00	66,062.44	0.00	100.00
Contract - Construction	1,000,000.00	(504,140.38)	495,859.62	0.00	495,859.62	0.00	100.00
Sewer	577,000.00	(569,717.28)	7,282.72	0.00	7,282.72	0.00	100.00
- Eng	40,000.00	(32,717.28)	7,282.72	0.00	7,282.72	0.00	100.00
- CM	37,000.00	(37,000.00)	0.00	0.00	0.00	0.00	●/O
- Const	500,000.00	(500,000.00)	0.00	0.00	0.00	0.00	●/O
ng	40,000.00	102,381.38	142,381.38	0.00	142,381.38	0.00	100.00
- Flow Monitoring	0.00	7,920.41	7,920.41	0.00	7,920.41	0.00	100.00
- Flow Monitoring	40,000.00	(16,972.79)	23,027.21	0.00	23,027.21	0.00	100.00
terceptor - Flow Monitoring	0.00	25,838.55	25,838.55	0.00	25,838.55	0.00	100.00
Flow Monitoring	0.00	69,235.72	69,235.72	0.00	69,235.72	0.00	100.00
- Flow Monitoring	0.00	16,359.49	16,359.49	0.00	16,359.49	0.00	100.00
Contract	750,000.00	(186,698.45)	563,301.55	0.00	564,269.06	(967.51)	100.17
Contract - Construction	675,000.00	(161,072.03)	513,927.97	0.00	513,927.97	0.00	100.00
Contract - CM	75,000.00	(25,626.42)	49,373.58	0.00	50,341.09	(967.51)	101.96
Contract	1,000,000.00	16,052.00	1,016,052.00	0.00	1,016,052.00	0.00	100.00
Contract - CM	100,000.00	1,349.78	101,349.78	0.00	101,349.78	0.00	100.00
Contract - Design	0.00	12,994.72	12,994.72	0.00	12,994.72	0.00	100.00
Contract - Construction	900,000.00	1,707.50	901,707.50	0.00	901,707.50	0.00	100.00
Sewer Inspection	600,000.00	20,044.17	620,044.17	0.00	620,561.34	(517.17)	100.08
Sewer Inspection - CM	100,000.00	210,998.22	310,998.22	0.00	311,515.39	(517.17)	100.17
Sewer Inspection - Design	0.00	5,077.73	5,077.73	0.00	5,077.73	0.00	100.00
Sewer Inspection - Const	500,000.00	(196,031.78)	303,968.22	0.00	303,968.22	0.00	100.00
er Replacement @ PAW Plant	0.00	406,510.79	406,510.79	0.00	406,510.79	0.00	100.00
er Replacement @ PAW Plant	0.00	406,510.79	406,510.79	0.00	406,510.79	0.00	100.00
	8,584,740.65	979,798.91	9,564,539.56	0.00	9,566,930.29	(2,390.73)	100.02

B4 SEWER - PUMP STATION ACTIVE PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
Sewage Pump Stations	368,975.32	74,890.00	443,865.32	0.00	287,522.92	156,342.40	64.78
Sewage Pump Station - 2005	368,975.32	74,890.00	443,865.32	0.00	287,522.92	156,342.40	64.78
	368,975.32	74,890.00	443,865.32	0.00	287,522.92	156,342.40	64.78

B4 SEWER - PUMP STATION COMPLETED PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
	140,600.00	(140,600.00)	0.00	0.00	0.00	0.00	●/O
	140,600.00	(140,600.00)	0.00	0.00	0.00	0.00	●/O
- Contract #1	854,700.00	(854,700.00)	0.00	0.00	0.00	0.00	●/O
- Contract #1	854,700.00	(854,700.00)	0.00	0.00	0.00	0.00	●/O
onst	850,000.00	(850,000.00)	0.00	0.00	0.00	0.00	●/O
onst	850,000.00	(850,000.00)	0.00	0.00	0.00	0.00	●/O
rbach - Flow Monitoring	60,000.00	(56,809.08)	3,190.92	0.00	3,190.92	0.00	100.00
rbach - Flow Monitoring	60,000.00	(56,809.08)	3,190.92	0.00	3,190.92	0.00	100.00
ump Station Survey	0.00	7,060.92	7,060.92	0.00	7,060.92	0.00	100.00
ump Station Survey	0.00	7,060.92	7,060.92	0.00	7,060.92	0.00	100.00
Force Main Construction	0.00	0.00	0.00	0.00	0.00	0.00	●/O
Force Main Construction	0.00	0.00	0.00	0.00	0.00	0.00	●/O
Force Main Survey	0.00	87,504.67	87,504.67	0.00	87,504.67	0.00	100.00
Force Main Survey	0.00	87,504.67	87,504.67	0.00	87,504.67	0.00	100.00
	1,905,300.00	(1,807,543.49)	97,756.51	0.00	97,756.51	0.00	100.00

C1 CITY / URA / SEA / PORT AUTHORITY ACTIVE PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
Park	2,300,000.00	(1,160,000.00)	1,140,000.00	0.00	1,048,703.10	91,296.90	91.99
Park - Consultant Design	180,000.00	(60,000.00)	120,000.00	0.00	116,124.89	3,875.11	96.77
Park - Construction	1,850,000.00	(900,000.00)	950,000.00	0.00	925,683.50	24,316.50	97.44
Park - CM	270,000.00	(200,000.00)	70,000.00	0.00	6,894.71	63,105.29	9.85
Housing	0.00	400,000.00	400,000.00	0.00	196,492.14	203,507.86	49.12
Housing	0.00	400,000.00	400,000.00	0.00	196,492.14	203,507.86	49.12
REDEVELOPMENT	0.00	10,000.00	10,000.00	0.00	7,085.94	2,914.06	70.86
INGS	0.00	839,567.54	839,567.54	0.00	839,567.54	0.00	100.00
AL DEVELOPMENT	940,000.00	(203,254.47)	736,745.53	0.00	103,750.74	632,994.79	14.08
	3,240,000.00	(113,686.93)	3,126,313.07	0.00	2,195,599.46	930,713.61	70.23

C1 CITY / URA / SEA / PORT AUTHORITY COMPLETED PROJECTS — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
uehanna Street	0.00	200,000.00	200,000.00	0.00	200,000.00	0.00	100.00
uehanna Street	0.00	200,000.00	200,000.00	0.00	200,000.00	0.00	100.00
	0.00	200,000.00	200,000.00	0.00	200,000.00	0.00	100.00

D1 ENGINEERING ACTIVE PROJECTS — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
	50,000.00	205,000.00	255,000.00	0.00	241,793.13	13,206.87	94.82
05	50,000.00	205,000.00	255,000.00	0.00	241,793.13	13,206.87	94.82
ervices	311,667.26	0.00	311,667.26	0.00	237,216.86	74,450.40	76.11
ervices	311,667.26	0.00	311,667.26	0.00	237,216.86	74,450.40	76.11
Improvements	0.00	450,000.00	450,000.00	0.00	442,903.00	7,097.00	98.42
Improvements	0.00	450,000.00	450,000.00	0.00	442,903.00	7,097.00	98.42
Casino Public W&S Imp	0.00	0.00	0.00	0.00	101,307.24	(101,307.24)	●/O
Casino Public W&S Imp	0.00	0.00	0.00	0.00	101,307.24	(101,307.24)	●/O
	361,667.26	655,000.00	1,016,667.26	0.00	1,023,220.23	(6,552.97)	100.64

D1 ENGINEERING ACTIVE PROJECTS — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
vate Development	26,905.25	622,611.79	649,517.04	0.00	649,517.04	0.00	100.00
ate Development - 2005	26,905.25	622,611.79	649,517.04	0.00	649,517.04	0.00	100.00
Engineering Services	2,000,000.00	(2,000,000.00)	0.00	0.00	0.00	0.00	●/O
ing Services	2,000,000.00	(2,000,000.00)	0.00	0.00	0.00	0.00	●/O
oject Engineering Services	640,000.00	1,912,012.64	2,552,012.64	20,361.08	2,531,651.56	0.00	100.00
ffing - ATSCE	420,000.00	843,369.11	1,263,369.11	0.00	1,263,369.11	0.00	100.00
ffing - Kimball	90,000.00	535,392.17	625,392.17	0.00	625,392.17	0.00	100.00
ffing - URS	130,000.00	533,251.36	663,251.36	20,361.08	642,890.28	0.00	100.00
iews	125,000.00	209,313.53	334,313.53	0.00	334,313.53	0.00	100.00
er Reviews	125,000.00	209,313.53	334,313.53	0.00	334,313.53	0.00	100.00
Design Services - ATSCE	133,000.00	111,050.24	244,050.24	0.00	244,050.24	0.00	100.00
Design Services	48,000.00	29,317.67	77,317.67	0.00	77,317.67	0.00	100.00
AP Testing & Project Setup	30,000.00	311.93	30,311.93	0.00	30,311.93	0.00	100.00
	30,000.00	21,349.62	51,349.62	0.00	51,349.62	0.00	100.00
f Monthly Reports	25,000.00	41,871.04	66,871.04	0.00	66,871.04	0.00	100.00
Procedure Manual	0.00	18,199.98	18,199.98	0.00	18,199.98	0.00	100.00
ing Dept Reimbursement	943,605.00	0.00	943,605.00	0.00	943,605.00	0.00	100.00
ing Dept Reimbursement	943,605.00	0.00	943,605.00	0.00	943,605.00	0.00	100.00
Services - ATSCE	100,000.00	(7,716.83)	92,283.17	0.00	92,283.17	0.00	100.00
	25,000.00	(987.55)	24,012.45	0.00	24,012.45	0.00	100.00
on	25,000.00	10,506.11	35,506.11	0.00	35,506.11	0.00	100.00
Design	25,000.00	233.41	25,233.41	0.00	25,233.41	0.00	100.00
ement	25,000.00	(17,468.80)	7,531.20	0.00	7,531.20	0.00	100.00
pdate & Calibration	180,000.00	33,450.25	213,450.25	0.00	213,450.25	0.00	100.00
	180,000.00	33,450.25	213,450.25	0.00	213,450.25	0.00	100.00
ojects - ATSCE	60,000.00	240,875.02	300,875.02	0.00	301,732.38	(857.36)	100.28
e Works	10,000.00	(695.78)	9,304.22	0.00	9,304.22	0.00	100.00
	20,000.00	100,750.36	120,750.36	0.00	120,750.36	0.00	100.00
verfront Housing	10,000.00	38,398.31	48,398.31	0.00	48,398.31	0.00	100.00
ings	10,000.00	70,366.72	80,366.72	0.00	81,224.08	(857.36)	101.07
rrace	10,000.00	(5,884.39)	4,115.61	0.00	4,115.61	0.00	100.00
	0.00	36,446.74	36,446.74	0.00	36,446.74	0.00	100.00
Bridge Utility Relocation	0.00	1,493.06	1,493.06	0.00	1,493.06	0.00	100.00
ept Reimbursement	0.00	2,588,644.00	2,588,644.00	0.00	2,588,644.00	0.00	100.00
ing Dept Reimbursement	0.00	1,158,458.00	1,158,458.00	0.00	1,158,458.00	0.00	100.00
ing Dept Reimbursement	0.00	1,430,186.00	1,430,186.00	0.00	1,430,186.00	0.00	100.00
tion Architectural Services	0.00	131,417.85	131,417.85	0.00	131,417.85	0.00	100.00
tion Architectural Services	0.00	131,417.85	131,417.85	0.00	131,417.85	0.00	100.00
Implementation	0.00	27,073.93	27,073.93	0.00	27,073.93	0.00	100.00
Implementation	0.00	27,073.93	27,073.93	0.00	27,073.93	0.00	100.00
	4,208,510.25	3,868,732.42	8,077,242.67	20,361.08	8,057,738.95	(857.36)	100.01

E1 TOOLS AND EQUIPMENT ACTIVE PROJECTS — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
l Meters	0.00	681,281.88	681,281.88	0.00	501,676.16	179,605.72	73.64
l Meters	0.00	4,072.88	4,072.88	0.00	3,674.14	398.74	90.21
l Meters	0.00	677,209.00	677,209.00	0.00	498,002.02	179,206.98	73.54
	0.00	0.00	0.00	0.00	5,577.63	(5,577.63)	●/O
	0.00	0.00	0.00	0.00	5,577.63	(5,577.63)	●/O
	0.00	681,281.88	681,281.88	0.00	507,253.79	174,028.09	74.46

E1 TOOLS AND EQUIPMENT COMPLETED PROJECTS — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
epaving Sewer Risers & Lids	96,610.75	0.00	96,610.75	0.00	96,610.75	0.00	100.00
epaving Sewer Risers & Lids	96,610.75	0.00	96,610.75	0.00	96,610.75	0.00	100.00
r Meters	0.00	91,712.50	91,712.50	0.00	91,712.50	0.00	100.00
r Meters	0.00	91,712.50	91,712.50	0.00	91,712.50	0.00	100.00
epaving Sewer Riser & Lids	0.00	139,586.00	139,586.00	0.00	139,586.00	0.00	100.00
epaving Sewer Riser & Lids	0.00	139,586.00	139,586.00	0.00	139,586.00	0.00	100.00
	96,610.75	231,298.50	327,909.25	0.00	327,909.25	0.00	100.00

F1 IT / GIS COMPLETED PROJECTS — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
- 2005	0.00	3,300.00	3,300.00	0.00	3,300.00	0.00	100.00
Support	70,000.00	(70,000.00)	0.00	0.00	0.00	0.00	●/O
Support	70,000.00	(70,000.00)	0.00	0.00	0.00	0.00	●/O
t Conversion	80,000.00	(4,634.12)	75,365.88	0.00	75,365.88	0.00	100.00
t Conversion	80,000.00	(4,634.12)	75,365.88	0.00	75,365.88	0.00	100.00
GPS Survey	0.00	139,631.00	139,631.00	0.00	139,631.00	0.00	100.00
GPS Survey	0.00	139,631.00	139,631.00	0.00	139,631.00	0.00	100.00
	0.00	3,300.00	3,300.00	0.00	3,300.00	0.00	100.00
	0.00	3,300.00	3,300.00	0.00	3,300.00	0.00	100.00
	150,000.00	71,596.88	221,596.88	0.00	221,596.88	0.00	100.00

EXHIBIT F
2007 DEPOSITORY AGREEMENT FUND STATUS REPORT AS OF DECEMBER 31, 2009

THE PITTSBURGH WATER AND SEWER AUTHORITY
CAPITAL IMPROVEMENT PROGRAM
2007 DEPOSITORY AGREEMENT FUND
STATUS AS OF DECEMBER 31, 2009

AMOUNT BUDGETED	COMPLETED CONTRACTS	ACTUAL COST ACTIVE CONTRACTS	TOTAL COMPLETE AND ACTIVE	RETAINAGE HELD	REIMBURSE-MENTS	AMOUNT REQUISITIONED
$ 1,751,041.97	$ 3,909,958.43	$ -	$ 3,909,958.43	$ -	$ -	$ 3,909,958.43
25,420.70	25,420.70	-	25,420.70	-	-	25,420.70
2,073,150.27	2,073,140.28	-	2,073,140.28	-	-	2,073,140.28
$ 3,849,612.94	**$ 6,008,519.41**	**$ -**	**$ 6,008,519.41**	**$ -**	**$ -**	**$ 6,008,519.41**
$ -	$ -		$ -	$ -	$ -	$ -
1,055,175.55	1,055,175.61	-	1,055,175.61	-	-	1,055,175.61
-	-	-	-	-	-	-
-	-	-	-	-	-	-
$ 1,055,175.55	**$ 1,055,175.61**	**$ -**	**$ 1,055,175.61**	**$ -**	**$ -**	**$ 1,055,175.61**
$ -	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
$ 54,794.52	**$ -**	**$ -**	**$ -**	**$ -**		**$ -**
$ 440,186.31	**$ 440,186.31**	**$ -**	**$ 440,186.31**	**$ -**		**$ 440,186.31**
$ -	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
$ 919,244.84						
725,954.79						
440,782.33						
18,130.05						
$ 2,104,112.01						
$ 7,503,881.33	**$ 7,503,881.33**	**$ -**	**$ 7,503,881.33**	**$ -**	**$ -**	**$ 7,503,881.33**

A1 WATER - DISTRIBUTION SYSTEM COMPLETED PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
Fire Hydrant Contract	0.00	691,074.67	691,074.67	0.00	691,074.88	(0.21)	100.00
Fire Hydrant - Design	0.00	10,344.30	10,344.30	0.00	10,344.30	0.00	100.00
Fire Hydrant - CM	0.00	85,775.69	85,775.69	0.00	85,775.69	0.00	100.00
nt-Dechlorination Equipment	0.00	8,264.40	8,264.40	0.00	8,264.40	0.00	100.00
Fire Hydrant - CONST	0.00	586,690.28	586,690.28	0.00	586,690.49	(0.21)	100.00
erline Relay	0.00	304,962.48	304,962.48	0.00	304,962.48	0.00	100.00
erline Relay - CM	0.00	48,696.23	48,696.23	0.00	48,696.23	0.00	100.00
erline Relay - Construction	0.00	256,266.25	256,266.25	0.00	256,266.25	0.00	100.00
lvd Waterline Replacement	0.00	755,004.82	755,004.82	0.00	755,004.82	0.00	100.00
lvd Waterline Replacement	0.00	755,004.82	755,004.82	0.00	755,004.82	0.00	100.00
vale Water System	0.00	0.00	0.00	0.00	1,550,000.00	(1,550,000.00)	●/O
ter AR Due 2007 Bond	0.00	0.00	0.00	0.00	608,916.25	(608,916.25)	●/O
	0.00	1,751,041.97	1,751,041.97	0.00	3,909,958.43	(2,158,916.46)	223.29

A2 WATER - PUMPING AND STORAGE COMPLETED PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
FP - CM	0.00	25,420.70	25,420.70	0.00	25,420.70	0.00	100.00
	0.00	25,420.70	25,420.70	0.00	25,420.70	0.00	100.00

A3 WATER - TREATMENT PLANT COMPLETED PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
No. 4 Collector Equipment	0.00	56,515.01	56,515.01	0.00	56,515.01	0.00	100.00
No. 4 Collector Equipment	0.00	937,431.20	937,431.20	0.00	937,431.20	0.00	100.00
Screen - Engineering	0.00	48,888.97	48,888.97	0.00	48,888.97	0.00	100.00
Screen - CM	0.00	110,726.90	110,726.90	0.00	110,726.90	0.00	100.00
Screen - General	0.00	818,918.19	818,918.19	0.00	818,908.20	9.99	100.00
Screen - Electrical	0.00	100,670.00	100,670.00	0.00	100,670.00	0.00	100.00
	0.00	2,073,150.27	2,073,150.27	0.00	2,073,140.28	9.99	100.00

B2 SEWER - COMBINED SEWER COMPLETED PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
r Line Point Repair	0.00	957,291.52	957,291.52	0.00	957,291.58	(0.06)	100.00
Line Point Repair	0.00	203,429.09	203,429.09	0.00	203,429.09	0.00	100.00
Line Point Repair - CONST	0.00	753,862.43	753,862.43	0.00	753,862.49	(0.06)	100.00
t Sewer Lining	0.00	43,420.26	43,420.26	0.00	43,420.26	0.00	100.00
t Sewer Lining	0.00	1,768.59	1,768.59	0.00	1,768.59	0.00	100.00
t Sewer Lining - CM	0.00	3,760.71	3,760.71	0.00	3,760.71	0.00	100.00
t Sewer Lining - CONST	0.00	37,890.96	37,890.96	0.00	37,890.96	0.00	100.00
ive	0.00	54,463.77	54,463.77	0.00	54,463.77	0.00	100.00
ive - CM	0.00	3,878.59	3,878.59	0.00	3,878.59	0.00	100.00
ning - CM	0.00	2,426.79	2,426.79	0.00	2,426.79	0.00	100.00
ive - Construction	0.00	26,250.16	26,250.16	0.00	26,250.16	0.00	100.00
ning - Construction	0.00	21,908.23	21,908.23	0.00	21,908.23	0.00	100.00
	0.00	1,055,175.55	1,055,175.55	0.00	1,055,175.61	(0.06)	100.00

EXHIBIT G
2008 CONSTRUCTION FUND STATUS REPORT
AS OF DECEMBER 31, 2009

E1 TOOLS AND EQUIPMENT COMPLETED PROJECTS — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
epaving Sewer Risers & Lids	0.00	440,186.31	440,186.31	0.00	440,186.31	0.00	100.00
ring Sewer Risers & Lids-CON	0.00	440,186.31	440,186.31	0.00	440,186.31	0.00	100.00
	0.00	440,186.31	440,186.31	0.00	440,186.31	0.00	100.00

THE PITTSBURGH WATER AND SEWER AUTHORITY
CAPITAL IMPROVEMENT PROGRAM
2008 CONSTRUCTION FUND
STATUS AS OF DECEMBER 31, 2009

AMOUNT BUDGETED	COMPLETED CONTRACTS	ACTUAL COST ACTIVE CONTRACTS	TOTAL COMPLETE AND ACTIVE	RETAINAGE HELD	REIMBURSE-MENTS	SAP POSTING ERROR	AMOUNT REQUISITIONED
$ 10,766,838.50	$ 3,147.56	$ 1,700,851.85	$ 1,703,999.41	$ -	$ -	$ -	$ 1,703,999.41
9,455,754.59	141,555.76	2,870,321.41	3,011,877.17	114,310.00	-	(248,889.50)	3,146,456.67
2,175,000.00	-	7,357.91	7,357.91	-	-	-	7,357.91
$ 22,397,593.09	**$ 144,703.32**	**$ 4,578,531.17**	**$ 4,723,234.49**	**$ 114,310.00**	**$ -**	**$ (248,889.50)**	**$ 4,857,813.99**
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6,228,649.84	16,486.24	879,389.18	895,875.42	42,518.65	-	-	853,356.77
3,360,000.00	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
$ 9,588,649.84	**$ 16,486.24**	**$ 879,389.18**	**$ 895,875.42**	**$ 42,518.65**	**$ -**		**$ 853,356.77**
$ 7,800,000.00	**$ -**	**$ 2,411,597.47**	**$ 2,411,597.47**	**$ -**	**$ -**	**$ -**	**$ 2,411,597.47**
$ 9,313,854.00	**$ 1,559,944.85**	**$ 3,967,829.69**	**$ 5,527,774.54**	**$ -**	**$ (12,017.00)**	**$ 948.51**	**$ 5,514,809.03**
$ 3,450,000.00	**$ 91,973.00**	**$ 431,165.50**	**$ 523,138.50**	**$ -**	**$ -**	**$ 24,465.00**	**$ 547,603.50**
$ -	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**		**$ -**
$ 45,523,528.65							
$ 98,073,625.58	**$ 1,813,107.41**	**$ 12,268,513.01**	**$ 14,081,620.42**	**$ 156,828.65**	**$ (12,017.00)**	**$ (223,475.99)**	**$ 14,185,180.76**

A1 WATER - DISTRIBUTION SYSTEM ACTIVE PROJECTS — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbranc	Actuals	Balance Remaining	% Util
ER READING (AMR) PROGRAM	400,000.00	0.00	400,000.00	0.00	460,545.00	(60,545.00)	115.14
Hydrant Replacement	1,500,000.00	(1,500,000.00)	0.00	0.00	0.00	0.00	●/O
Hydrant Replacement	1,500,000.00	(1,500,000.00)	0.00	0.00	0.00	0.00	●/o
eplacement Program	5,000,000.00	0.00	5,000,000.00	0.00	0.00	5,000,000.00	0.00
eplacement Program	5,000,000.00	0.00	5,000,000.00	0.00	0.00	5,000,000.00	0.00
Hydrants	200,000.00	0.00	200,000.00	0.00	0.00	200,000.00	0.00
Hydrants	200,000.00	0.00	200,000.00	0.00	0.00	200,000.00	0.00
ays	1,000,000.00	2,663,690.94	3,663,690.94	0.00	430,990.06	3,232,700.88	11.76
ays	1,000,000.00	37,740.94	1,037,740.94	0.00	0.00	1,037,740.94	0.00
-inch WL Relay	0.00	5,000.00	5,000.00	0.00	4,699.28	300.72	93.99
L Lewis to Woodruff	0.00	8,000.00	8,000.00	0.00	1,201.03	6,798.97	15.01
lacement Contract - Eng	0.00	2,300.00	2,300.00	0.00	1,579.03	720.97	68.65
-inch WL Relay - CM	0.00	30,000.00	30,000.00	0.00	23,751.82	6,248.18	79.17
L Lewis to Woodruff - CM	0.00	35,000.00	35,000.00	0.00	0.00	35,000.00	0.00
lacement Contract - CM	0.00	150,000.00	150,000.00	0.00	0.00	150,000.00	0.00
Waterline - CM	0.00	13,300.00	13,300.00	0.00	21,758.55	(8,458.55)	163.60
-inch WL Relay - Const	0.00	285,000.00	285,000.00	0.00	284,736.34	263.66	99.91
L Lewis to Woodruff - Const	0.00	350,000.00	350,000.00	0.00	0.00	350,000.00	0.00
lacement Contract - Const	0.00	1,500,000.00	1,500,000.00	0.00	0.00	1,500,000.00	0.00
Waterline - Construction	0.00	247,350.00	247,350.00	0.00	32,168.95	215,181.05	13.01
ay Material Purchase	0.00	0.00	0.00	0.00	61,095.06	(61,095.06)	●/o
ions and Mapping	1,200,000.00	(1,200,000.00)	0.00	0.00	0.00	0.00	●/O
ions and Mapping	1,200,000.00	(1,200,000.00)	0.00	0.00	0.00	0.00	●/o
ruction - Waterline Reloc	0.00	1,500,000.00	1,500,000.00	0.00	0.00	1,500,000.00	0.00
ruction Waterline	0.00	1,500,000.00	1,500,000.00	0.00	0.00	1,500,000.00	0.00
ter AR Due 2008 Bond	0.00	0.00	0.00	0.00	809,316.79	(809,316.79)	●/O
	9,300,000.00	1,463,690.94	10,763,690.94	0.00	1,700,851.85	9,062,839.09	15.80

A1 WATER - DISTRIBUTION SYSTEM COMPLETED PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
mission Main Improvements	0.00	3,147.56	3,147.56	0.00	3,147.56	0.00	100.00
ion Main	0.00	0.00	0.00	0.00	0.00	0.00	●/O
ion Main - Eng	0.00	3,147.56	3,147.56	0.00	3,147.56	0.00	100.00
	0.00	3,147.56	3,147.56	0.00	3,147.56	0.00	100.00

A2 WATER - PUMPING AND STORAGE ACTIVE PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
grade - Engineering	0.00	28,873.89	28,873.89	0.00	29,653.89	(780.00)	102.70
grade - CM	135,000.00	(135,000.00)	0.00	0.00	0.00	0.00	●/O
grade - Construction	1,365,000.00	(1365,000.00)	0.00	0.00	0.00	0.00	●/O
s Rehabilitation	0.00	1,470,000.00	1,470,000.00	796,780.00	627,019.01	46,200.99	96.86
s Rehabilitation - CM	0.00	270,000.00	270,000.00	0.00	98,169.01	171,830.99	36.36
s Rehabilitation	0.00	1,200,000.00	1,200,000.00	796,780.00	528,850.00	(125,630.00)	110.47
#6 & 7 - CM	0.00	74,000.00	74,000.00	0.00	4,904.61	69,095.39	6.63
#6 & 7 - CM	0.00	74,000.00	74,000.00	0.00	4,904.61	69,095.39	6.63
ncoln Pump Station	900,000.00	(74,000.00)	826,000.00	729,500.00	0.00	96,500.00	88.32
ncoln Pump Station	900,000.00	(824,000.00)	76,000.00	0.00	0.00	76,000.00	0.00
tation 6 & 7 - CM	0.00	0.00	0.00	0.00	0.00	0.00	●/O
tation 6 & 7 - Const	0.00	750,000.00	750,000.00	729,500.00	0.00	20,500.00	97.27
Modeling Support	150,000.00	0.00	150,000.00	0.00	11,569.92	138,430.08	7.71
Modeling Support	150,000.00	0.00	150,000.00	0.00	11,569.92	138,430.08	7.71
inting and Improvements	3,000,000.00	(2970,000.00)	30,000.00	0.00	0.00	30,000.00	0.00
inting and Improvements	3,000,000.00	(2970,000.00)	30,000.00	0.00	0.00	30,000.00	0.00
2 Cover	3,000,000.00	0.00	3,000,000.00	0.00	489.73	2,999,510.27	0.02
2 Cover - Engineering	200,000.00	0.00	200,000.00	0.00	0.00	200,000.00	0.00
2 Cover - CM	200,000.00	0.00	200,000.00	0.00	489.73	199,510.27	0.24
2 Cover - Construction	2,600,000.00	0.00	2,600,000.00	0.00	0.00	2,600,000.00	0.00
tion Main - CM	62,500.00	0.00	62,500.00	0.00	30,763.13	31,736.87	49.22
tion Main - CM	62,500.00	0.00	62,500.00	0.00	30,763.13	31,736.87	49.22
tion Main - Construction	625,000.00	(377,175.06)	247,824.94	0.00	247,824.94	0.00	100.00
tion Main - Construction	625,000.00	(377,175.06)	247,824.94	0.00	247,824.94	0.00	100.00
r Rehabilitiation	0.00	825,000.00	825,000.00	5,389.37	398,968.95	420,641.68	49.01
r Rehabilitation	0.00	75,000.00	75,000.00	5,389.37	7,375.65	62,234.98	17.02
r Rehabilitation	0.00	750,000.00	750,000.00	0.00	391,593.30	358,406.70	52.21
FP - CM	0.00	100,000.00	100,000.00	0.00	4,927.23	95,072.77	4.93
1 MFP - FILTER ELEMENTS	0.00	2,500,000.00	2,500,000.00	409,500.00	1,514,200.00	576,300.00	76.95
	9,237,500.00	76,698.83	9,314,198.83	1,941,169.37	2,870,321.41	4,502,708.05	51.66

A2 WATER - PUMPING AND STORAGE COMPLETED PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
tion Main - Engineering	62,500.00	11,145.16	73,645.16	0.00	73,645.16	0.00	100.00
tion Main - Engineering	62,500.00	11,145.16	73,645.16	0.00	73,645.16	0.00	100.00
rgency Pumping Plan	0.00	18,723.00	18,723.00	0.00	18,723.00	0.00	100.00
rgency Pumping Plan	0.00	18,723.00	18,723.00	0.00	18,723.00	0.00	100.00
rical Feed	0.00	49,187.60	49,187.60	0.00	49,187.60	0.00	100.00
rical Feed	0.00	49,187.60	49,187.60	0.00	49,187.60	0.00	100.00
	62,500.00	79,055.76	141,555.76	0.00	141,555.76	0.00	100.00

A3 WATER - TREATMENT PLANT ACTIVE PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbranc	Actuals	Balance Remaining	% Util
sh / Clarification ENG	127,000.00	(127,000.00)	0.00	0.00	0.00	0.00	●/O
sh / Clarification CM	1,095,000.00	(1,095,000.00)	0.00	0.00	0.00	0.00	●/O
sh Equalization - ENG	160,000.00	(160,000.00)	0.00	0.00	0.00	0.00	●/O
sh Equalization - CM	500,000.00	(500,000.00)	0.00	0.00	0.00	0.00	●/O
sh Equalization - CONST	18,615,000.00	(18,615,000.00)	0.00	0.00	0.00	0.00	●/O
sh / Clarification ELECTR	3,285,000.00	(3,285,000.00)	0.00	0.00	0.00	0.00	●/O
	190,000.00	0.00	190,000.00	0.00	0.00	190,000.00	0.00
:	1,810,000.00	0.00	1,810,000.00	0.00	0.00	1,810,000.00	0.00
Station Standby Power	7,765,000.00	(7,765,000.00)	0.00	0.00	0.00	0.00	●/O
dby Power - Engineering	115,000.00	(115,000.00)	0.00	0.00	0.00	0.00	●/O
dby Power - CM	250,000.00	(250,000.00)	0.00	0.00	0.00	0.00	●/O
dby Power - Construction	7,400,000.00	(7,400,000.00)	0.00	0.00	0.00	0.00	●/O
1 Reservoir MFP Expansion	1,100,000.00	(1,100,000.00)	0.00	0.00	0.00	0.00	●/O
1 MFP Expansion - CM	100,000.00	(100,000.00)	0.00	0.00	0.00	0.00	●/O
1 MFP Expansion - Const.	1,000,000.00	(1,000,000.00)	0.00	0.00	0.00	0.00	●/O
Containment Walls	0.00	175,000.00	175,000.00	0.00	7,357.91	167,642.09	4.20
Containment Walls	0.00	10,000.00	10,000.00	0.00	7,357.91	2,642.09	73.58
Containment Walls - CM	0.00	15,000.00	15,000.00	0.00	0.00	15,000.00	0.00
Containment Walls - Const	0.00	150,000.00	150,000.00	0.00	0.00	150,000.00	0.00
	34,647,000.00	(32,472,000.00)	2,175,000.00	0.00	7,357.91	2,167,642.09	0.34

B2 SEWER - COMBINED SEWER ACTIVE PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
evising and Cleaning	2,250,000.00	(2,068,470.07)	181,529.93	0.00	0.00	181,529.93	0.00
evising and Cleaning	2,250,000.00	(2,068,470.07)	181,529.93	0.00	0.00	181,529.93	0.00
evising & Cleaning - CM	0.00	90,000.00	90,000.00	0.00	118,539.81	(28,539.81)	131.71
evising & Cleaning - CM	0.00	90,000.00	90,000.00	0.00	118,539.81	(28,539.81)	131.71
evising & Cleaning - Const	0.00	225,000.00	225,000.00	84,252.68	139,109.39	1,637.93	99.27
evising & Cleaning - Const	0.00	225,000.00	225,000.00	84,252.68	139,109.39	1,637.93	99.27
agement	750,000.00	0.00	750,000.00	0.00	0.00	750,000.00	0.00
agement	750,000.00	0.00	750,000.00	0.00	0.00	750,000.00	0.00
Line Point Repair	2,250,000.00	(2,247,366.33)	2,633.67	0.00	0.00	2,633.67	0.00
Line Point Repair	2,250,000.00	(2,247,366.33)	2,633.67	0.00	0.00	2,633.67	0.00
Line Point Repair - CM	0.00	200,000.00	200,000.00	0.00	31,251.31	168,748.69	15.63
Line Point Repair - CM	0.00	200,000.00	200,000.00	0.00	31,251.31	168,748.69	15.63
Line Point Repair - Const	0.00	1,295,000.00	1,295,000.00	1,097,434.70	190,922.80	6,642.50	99.49
Line Point Repair - Const	0.00	1,295,000.00	1,295,000.00	1,097,434.70	190,922.80	6,642.50	99.49
itation - Gunite	750,000.00	(741,000.00)	9,000.00	0.00	0.00	9,000.00	0.00
itation - Gunite	750,000.00	(741,000.00)	9,000.00	0.00	0.00	9,000.00	0.00
ewer Repair - CM	0.00	44,000.00	44,000.00	0.00	40,001.85	3,998.15	90.91
ewer Repair - CM	0.00	44,000.00	44,000.00	0.00	40,001.85	3,998.15	90.91
ewer Repair - Construction	0.00	220,000.00	220,000.00	974.55	216,918.00	2,107.45	99.04
ewer Repair - Construction	0.00	220,000.00	220,000.00	974.55	216,918.00	2,107.45	99.04
itation - Lining	650,000.00	(650,000.00)	0.00	0.00	0.00	0.00	●/O
itation - Lining	650,000.00	(650,000.00)	0.00	0.00	0.00	0.00	●/O
ments - Planned	1,050,000.00	924,000.00	1,974,000.00	998,134.61	142,497.98	833,367.41	57.78
ments - Planned	1,050,000.00	(309,300.00)	740,700.00	0.00	0.00	740,700.00	0.00
er Const - Eng	0.00	10,000.00	10,000.00	0.00	7,304.97	2,695.03	73.05
ment Contract - CM	0.00	105,000.00	105,000.00	0.00	13,867.62	91,132.38	13.21
ment Contract - CONST	0.00	1,118,300.00	1,118,300.00	998,134.61	121,325.39	(1,160.00)	100.10
r Compliance	400,000.00	0.00	400,000.00	0.00	0.00	400,000.00	0.00
r Compliance	400,000.00	0.00	400,000.00	0.00	0.00	400,000.00	0.00
nitoring	45,000.00	0.00	45,000.00	0.00	0.00	45,000.00	0.00
nitoring	45,000.00	0.00	45,000.00	0.00	0.00	45,000.00	0.00
ewer Extension	200,000.00	76,000.00	276,000.00	0.00	148.04	275,851.96	0.05
ewer Extension Easement	10,000.00	0.00	10,000.00	0.00	0.00	10,000.00	0.00
ewer Extension Engineering	12,000.00	0.00	12,000.00	0.00	0.00	12,000.00	0.00
ewer Extension - CM	15,000.00	9,000.00	24,000.00	0.00	148.04	23,851.96	0.62
ewer Extension - CONST	163,000.00	67,000.00	230,000.00	0.00	0.00	230,000.00	0.00
ruction - Sewer Reloc	0.00	500,000.00	500,000.00	0.00	0.00	500,000.00	0.00
ruction Sewer Reloc	0.00	500,000.00	500,000.00	0.00	0.00	500,000.00	0.00
	8,345,000.00	(2,132,836.40)	6,212,163.60	2,180,796.54	879,389.18	3,151,977.88	49.26

B2 SEWER - COMBINED SEWER COMPLETED PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
evising & Cleaning - Eng	0.00	3,470.07	3,470.07	0.00	3,470.07	0.00	100.00
evising & Cleaning - Eng	0.00	3,470.07	3,470.07	0.00	3,470.07	0.00	100.00
Line Point Repair - Eng	0.00	2,366.33	2,366.33	0.00	2,366.33	0.00	100.00
Line Point Repair - Eng	0.00	2,366.33	2,366.33	0.00	2,366.33	0.00	100.00
ewer Repair - Engineering	0.00	10,649.84	10,649.84	0.00	10,649.84	0.00	100.00
ewer Repair - Engineering	0.00	10,649.84	10,649.84	0.00	10,649.84	0.00	100.00
	0.00	16,486.24	16,486.24	0.00	16,486.24	0.00	100.00

B4 SEWER - PUMP STATION ACTIVE PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
tation Improvements	3,360,000.00	0.00	3,360,000.00	0.00	0.00	3,360,000.00	0.00
Rd Sewer Separation - CONST	90,000.00	(90,000.00)	0.00	0.00	0.00	0.00	●/O
Rd Sewer Separation - CM	10,000.00	(10,000.00)	0.00	0.00	0.00	0.00	●/O
	3,460,000.00	(100,000.00)	3,360,000.00	0.00	0.00	3,360,000.00	0.00

C1 CITY / URA / SEA / PORT AUTHORITY ACTIVE PROJECTS

STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
using	200,000.00	(200,000.00)	0.00	0.00	0.00	0.00	●/O
using	200,000.00	(200,000.00)	0.00	0.00	0.00	0.00	●/O
lopment Projects	875,000.00	(875,000.00)	0.00	0.00	0.00	0.00	●/O
lopment Projects	875,000.00	(875,000.00)	0.00	0.00	0.00	0.00	●/O
ing	4,000,000.00	(2,000,000.00)	2,000,000.00	0.00	572,224.67	1,427,775.33	28.61
ing	4,000,000.00	(3,300,000.00)	700,000.00	0.00	0.00	700,000.00	0.00
ing - Administrative	0.00	80,000.00	80,000.00	0.00	25,408.49	54,591.51	31.76
ing - Design	0.00	88,203.00	88,203.00	0.00	88,203.00	0.00	100.00
ing - Construction	0.00	1,131,797.00	1,131,797.00	0.00	458,613.18	673,183.82	40.52
chnology Center	1,350,000.00	(1,350,000.00)	0.00	0.00	0.00	0.00	●/O
chnology Center	1,350,000.00	(1,350,000.00)	0.00	0.00	0.00	0.00	●/O
REDEVELOPMENT	4,450,000.00	(2,000,000.00)	2,450,000.00	0.00	107,932.55	2,342,067.45	4.41
RRACE	3,750,000.00	(2,000,000.00)	1,750,000.00	0.00	0.00	1,750,000.00	0.00
AL DEVELOPMENT	1,600,000.00	0.00	1,600,000.00	0.00	1,731,440.25	(131,440.25)	108.22
	16,225,000.00	(8,425,000.00)	7,800,000.00	0.00	2,411,597.47	5,388,402.53	30.92

D1 ENGINEERING ACTIVE PROJECTS — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbranc	Actuals	Balance Remaining	% Util
ng Services - 2008 CF	1,250,000.00	(1,010,000.00)	240,000.00	0.00	0.00	240,000.00	0.00
ng Services - 2008 CF	1,250,000.00	(1,010,000.00)	240,000.00	0.00	0.00	240,000.00	0.00
	175,000.00	(100,000.00)	75,000.00	0.00	0.00	75,000.00	0.00
	175,000.00	(100,000.00)	75,000.00	0.00	0.00	75,000.00	0.00
Development	435,000.00	23,459.00	458,459.00	0.00	208,915.79	249,543.21	45.57
Development	435,000.00	(236,739.88)	198,260.12	0.00	0.00	198,260.12	0.00
ocation W&S Facilities	0.00	17,500.00	17,500.00	0.00	15,448.87	2,051.13	88.28
rs Memorial	0.00	2,489.88	2,489.88	0.00	2,489.88	0.00	100.00
reet Scape	0.00	17,500.00	17,500.00	0.00	16,902.22	597.78	96.58
ine 3 PNC/Market Sq Pl	0.00	10,267.00	10,267.00	0.00	7,481.11	2,785.89	72.87
ctor	0.00	200,000.00	200,000.00	0.00	152,449.76	47,550.24	76.22
let Reconstruction	0.00	1,200.00	1,200.00	0.00	1,661.61	(461.61)	138.47
ant & CB Relocation	0.00	0.00	0.00	0.00	618.43	(618.43)	●/O
atf Fire Hydrant Reloc.	0.00	982.00	982.00	0.00	0.00	982.00	0.00
es - WL & MH Construction	0.00	4,250.00	4,250.00	0.00	5,435.12	(1,185.12)	127.89
ports Complex	0.00	6,010.00	6,010.00	0.00	0.00	6,010.00	0.00
W&S Reconstruction	0.00	0.00	0.00	0.00	6,428.79	(6,428.79)	●/O
taffing	1,800,000.00	0.00	1,800,000.00	0.00	1,383,711.78	416,288.22	76.87
taffing - Chester Eng	800,000.00	0.00	800,000.00	0.00	646,187.52	153,812.48	80.77
taffing - Kimball	464,000.00	0.00	464,000.00	0.00	418,574.22	45,425.78	90.21
taffing - URS	536,000.00	0.00	536,000.00	0.00	318,950.04	217,049.96	59.51
ews - 2009	0.00	196,450.15	196,450.15	0.00	97,796.60	98,653.55	49.78
ews - 2009	0.00	196,450.15	196,450.15	0.00	97,796.60	98,653.55	49.78
ineer Additonal Services	350,000.00	0.00	350,000.00	0.00	84,123.43	265,876.57	24.04
ineer Additonal Services	125,000.00	(15,000.00)	110,000.00	0.00	0.00	110,000.00	0.00
eous Design	70,000.00	0.00	70,000.00	0.00	21,134.06	48,865.94	30.19
and Testing	40,000.00	0.00	40,000.00	0.00	5,356.29	34,643.71	13.39
ttendance	15,000.00	15,000.00	30,000.00	0.00	22,854.89	7,145.11	76.18
on of Monthly Reports	100,000.00	0.00	100,000.00	0.00	34,778.19	65,221.81	34.78
anager Additional Services	210,000.00	0.00	210,000.00	0.00	32,512.68	177,487.32	15.48
anager Additional Services	85,000.00	0.00	85,000.00	0.00	0.00	85,000.00	0.00
	25,000.00	0.00	25,000.00	0.00	8,200.11	16,799.89	32.80
e Requisition Preparation	50,000.00	0.00	50,000.00	0.00	21,986.16	28,013.84	43.97
eous Design	50,000.00	0.00	50,000.00	0.00	2,326.41	47,673.59	4.65
anagement for URA Projects	700,000.00	314,000.00	1,014,000.00	0.00	561,562.39	452,437.61	55.38
anagement for URA Projects	340,000.00	(330,000.00)	10,000.00	0.00	0.00	10,000.00	0.00
strial Development	100,000.00	0.00	100,000.00	0.00	78,935.32	21,064.68	78.94
Run Development	100,000.00	0.00	100,000.00	0.00	823.46	99,176.54	0.82
wellings	10,000.00	0.00	10,000.00	0.00	6,923.09	3,076.91	69.23
a Terrace	100,000.00	0.00	100,000.00	0.00	0.00	100,000.00	0.00
h Technology Center	50,000.00	70,000.00	120,000.00	0.00	118,663.75	1,336.25	98.89
na Street	0.00	50,000.00	50,000.00	0.00	32,564.42	17,435.58	65.13
ill Housing	0.00	100,000.00	100,000.00	0.00	102,144.22	(2,144.22)	102.14
Heights	0.00	90,000.00	90,000.00	0.00	78,380.90	11,619.10	87.09
Widening	0.00	314,000.00	314,000.00	0.00	128,131.75	185,868.25	40.81
ll Rd Intersection Recon	0.00	20,000.00	20,000.00	0.00	14,995.48	5,004.52	74.98
ng Dept Reimbursement	1,000,000.00	0.00	1,000,000.00	0.00	1,250,341.00	(250,341.00)	125.03
ng Dept Reimbursement	1,000,000.00	0.00	1,000,000.00	0.00	1,250,341.00	(250,341.00)	125.03
ng Dept Reimbursement	1,000,000.00	0.00	1,000,000.00	0.00	0.00	1,000,000.00	0.00
ng Dept Reimbursement	1,000,000.00	0.00	1,000,000.00	0.00	0.00	1,000,000.00	0.00
ng Dept Reimbursement	1,000,000.00	0.00	1,000,000.00	0.00	0.00	1,000,000.00	0.00
ng Dept Reimbursement	1,000,000.00	0.00	1,000,000.00	0.00	0.00	1,000,000.00	0.00
lication Upgrade	0.00	2,000.00	2,000.00	0.00	1,039.14	960.86	51.96
lication Upgrade	0.00	2,000.00	2,000.00	0.00	1,039.14	960.86	51.96
vices	0.00	8,000.00	8,000.00	0.00	831.31	7,168.69	10.39
vices	0.00	8,000.00	8,000.00	0.00	831.31	7,168.69	10.39
Legal Fees	0.00	400,000.00	400,000.00	0.00	345,031.83	54,968.17	86.26
Legal Fees	0.00	400,000.00	400,000.00	0.00	345,031.83	54,968.17	86.26

D1 ENGINEERING ACTIVE PROJECTS — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbranc	Actuals	Balance Remaining	% Util
ings	0.00	0.00	0.00	0.00	1,963.74	(1,963.74)	●/O
ings - As Built	0.00	0.00	0.00	0.00	1,963.74	(1,963.74)	●/O
	7,920,000.00	(166,090.85)	7,753,909.15	0.00	3,967,829.69	3,786,079.46	51.17

D1 ENGINEERING COMPLETED PROJECTS — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
iews	295,000.00	(196,450.15)	98,549.85	0.00	98,549.85	0.00	100.00
iews	295,000.00	(196,450.15)	98,549.85	0.00	98,549.85	0.00	100.00
ing Dept Reimbursement	1,000,000.00	461,395.00	1,461,395.00	0.00	1,461,395.00	0.00	100.00
ing Dept Reimbursement	1,000,000.00	461,395.00	1,461,395.00	0.00	1,461,395.00	0.00	100.00
	1,295,000.00	264,944.85	1,559,944.85	0.00	1,559,944.85	0.00	100.00

E1 TOOLS AND EQUIPMENT ACTIVE PROJECTS — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
ng Sewer Risers and Lids	1,200,000.00	0.00	1,200,000.00	431,853.75	269,344.10	498,802.15	58.43
r Castings	1,200,000.00	(625,228.25)	574,771.75	0.00	0.00	574,771.75	0.00
East Jordan	0.00	431,519.75	431,519.75	235,533.35	196,368.40	(382.00)	100.09
Bingham & Taylor	0.00	125,608.50	125,608.50	82,962.40	43,083.70	(437.60)	100.35
Neenah	0.00	68,100.00	68,100.00	113,358.00	29,892.00	(75,150.00)	210.35
r Meters / UMEs	750,000.00	0.00	750,000.00	0.00	0.00	750,000.00	0.00
r Meters / UMEs	750,000.00	0.00	750,000.00	0.00	0.00	750,000.00	0.00
	2,100,000.00	(1,216,438.01)	883,561.99	0.00	0.00	883,561.99	0.00
	2,100,000.00	(1,216,438.01)	883,561.99	0.00	0.00	883,561.99	0.00
ur Dump Trucks	0.00	0.00	0.00	0.00	132,726.40	(132,726.40)	●/O
ur Dump Trucks	0.00	0.00	0.00	0.00	132,726.40	(132,726.40)	●/O
acility Improv / Fencing	1,500,000.00	(1,000,000.00)	500,000.00	0.00	0.00	500,000.00	0.00
acility Improv / Fencing	1,500,000.00	(1,000,000.00)	500,000.00	0.00	0.00	500,000.00	0.00
rench Shoring Equipment	0.00	0.00	0.00	0.00	29,095.00	(29,095.00)	●/O
rench Shoring Equipment	0.00	0.00	0.00	0.00	29,095.00	(29,095.00)	●/O
	5,550,000.00	(2,216,438.01)	3,333,561.99	431,853.75	431,165.50	2,470,542.74	25.89

E1 TOOLS AND EQUIPMENT COMPLETED PROJECTS — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
SPEC 7300 Dump Truck	0.00	116,438.01	116,438.01	26,889.47	91,973.00	(2,424.46)	102.08
SPEC 7300 Dump Truck	0.00	116,438.01	116,438.01	26,889.47	91,973.00	(2,424.46)	102.08
	0.00	116,438.01	116,438.01	26,889.47	91,973.00	(2,424.46)	102.08

EXHIBIT H
PENNVEST STATUS REPORT
AS OF DECEMBER 31, 2009

THE PITTSBURGH WATER AND SEWER AUTHORITY
CAPITAL IMPROVEMENT PROGRAM
PENNVEST
STATUS AS OF DECEMBER 31, 2009

AMOUNT BUDGETED	COMPLETED CONTRACTS	ACTUAL COST ACTIVE CONTRACTS	TOTAL COMPLETE AND ACTIVE	RETAINAGE HELD	REIMBURSE-MENTS	SAP POSTING ERROR	AMOUNT REQUISITIONED
6,340,706.24	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1,459,007.76	-	-	-	-	-		-
8,185,889.00	-	-	-	-	-	-	-
15,985,603.00	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
17,452,050.90	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
17,452,050.90	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**		**$ -**
$ -	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
$ -	**$ -**	**$ -**	**$ -**	**$ -**			**$ -**
$ -	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**		**$ -**
$ -	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**		**$ -**
3,371,643.10	**$ -**	**$ -**					
36,809,297.00	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

A1 WATER - DISTRIBUTION SYSTEM — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
r Phase 5	4,200,045.00	0.00	4,200,045.00	3,357,115.00	0.00	760,930.00	81.88
r 5 - Administration	5,000.00	0.00	5,000.00	0.00	0.00	5,000.00	0.00
r 5 - Legal Fees	63,000.00	0.00	63,000.00	0.00	0.00	63,000.00	0.00
r 5 - Interest During Cons	35,300.00	0.00	35,300.00	0.00	0.00	35,300.00	0.00
r 5 - Engineering	375,213.02	0.00	375,213.02	0.00	0.00	375,213.02	0.00
r 5 - 60" Main - Engineeri	31,216.98	0.00	31,216.98	0.00	0.00	31,216.98	0.00
r 5 - 60" Main - CM	251,200.00	0.00	251,200.00	0.00	0.00	251,200.00	0.00
r 5 - 60" Main - Const	3,439,115.00	0.00	3,439,115.00	3,439,115.00	0.00	0.00	100.00
r Phase 6	2,140,661.24	0.00	2,140,661.24	1,395,220.00	0.00	745,441.24	65.18
r 6 - Administration	2,000.00	0.00	2,000.00	0.00	0.00	2,000.00	0.00
r 6 - Legal Fees	65,000.00	0.00	65,000.00	0.00	0.00	65,000.00	0.00
r 6 - Interest During Cons	38,000.00	0.00	38,000.00	0.00	0.00	38,000.00	0.00
r 6 - Engineering	503,541.24	0.00	503,541.24	0.00	0.00	503,541.24	0.00
r 6 - Valve & Hydrant - CM	136,900.00	0.00	136,900.00	0.00	0.00	136,900.00	0.00
r 6 - Valve & Hydrant - Co	1,395,220.00	0.00	1,395,220.00	1,395,220.00	0.00	0.00	100.00
	6,340,706.24	0.00	6,340,706.24	4,752,335.00	0.00	1,506,371.24	76.24

A2 WATER - PUMPING AND STORAGE — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
r 5 - Squirrel Hill Tank	792,899.00	0.00	792,899.00	680,999.00	0.00	111,900.00	85.89
r 5-Squirrel Hill Tank - C	111,900.00	0.00	111,900.00	0.00	0.00	111,900.00	0.00
r 5-Squirrel Hill Tank-Con	680,999.00	0.00	680,999.00	680,999.00	0.00	0.00	100.00
r 6 - Herron Hill Tank	666,108.76	0.00	666,108.76	548,950.00	0.00	117,158.76	82.41
r 6 - HerronHill Tank - En	5,158.76	0.00	5,158.76	0.00	0.00	5,158.76	0.00
r 6 - HerronHill Tank - CM	112,000.00	0.00	112,000.00	0.00	0.00	112,000.00	0.00
r 6 - HerronHill Tank - Co	548,950.00	0.00	548,950.00	548,950.00	0.00	0.00	100.00
	1,459,007.76	0.00	1,459,007.76	1,229,949.00	0.00	229,058.76	84.30

A3 WATER - TREATMENT PLANT — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
r 5 - WTP Clarifiers 1,2,3	2,941,489.00	0.00	2,941,489.00	2,671,019.00	0.00	270,470.00	90.80
r 5 - WTP Clarifiers - CM	270,470.00	0.00	270,470.00	0.00	0.00	270,470.00	0.00
WTP Clarifiers - Gen Const	2,263,788.00	0.00	2,263,788.00	2,263,788.00	0.00	0.00	100.00
WTP Clarifiers - Elec Cons	407,231.00	0.00	407,231.00	407,231.00	0.00	0.00	100.00
r 6 - Filter Backwash	5,244,400.00	0.00	5,244,400.00	4,902,000.00	0.00	342,400.00	93.47
r 6 - Filter Backwash - CM	342,400.00	0.00	342,400.00	0.00	0.00	342,400.00	0.00
Backwash - Gen/Mec - Const	4,569,000.00	0.00	4,569,000.00	4,569,000.00	0.00	0.00	100.00
Backwash - Electric - Cons	333,000.00	0.00	333,000.00	333,000.00	0.00	0.00	100.00
	8,185,889.00	0.00	8,185,889.00	7,573,019.00	0.00	612,870.00	92.51

B2 SEWER - COMBINED SEWER — STATUS AS OF DECEMBER 31, 2009

	Original Budget	Budget Changes	Current Budget	Encumbrance	Actuals	Balance Remaining	% Util
Improvements	4,302,373.00	0.00	4,302,373.00	3,700,373.00	0.00	602,000.00	86.01
r 1 Legal Fees	46,000.00	0.00	46,000.00	0.00	0.00	46,000.00	0.00
r 1 Interest During Const.	25,000.00	0.00	25,000.00	0.00	0.00	25,000.00	0.00
r 1 Administration	1,000.00	0.00	1,000.00	0.00	0.00	1,000.00	0.00
Semple Street Survey	7,000.00	0.00	7,000.00	0.00	0.00	7,000.00	0.00
r 1 Engineering	219,000.00	0.00	219,000.00	0.00	0.00	219,000.00	0.00
Contract - CM	112,000.00	0.00	112,000.00	0.00	0.00	112,000.00	0.00
Contract - CM	94,000.00	0.00	94,000.00	0.00	0.00	94,000.00	0.00
ment Contract - CM	98,000.00	0.00	98,000.00	0.00	0.00	98,000.00	0.00
Contract - Construction	1,559,803.00	0.00	1,559,803.00	1,559,803.00	0.00	0.00	100.00
Contract - Construction	1,193,175.00	0.00	1,193,175.00	1,193,175.00	0.00	0.00	100.00
ment Contract -Constructio	947,395.00	0.00	947,395.00	947,395.00	0.00	0.00	100.00
r Phase 2	8,640,847.90	0.00	8,640,847.90	7,522,847.90	0.00	1,118,000.00	87.06
r Phase 2 - Administration	5,000.00	0.00	5,000.00	0.00	0.00	5,000.00	0.00
r Phase 2 - Legal Fees	63,000.00	0.00	63,000.00	0.00	0.00	63,000.00	0.00
r 2 - Interest During Cons	50,000.00	0.00	50,000.00	0.00	0.00	50,000.00	0.00
r 2 - Engineering	24,000.00	0.00	24,000.00	0.00	0.00	24,000.00	0.00
Sewer Inspection #1 - CM	71,000.00	0.00	71,000.00	0.00	0.00	71,000.00	0.00
Sewer Inspection #2 - CM	71,000.00	0.00	71,000.00	0.00	0.00	71,000.00	0.00
cal Sewer Inspection #1-CM	126,000.00	0.00	126,000.00	0.00	0.00	126,000.00	0.00
cal Sewer Inspection #2-CM	126,000.00	0.00	126,000.00	0.00	0.00	126,000.00	0.00
Repair - CM	147,000.00	0.00	147,000.00	0.00	0.00	147,000.00	0.00
Contract - CM	70,000.00	0.00	70,000.00	0.00	0.00	70,000.00	0.00
unite Contract - CM	131,000.00	0.00	131,000.00	0.00	0.00	131,000.00	0.00
ment McBride - CM	106,000.00	0.00	106,000.00	0.00	0.00	106,000.00	0.00
ment Browns Hill - CM	25,000.00	0.00	25,000.00	0.00	0.00	25,000.00	0.00
ment 44th/Davison - CM	103,000.00	0.00	103,000.00	0.00	0.00	103,000.00	0.00
Sewer Inspection #1 - Cons	218,852.50	0.00	218,852.50	218,852.50	0.00	0.00	100.00
Sewer Inspection #2 - Cons	228,568.50	0.00	228,568.50	228,568.50	0.00	0.00	100.00
al Sewer Inspection 1-Cons	441,850.00	0.00	441,850.00	441,850.00	0.00	0.00	100.00
al Sewer Inspection 2-Cons	433,880.00	0.00	433,880.00	433,880.00	0.00	0.00	100.00
Repair - Construction	1,476,395.00	0.00	1,476,395.00	1,476,395.00	0.00	0.00	100.00
Contract - Construction	693,474.00	0.00	693,474.00	693,474.00	0.00	0.00	100.00
unite Contract-Constructio	1,207,445.00	0.00	1,207,445.00	1,207,445.00	0.00	0.00	100.00
ment McBride - Constructio	1,507,777.90	0.00	1,507,777.90	1,507,777.90	0.00	0.00	100.00
ment Browns Hill - Const	237,720.00	0.00	237,720.00	237,720.00	0.00	0.00	100.05
ment 44th/Davison - Const	1,076,885.00	0.00	1,076,885.00	1,076,885.00	0.00	0.00	100.00
r Phase 3	4,508,830.00	0.00	4,508,830.00	3,567,830.00	0.00	941,000.00	79.13
r 3 - Administration	1,000.00	0.00	1,000.00	0.00	0.00	1,000.00	0.00
r 3 - Legal Fees	60,000.00	0.00	60,000.00	0.00	0.00	60,000.00	0.00
r 3 - Interest During Cons	30,000.00	0.00	30,000.00	0.00	0.00	30,000.00	0.00
r 3 - Engineering	470,800.00	0.00	470,800.00	0.00	0.00	470,800.00	0.00
Contract - CM	150,600.00	0.00	150,600.00	0.00	0.00	150,600.00	0.00
Repair - CM	177,200.00	0.00	177,200.00	0.00	0.00	177,200.00	0.00
ining - CM	51,400.00	0.00	51,400.00	0.00	0.00	51,400.00	0.00
Contract - Construction	1,494,600.00	0.00	1,494,600.00	1,494,600.00	0.00	0.00	100.00
Repair - Construction	1,564,100.00	0.00	1,564,100.00	1,564,100.00	0.00	0.00	100.00
ining - Construction	509,130.00	0.00	509,130.00	509,130.00	0.00	0.00	100.00
	17,452,050.90	0.00	17,452,050.90	14,791,050.90	0.00	2,661,000.00	84.75

EXHIBIT I
FACILITIES INSPECTION REPORTS

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Allentown Tanks

Condition: Interior Tank – KTA-Tator conducted a detailed inspection of the tank interior, tank exterior, exposed portion of the tank foundation, corrosion protection systems (if present) and all tank appurtenances three years ago. As per their report it was recommended to paint the inside and outside of both tanks in two years from now

Exterior Tank and Appurtenances – See above

Access Road and Pavements – The access road near the gate was paved to insure proper traction for access of the chlorine delivery truck

Site and Fencing – A vault hatch cover between the two tanks is bent and distorted, whereby it does not fully close. The ground is wet and saturated on the surface at the east side of the site, indicating a potential small leak from one of the tanks. This condition may get confirmed and/or be resolved when the tank interior is painted. Fence posts and wire fabric are badly rusted. Fabric has been patched numerous times

Site Building (Exterior Structural/Architectural) – Soffit and fascia on wooden utility building and the door are in very poor condition. The signal cable that is secured to the building is such that it is pulling the fascia off the building. Radio transmission cables are hanging low to the ground along the south side of the property

Instrumentation and SCADA System – Replacement of the SCADA system is being evaluated

Chlorination Facilities – BissNuss, along with PWSA, completed the installation, testing and start-up of the new booster chlorination facilities, which were provided to reduce the formation of THM's in the water distribution system

Recommendations: Address recommendations from KTA-Tator relative to the tanks and appurtenances, including repainting the inside and outside of both tanks in two years

Repair or replace the vault hatch cover between the two tanks

Continue removal of vegetation and make necessary repairs or replace site fencing

Repair/repaint soffit and fascia on utility building

Re-secure the signal cable at the building

Raise and re-support the low hanging transmission cables (by utility company)

Replace SCADA system in future CIP project

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Aspinwall Pump Station (Including Fox Chapel Pump Station)

Condition: Pumping Equipment – Two of the four pumps are in good condition and in operating service. Wear rings are being refurbished in Pump No. 2. Pump No. 1 is operable, but there is a vibration present in the motor, which may be due to a shorted pole piece in the rotor. The priming system works well

Interior Valves and Piping (includes pump isolation, control and surge valves) – One of isolation valves on the surge piping on the west discharge header is broken. The other isolation gate valve on surge piping on west discharge header line is difficult to operate. The main shut-off valve on east discharge header leaks water through valve packing. Main shut-off valve on west discharge header constantly leaks water through the seat. All four surge valves appear to be nonoperational. They have been piped in a manner that requires them to be removed from the piping in order to service them. One of the two surge valves on each discharge header is mounted in an inverted position whereby the operation may be compromised. Piping is rusted in the basement mainly due to the lack of heat and ventilation, causing damp and humid conditions

Exterior Valves and Pits – The cover plates on the north, west and east valve vaults are in poor condition.

Instrumentation and SCADA System (includes flow meters and suction/discharge pressure transmitters) – Abandoned flow indicating meters and the electronic pressure indicating meters and flow chart recorder in the basement should be removed. The bearing sensor devices at the pumps are old and do not include a local readout temperature. Presently there is only a minimal amount of operating data being reported to the OC Center due to lack of working hardware in the SCADA equipment. Replacement of the total SCADA System will be evaluated in an upcoming project. A proposal for a temporary resolution of the SCADA problems is presently being evaluating at this site until the new system is provided

Access Road and Pavements – See "Site and Grounds"

Pump Station Building Interior (Structural/Architectural) – The office area was repainted. Paint is peeling on basement walls and ceiling support beams. Plaster walls and ceiling in vestibule is in need of repair/repainting. Front door glass and corrugated glass around station are broken. Ceiling insulation in shop area and bathroom ceiling tiles have been damaged by previous roof leaks. Water is leaking into the basement at the 8" water line pipe penetration at the northeast corner. The concrete on the floor on the west half of the Workshop area is deteriorating badly and progressively getting worse. This is probably from salt exposure from the vehicles entering the building

Pump Station Building Exterior (Structural/Architectural) – Vines/vegetation were removed from the walls of the station. An abandoned basement access pit on the northwest corner is presently open, as the cover plate is badly deteriorated

Electrical System (includes lighting and battery backup systems) – Battery backup system is old, but is in good operating condition. Switchgear system needs to be evaluated. Lighting fixtures in pump area are old mercury vapor type and several lighting ballasts are inoperable. Pump Basement and Pipe Tunnel lighting is in poor condition. Some of the lights in Shop Basement and Tunnel area are not functioning properly, as they flash on and off. Emergency generator and transfer switch (serving the station lighting) in Workshop area are inoperable. The cover is off of the telephone terminal panel at the northwest corner of pump area. Some of the outside light fixtures are not functional

HVAC & Plumbing Systems — Two heating units in basement are inoperable, whereby there is no heat in the basement, resulting in humid, damp conditions with lots of formed condensation. Two of the four heating units on first floor pump area are inoperable with defective coils. The heater above the east door in the shop area is malfunctioning. The abandoned flue pipe from a removed gas heater in basement should be capped to reduce heat loss out of the building. All (6) ventilation fans on the roof are inoperable and currently electrically tagged off. Leak noted in plumbing lines inside the wall at the slop sink in Workshop. Leaks noted at two places on the water service line in the northeast corner of the Pump Basement

Auxiliary Systems – The fire alarm system is not in service. Its operation should be evaluated and the system upgraded as necessary to restore trouble-free service

Roofing – Vegetation growing inside the abandoned chimney was removed. Some deficiencies were noted in the vestibule roof and the chimney needs to be removed from the roof and adjacent gutter

Drainage System and Sump Pumps – Two main sump pumps are nonfunctional. All drainage water is now being pumped using the single backup vertical pump. All platform grating and support system over the sump is in poor condition. Check valve on discharge of backup vertical sump pump is in poor condition.

Site - The "Outfall Discharge" sign at the river bank is not legible and needs to be repainted or replaced. The grating is off of a catch basin at the southeast corner of the station. An underground sink hole was noted at the east side of the office area. Vegetation is growing in the fenced-in transformer area

Miscellaneous – Materials and old equipment scattered throughout the pump station basement, workshop area and outside the station. Overhead crane in pump area needs to be inspected. Soffit and fascia and door on storage building south of pump station are in poor condition

Fox Chapel Pump Station – Packing at Pump No. 3 noted to be leaking excessively and not contained or conveyed to the nearest drain. The water being discharged from the vent line at check valves at Pump No.'s 1, 2 and 3 is being discharged directly onto the floor. A cover is off of an electrical junction box with wires hanging out at southwest corner of station

Recommendations: Resolve problems with Pump No. 1 and 2.

Repair/replace isolation valves on the surge piping on the west discharge header

Repair/service main shut-off gate valves on the west and east discharge headers

Resolve malfunctions of all four surge valves on the two discharge headers and evaluate possible re-orientation of two of them

Repaint or replace valve pit cover plates

Paint piping in basement

Remove abandoned flow chart recorders/instrumentation

Evaluate operation of bearing sensor devices and consider replacing with a digital type unit that would include a local readout temperature

Resolve problem with SCADA system to restore full operation as necessary until system is rehabilitated or upgraded in the future

Repaint basement walls and structural steel

Repair/repaint vestibule walls

Replace glass in front door and broken corrugated glass around station

Repair/replace damaged ceiling insulation and bathroom ceiling tiles in Workshop area

Resolve leaking water problem at northwest corner of basement

Repair concrete on the floor on the west half of the shop area and apply seal coating to eliminate further damage

Remove vegetation/vines from building

Cover the open pit at the northwest corner of pump station

Evaluate switchgear system

Replace mercury vapor lights in pump station with high-pressure sodium or metal halide fixtures

Replace, repair or relamp lights in basement of pump and shop areas and Pipe Tunnel area

Replace emergency generator and transfer switch in maintenance area (if operation is required or remove equipment otherwise)

Reinstall cover on telephone terminal panel at northwest corner of pump area

Resolve problems with nonfunctional outside light fixtures

Service/repair two heating units on first floor of pump station, two units in basement, and the heater above the east door in the shop area

Cap abandoned gas flue pipe in basement

Replace (6) ventilation fans on roof

Repair leak in plumbing line inside the wall at the slop sink in Workshop

Repair two leaks noted on the water service line in the northeast area of the Pump Basement

Evaluate fire alarm system and upgrade as necessary to restore trouble-free service

Address deficiencies in the Vestibule roof and the chimney area

Restore operation of two main sump pumps by replacing them with submersible type pumps and replace all associated isolation and check valves

Replace all platform grating and support system over the sump

Replace check valve on the discharge of backup vertical sump pump

Repaint or replace the "Discharge" sign at the river bank

Reinstall the grating on the catch basin at the southeast corner of the station

Fill in the sink hole at the east side of the office area

Remove vegetation from the fenced-in transformer area

Consolidate and orderly store usable materials scattered inside and outside pump station and discard unusable equipment and materials

Inspect, test, and recondition overhead crane in pump area

Cover soffit and fascia on storage building behind the pump station with aluminum and replace the door with aluminum, maintenance-free door

Fox Chapel Pump Station

- Resolve packing problem at Pump No. 3 (possibly other pumps as necessary) and convey to the nearest drain
- Direct the water being discharged from the vent line at check valves at Pump No.'s 1, 2 and 3 to a nearest drain
- Reinstall cover on electrical junction box at southwest corner of basement

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Bedford Tank

Condition: Interior Tank – KTA-Tator conducted a detailed inspection of the tank interior, tank exterior, exposed portion of the tank foundation, corrosion protection systems (if present) and all tank appurtenances three years ago. As per their report it was recommended that the exterior of both tanks be spot painted within two years from now

Exterior Tank and Appurtenances – See above

Site Fencing – Barbed wire missing from portion of gate at west side. There are vines growing on the fence

Site Building Exterior (Structural/Architectural) – Plaster walls are in poor condition

Site Building Exterior (Structural/Architectural) – Concrete around some handrail posts is cracked

Chlorination Facilities – The two Prominent brand pumps are working; however, the Operations Staff have ordered new pumps, which include built-in VFD controls and an automatic degasification feature to replace the existing two pumps in the near future. Gasification/air-locking has been a problem at this site. After the new chlorination systems at Lincoln, Allentown and Squirrel Hill are placed into full service and the automatic dosing control operation at these sites is evaluated, installation of onsite sampling and chlorine concentration analyzers may be considered at this site in the future. Ventilation fan, intake damper and both heaters work well

Valve Vaults – Vault and valves are in good condition

Miscellaneous – An active leak in the chlorine solution line next to the valve vault was repaired. The phone line is hanging low over the sidewalk in front of the building

Recommendations: Address recommendations from KTA-Tator relative to the tanks and appurtenances, including spot painting the exterior of tanks within two years

Install missing barbed wire on gate at west side of site and remove vines from fencing

Repair plaster walls inside site building and paint them

Repair/reset and seal concrete around handrail posts

Replace Chlorine Feed pumps as planned

Install a chlorine analyzer and sample line to enhance control of chlorine dosing if warranted following evaluation

Provide timer control operation for the vent fan to reduce the corrosive air conditions inside the Chlorine Room

Resupport the phone line over the sidewalk in front of the building

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Brashear Tanks

Condition: Interior Tank – One of the two tanks has been recoated on the interior and exterior under a present contract. New vents, a lightning protection grounding system and ladder safety rails were installed and a new passive flow mixing system will be installed in the near future. Once the mixing system is installed the present access opening in the tank will be closed and the tank will be coated and placed into service. The painting of the second tank will be performed in the spring

Exterior Tank and Appurtenances – Tank level indicator will be removed and level readings taken from gauges installed in the valve vaults next to the tanks. Overflow chamber grating cover is missing at both tanks

Site and Fencing – South fencing next to chlorine building is missing barbed wire and is insufficient height for adequate security. Trees growing along this fence promote easier entry over the fence. Vegetation is growing on and around fencing at Chlorine Building and around North Tank. A tree is growing into the building and utility wires. There is an accumulation of leaves around the tanks. Chlorine Building sidewalk is in poor condition and the sidewalk at the top of the steps are deteriorated. Abandoned reservoir wall is in fair condition

Site Building Interior (Structural/Architectural) – Wall plaster cracked on upper floor. Surface paint of basement walls is badly peeled. Ventilation fan and intake louver work well. The chlorine room door is in poor condition

Site Building Exterior (Structural/Architectural) – Handrail sections missing and other sections unsupported in front of building

Chlorination Facilities - The old W&T feed pumps are still in place, with only one operational. The Operations Staff have ordered new Prominent brand pumps, which include built-in VFD controls and an automatic degasification feature to replace the existing two pumps in the near future. Gasification/air-locking has been a problem at this site. After the new chlorination systems at Lincoln, Allentown and Squirrel Hill are placed into full service and the automatic dosing control operation at these sites is evaluated, installation of onsite sampling and chlorine concentration analyzers may be considered at this site in the future. Abandoned gas feed type chlorination equipment is still in place

Miscellaneous - Emergency light fixture on upper floor is not operable. There is no water service in the building, as one of the water booster pumps is partially removed and out of service and the second pump does not operate. The power supply module in the RTU panel is not functional, as the equipment devices are plugged into a receptacle outside of the RTU enclosure panel

Recommendations: Complete recoating of the interior and exterior surfaces of both tanks and installation of tank appurtenances under the current contract

Provide and install grating cover for overflow chamber on both tanks

Extend fencing vertically on south side of building where it abuts concrete retaining wall and replace missing barbed wire sections. Remove trees along fence in this area

Remove vegetation on and around fencing at Chlorine Building and North Tank

Remove tree growing next to building

Remove accumulated leaves from around the reservoirs

Replace sidewalk in front of Chlorine Building and replace deteriorated sections of the sidewalk at the top of the steps

Repair and paint cracked wall plaster cracked on upper floor

Waterproof coat and repaint walls in basement

Replace door at the Chlorine Room

Provide and install missing sections and re-support loose sections of hand railing in front of building

Replace both chlorination pumps as planned

Install a chlorine analyzer and sample line to enhance control of chlorine dosing if warranted after evaluation

Remove old abandoned chlorination equipment from site building

Provide timer control operation for the vent fan to reduce the corrosive air conditions inside the Chlorine Room

Resolve malfunction of emergency lighting fixture(s)

Restore operation of water booster pumps

Replace the power supply module in the RTU panel

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Brilliant Warehouse

Condition: Building Interior (Structural/Architectural) – Kitchen cabinets, sink, counter tops, stove and refrigerator were replaced under a recent project. The vinyl flooring in the lunchroom, south hallway and main vestibule were replaced with a sand quartz/epoxy flooring system. The ceiling tiles were replaced in the lunch room. Drywall covering over the pilasters in lunchroom and doors were repaired and the lunchroom painted. The Authority is currently painting the doors and walls in the upstairs and downstairs hallways. Many of ceiling tiles throughout first floor have been discolored, caused from toilet overflowing from second floor and rain water infiltration in the window curtain wall. Paint is badly peeled in the Mechanical Room near the pressure washer. An access door was removed from the wall at the south entrance to the Men's Locker Room

Building Exterior (Structural/Architectural) – Building siding was damaged at the northeast corner and southeast corner (three places) of building. Both of the two glass roof and two wall panels at vestibule entrance are badly fogged and one is cracked. Replacement of these windows is being evaluated. Rainwater enters the building through the window wall on the north side of the building when it is wind driven, possibly via a top window ledge or siding flashing. Water runoff from the entrance sidewalk enters the vestibule from underneath the door threshold

Doors and Hardware and Windows – Most of the man-doors in the vehicle area and one in the Mechanical Room are damaged and/or missing hardware. Windows are broken on the man door at the southwest corner of the building. Weather seals on overhead doors are torn or missing. The hood was removed from the overhead door at the northeast corner of building. The manager requests that windows, which can be opened, be installed at the main office, and each end of the second floor hallway to provide positive ventilation during times between the heating and cooling seasons

Auxiliary Building Systems - Intrusion alarm system is inoperable. Many of man-door intrusion switches have been disconnected. Proper operation of fire alarm system needs to be evaluated

Lighting Systems – A new fixture has been installed to enhance the yard lighting. Another new light fixture is needed at the northwest corner of the building to fully light the storage area. Damaged conduits serving light fixtures on south inside wall of the vehicle area had been removed but wiring was left exposed. First floor hallway light fixtures are in poor condition. The stairwell at the east end of the office area is not lighted well enough

Heating and Ventilation Systems – All HVAC ductwork, diffusers, grills and intake louver screens are very dirty and need to be cleaned. Insulation on two heating

lines in main vestibule is damaged. The HVAC system controls need to be replaced to provide reliable trouble free operation. This is being pursued under a contract in the near future. The insect screens in front of the air intake louvers are plugged up with dirt and/or whole sections torn out. The screen should be replaced with bird screen and pre-filters installed ahead of the filters at the two air handler systems. The ventilation air intake ducts in the vehicle storage area should have grill covers installed over them to keep debris from getting into the ventilation system

Plumbing System – The pressure washer unit in the Mechanical Room has been repaired, but is unreliable. Potable water backflow preventer in Mechanical Room is leaking. The toilet stall dividers need to be painted or replaced

Roofing, Gutters and Downspouts – Roof is in good condition. Roof drain gutters around the building have an accumulation of leaves in them. The gutter at the southwest corners has been damaged. It has dropped from the weight of water backing up in it and water overflows down the face of the building siding during rain events. This gutter needs to be resupported. The joints in the gutter at this area leak

Drainage System and Sumps – Some sections of drainage grating are missing in the vehicle area. These sections need to be replaced and the remaining sections adequately secured in place

Fencing – Southeast corner of building is not secure by fencing. Two front gates at the entrance to Old and New Warehouses and one to the Equalization Chamber access road are in poor condition and warrant replacement. Fencing along east property line has been damaged. Manager requested a motorized gate with security card access and remote activation at the southwest corner and main gates. Damaged or missing sections of fencing were noted around the entire perimeter of the site. A section of fencing was removed when the gas line was replaced at the southwest corner of the site and never reinstalled. Also see "Fencing" under "Bruecken Pump Station", which adjoins this facility

Site – Earth material continues to slide off the hillside to the south of the access roadway. PWSA has been dealing with this problem using Jersey barriers along the roadway to contain this material and routinely removing loose material collected behind the barriers. There is inadequate signage (old outdated type signs) at the railroad crossing. Pavement around catch basin on east side of building is undermined. The catch basins along the curb on the west side of the building are higher than the road pavement, whereby water is ponding. The pavement should be resurfaced to accommodate proper drainage. The landscape gravel around the building has vegetation and grass growing in it. It was noted that the dump trucks are washed out in the roadway at the northwest corner of the building. A wash pit should be constructed at a location that will not interfere with travel around the station and accommodate handling of the wash water

Miscellaneous – Fire extinguisher is missing in the Mechanical Room. The VeederRoot leak detection system at the gasoline and diesel fuel storage tanks are working well

Old Warehouse Building - Lighting fixtures and the electrical breaker panel were replaced. Ceiling in shower needs to be replaced. Faucets at the sinks constantly leak water. Supporting steel at roof parapet at outside building is rusted. Intake ventilation grills on north and south wall are damaged or missing and some are boarded up. The utility air compressor in the shop is unreliable and is undersized to suit shop needs. One of two urinals was removed, although this area has been temporarily converted to a storage area. The two man doors are in very poor condition and need to be replaced. Missing thresholds are enabling rodents to enter the building. The trim and seal materials are missing at the overhead door on the east side of the building

Recommendations: Replace water-stained and discolored ceiling tiles throughout first floor

Repaint walls in the Mechanical Room near the pressure washer

Reinstall the access door in the wall at the south entrance to the Men's Locker Room

Repair building siding at northeast and southeast corners of building

Replace four glass window panels at vestibule entrance

Investigate and eliminate leaks in the north window wall; flashing probably needs to be caulk-sealed

Provide watertight seal underneath the main entrance door threshold in the vestibule

Replace three man-doors, including new hardware and install hardware and broken glass panes on other doors where needed

Renew weather seals on overhead doors and install hood where removed

Reinstall hood on overhead door at the northeast corner of building

Install windows, which can be opened, at the main office and each end of the second floor hallway

Upgrade or replace intrusion alarm system and all field devices

Inspect and test operation of fire alarm system and correct malfunctions as necessary

Install a new light fixture at the northwest corner of the building to fully light the storage area

Replace removed conduit to conceal wiring, which serves light fixtures on south inside wall of building

Replace and/or relamp first floor hallway light fixtures

Install a new light fixture in the stairwell at the east end of the office area

Clean entire HVAC duct system, diffusers, grills and intake louver screen

Repair insulation on heating lines in main vestibule

Replace controls for the entire HVAC system

Replace the insect screens in front of the air intake louvers with bird screen and install pre-filters ahead of the filters at the two air handler systems

Install grill covers over the ventilation air intake ducts in the vehicle storage area

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Bruecken Pump Station

Condition: Pumping Equipment – Pump No.'s 3 & 6 along with their motors were rebuilt under the Motor and Pump repair contract and are in full service. Pump No. 2 is presently being rebuilt under the same contract. Pump No. 5 is not in service due to problems with the control valve. Excessive leakage of packing water was noted at Pump No.'s 4 and 5. The Operations Staff plan to install new bearing end seals to keep leaking seal water out of the bearings. The evaluation of the installation of a new pump (No.1) by CDM has been put on hold

Interior Valves and Piping (includes pump isolation, control and surge valves) – The Pump control valve at Pump No.'s 2, 3 and 6 were rebuilt under the above contract. There is a cracked control check valve at Pump No. 4 check valve. The control check valve at Pump No. 5 does not function. The Operations Staff plans to rebuild this valve soon. The Packing at suction gate valve No.'s 6 & 7 is leaking. Pump control valve No. 7 is leaking water at a hydraulic control tube. Water leaking from the pumps on the first floor is discharging onto some of the suction valve actuators in the basement and it is rusting the piping and electrical conduits in the basement

Instrumentation and SCADA System (includes flowmeters and suction/discharge pressure transmitters) – Replacement of entire SCADA System is being evaluated. The bearing sensor devices at the pumps are old and do not include a local readout temperature. The devices were replaced on Pump No.'s 3 and 6 and will be replaced at Pump No. 2 and the motors at Pump No.'s 2, 3 and 6

Access Road and Pavements – Areas of the asphalt around the station are in poor condition. Vegetation is growing out of the joints in the tie gate vaults

Site and Fencing – Vegetation was removed from inside the outdoor transformer area. The fencing around the building is in poor condition and sections are damaged or missing on the south side of the building and toward the stockpile area. Since the station along with the Brilliant Warehouse is enclosed within a security fence around the perimeter of the entire site, the fencing and the numerous gates around the pump station may not be needed. The existing slide gates at the station may be able to be used at the Warehouse to replace existing swing gates. Pipe bollards would need to be installed along the south side of the station to keep vehicles from driving onto the valve vaults

Pump Station Building Exterior (Structural/Architectural) – Mortar joints in the walls were repointed and the entire building was pressure wash-cleaned. All the windows in the station are currently being replaced under an active 'B" contract. Some of the door frames and doors are deteriorated

Pump Station Building Interior (Structural/Architectural) – The ceiling in the electrical room and adjacent office and bathroom areas is water-damaged, including badly peeling paint

Electrical System (includes lighting and battery back-up systems) – Electrical switchgear requires servicing and cleaning. Most of outside lighting fixtures are old mercury vapor type and unreliable. Lighting fixtures in basement and Boiler Room are incandescent type and unreliable. Many of the lights in the south basement have had to be replaced with temporary lights due to water getting into the conduits and deteriorating the fixtures. Emergency light fixtures are inoperable in many areas of the station. There is no lighting in the west stairwell. The electrical panel cover is off of the panel on the north balcony wall. Battery backup system operation is unreliable. The evaluation of the installation of emergency generators by CDM has been put on hold. The junction box covers are off at pump control valve no. 2, 3, 4 and 7. Covers are off of two receptacles next to Pump No. 6. Wires are hanging out of a connection box at the Boiler Recirculation Pumps. The light switch in the boiler room is broken.

Heating and Ventilation Systems – The boilers are in good operating condition. One of the recirculation pumps has been replaced. Pump area ventilation intake damper and the exhaust fan damper were repaired to restore proper operation

Mechanical Systems (water, plumbing, sanitary) – First floor water fountain is in poor condition. Water serving the toilets, sinks and showers in the locker room has been shut off, as these facilities are no longer used. The sewage ejector station, to where these fixtures would drain, is not operable. The toilet on the first floor is malfunctioning

Auxiliary Systems – The fire alarm system is not in service. Its operation should be evaluated and the system upgraded as necessary to restore trouble-free service

Roofing, Gutters, and Downspouts – Two of the interior roof drains lines inside the building leak and one of the lines is badly deteriorated

Drainage System and Sump Pumps – Emergency Flood Pumps operate well. The amount of pump seal water, pump priming water, bearing cooling water, and control valve seal leakage water is presently so great that the sump pumps at the south half of the basement can not keep up with the inflow of water. A supplemental sump pump was installed in the sump pit on the north side of the basement to handle the excess water coming from the south side of the basement. The drain pipe from the cooling water reservoir at stage 1 of Pump No. 3 and stage 1 inboard bearing of Pump No. 5 are leaking directly into the basement. Drainage hoses from Pump No. 6 are discharging directly onto the basement floor. Excessive drainage water being discharged into the basement and getting into the lighting system conduits and deteriorating the fixtures. Water backs up into the pump base trench drain from Pump No. 2.

Discharge and Distribution Valves - The discharge gate valve on Pump No. 4 and the tie gate between Pump No.'s 2 and 3 (with actuators) will be replaced soon under a repair contract. Restoration of the concrete vault is included. The tie gate between pump no. 3 and 4 leaks badly. This valve will need to be inspected when a shut is performed while the above valves are replaced to determine if the packing

can be restored or a new shaft will need to be provided. Some of the pump discharge and tie valves in front of station will not achieve a tight shut. Some valves have malfunctioning Limitorque actuators/controls, especially the tie gate between Highland #1 and #2 Rising Mains, whereby operation of these valves is not reliable. It is noted that these valve pits have been flooded in the past. Packing in some of these valves leaks. The existing surge valve on the discharge header at Rising Main No. 1 does not operate and is valved off (out of service)

Equalization Chamber – West and East Chambers are in good condition, however both are flooded with several feet of water. Minor settlement noted around chamber. Fence access gate is out of alignment, due to a displaced post, and the latch can not be closed

Miscellaneous – Overhead crane rail system and hoist are old, although in working condition. Despite some cleanup throughout the inside and outside of the station there are still old parts and other materials, scattered about the station. There is a large accumulation of oil on the floor around Pump No. 2 that was discharged from pump bearing housings

Recommendations:

- Complete servicing work for Pump No. 2
- Resolve excessive leakage of packing water at Pump No.'s 4 and 5 and install new bearing end seals at Pump No. 4 to keep leaking seal water out of the bearings
- Replace a control check valve at Pump No. 4 check valve
- Rebuild the pump check valve at Pump No. 5
- Resolve leaking packing at Suction Gate Valve No.'s 6 and 7
- Resolve the problem at Pump control valve No. 7 hydraulic control tube
- Replace SCADA system in upcoming project
- Replace bearing sensor devices at Pump No.'s 4, 5 and 7 (motor and pump bearings) with the same equipment installed under the present repair contract for the other pumps and motors
- Restore deteriorated sections of concrete and asphalt pavement around pump station where necessary
- Remove vegetation that is growing out of the joints in the distribution valve vaults
- Repair/replace perimeter fencing around the combined pump station and warehouse site Consider installing the unused slide gates from the pump station at the Warehouse to replace existing swing gates
- Install pipe bollards along the south side of the station to keep vehicles from driving onto the valve vaults
- Repaint and/or replace doors in pump station building exterior
- Address repair and repainting of the ceiling in the electrical room and adjacent office and bathroom areas
- Inspect, clean, and evaluate need for renovation of switchgear
- Replace exterior mercury vapor lights with high-pressure sodium or metal halide

- Replace pressure washer unit in the Mechanical Room
- Resolve leak at potable water backflow preventer in Mechanical Room
- Paint or replace the toilet stall dividers
- Remove leaves from roof gutter drains and repair and resupport the "dropped" section of gutter at the southwest corner, including resealing gutter seam joints
- Provide replacement sections of drainage grating where missing in the vehicle area and secure remaining sections of grating
- Install new fencing along east side and at southeast corner of the building, including a motorized gate with security card access and remote activation
- Replace two front gates with motorized slide gates and security card access and remote activation. Install new manual slide gate to equalization chamber
- Replace damaged sections or install new sections of fencing where missing around the entire perimeter of the site
- Investigate resolution of earth material sliding off hillside to the south of access roadway
- Install new updated-style railroad crossing signs at the track crossing
- Address undermining of pavement at catch basin on east side of building by installing a new riser section
- Resurface the pavement between the Old and New Warehouse Buildings to accommodate proper drainage into the catch basins
- Remove vegetation and grass that is growing in the landscape gravel around the building
- Construct a dump truck wash pit, strategically located that will not interfere with travel around the station and accommodate handling of the wash water
- Install fire extinguisher in Mechanical Room
- Old warehouse
  - Replace ceiling in shower
  - Resolve leaks at faucets at the sinks
  - Paint supporting steel at roof parapet at outside walls
  - Replace intake ventilation grills on north and south walls
  - Replace utility compressor
  - Replace man doors and install thresholds
  - Install trim and seal materials where missing at the overhead door on the east side of the building

Replace lighting fixtures in the basement and Boiler Room (after the water infiltration problem is resolved in the basement)

Address malfunctions of the emergency light fixtures in many areas of the station

Re-lamp and/or address malfunctions of the west stairwell lighting fixtures

Reinstall cover on electrical panel on the North Balcony wall

Repair/replace Battery backup system

Install cover on electrical junction box at several Pump Control Valves

Install covers on receptacles next to Pump No. 6 and conceal wires at a connection box at the Boiler Recirculation Pumps

Replace the light switch in the Boiler Room

Replace first floor water fountain

Restore operation of sewage ejector station if locker room facilities are placed back into service

Resolve malfunction with the toilet on the first floor

Evaluate fire alarm system and upgrade as necessary to restore trouble-free service

Repair leaking roof drain lines

Evaluate and modify station drain system to handle flow. Resolve excessive leaking problems with pump packing and control valves. Consider piping the control valve vent lines directly to the sumps

Resolve and/or contain the leaks from the drain pipe from the cooling water reservoir at stage 1 of Pump No. 3 and stage 1 inboard bearing of Pump No. 5

Route drainage hoses from Pump No. 6 to the nearest sump

Replace valves and actuators under per the pending contract work

Repair Limitorque actuators and distribution valves as required

Repair or replace the malfunctioning surge valve on the discharge header at Rising Main No.1

Pump water out of Equalization Chamber vaults

Address minor settlement around Equalization Chamber

Repair/realign fence access gate at Equalization Chamber

Further consolidate and organize usable materials in pump station and discard unusable materials

Remove oil from floor around Pump No. 2

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Garfield Tank

Condition:

Interior Tank – A detailed inspection of the interior and exterior of the tank, tank foundation, corrosion protection systems (if present) and all tank appurtenances should be conducted

Exterior Tank and Appurtenances – See above

Site Fencing – Good to fair condition. Some openings were noted in the fence. Trees are growing next to the fence, which enable easy access over the fence into the site

Instrumentation – No problems noted

Chlorination Facilities – The chlorination facilities at Highland Pump Station, which had served this storage tank, are being eliminated, as the water being supplied to this station is being partially chlorinated from the Membrane Filtration Plant before entering the distribution system, which proves to be adequate

Recommendations:

Inspect the inside and outside of the tank and its appurtenances

Patch openings in the fence

Remove trees growing next to the fence

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Herron Hill Pump Station

Condition:

Pumping Equipment – All five pumps are in good running condition; however an abnormal noise is present at the motor at Pump No. 1 when running and the packing is leaking excessively at Pump No. 2

Interior Valves and Piping (includes pump isolation, control and surge valves) – GA electric check valves at all the pumps leak but are in good operating condition; however Pump No. 2 check valve is leaking. All of the surge valves work satisfactorily

Instrumentation and SCADA System (includes flow meters, suction/discharge pressure transmitters) – RTD (bearing temperature sensing) devices at pumps are failing, especially at Pump No. 4. Replacement of entire SCADA System is being evaluated

Pump Station Building Interior (Structural/Architectural) – Plaster damage on bathroom ceiling from previous roof leak (now resolved). Paint on basement walls is badly peeled and wall surface material is deteriorated from water infiltration. The paint is peeling on the floor around the pumps. The structural concrete roof support beams in Pump No. 5 Room are showing signs of being overstressed, as evidenced from cracks noted in the concrete beams. The beam next to the door of the adjacent storage room has deflected, such that the door can not be fully opened. Water appears to be leaking into the ceiling of Pump No. 5 Room and adjoining wall in the main pump room basement, possibly caused by poor drainage of water off the asphalt pavement above. See "Roofing, Gutters and Downspouts"

Pump Station Building Exterior (Structural/Architectural) – Stone face on lower portion of south wall is badly deteriorated due to weathering. Mortar joints in poor condition where downspout was previously missing at boiler room addition. Soffit and fascia are in poor condition and a section is missing on the west side of station. One of the front doors, including the threshold, is deteriorated and misaligned. A metal cover on an underground pit on the west side of the building is deteriorated, and surrounding cap stones shifted, which is unsafe

Site Conditions – There is settlement in the lawn area in front of the station next to the driveway and along the side of the front steps. The surface drain in the driveway pavement, which presently discharges into the storage room next to Pump No. 5 Room, should be redirected or eliminated and the pavement re-sloped to effect proper drainage. The concrete steps in front of the station are in poor condition and the top step is settled. Vines and trees are growing along the east and north walls of the station and small trees are growing out of joints in the sidewalk on the west side of the building

Electrical System (includes lighting and Battery Backup systems) – Switchgear system is in poor condition. The battery backup system is not operable and needs replaced. Lighting in basement is fair. Wires are hanging from the back of the three of the four heaters in the pump area. The temporary power wires inside the station, which are ran to a power pole outside, are no longer needed and should be removed (by DLCO)

Mechanical Systems (water, plumbing, sanitary) – The hot water tank has deteriorated due to water previously leaking through the roof. Drain lines were cut and left open in basement (three places) that may discharge water onto the floor if surcharged. The grating cover was removed from the sump opening in the basement floor

Heating and Ventilation Systems – Inadequate ventilation in summer. Ventilation damper in Pump No. 5 pit is bent and stuck in an open position and the fan does not operate. Boiler No. 2 has been repaired and restored to service. The recirculation pumps work well. Heater No 2 in the pump area does not function

Auxiliary Systems – The fire alarm system is not in service. Its operation should be evaluated and the system upgraded as necessary to restore trouble-free service

Roofing, Gutters and Downspouts – Downspout is missing on the north side of the East Garage and causing damage to the brick wall. The downspout at the north side of the Testing Lab is split and disconnected. The downspout to the east of the front door may be partially blocked, which may be causing run-off water to leak through the asphalt driveway and enter into the ceiling of Pump No. 5 Room and adjacent main basement area

Miscellaneous - Old unused Limitorque valve actuators are lying scattered in the basement and should be removed

Recommendations:

Investigate and/or resolve the cause of the noise present at the motor at Pump No. 1 and resolve packing leakage at Pump No. 2

Resolve leaking condition at the Pump Control Valve No. 2 and convey the leakage water to a drain or sump

Replace digital-type RTD devices at pumps with a new retrofit digital type with local temperature display

Replacement of SCADA System in upcoming project

Repair damaged bathroom ceiling and repair and waterproof/coat basement walls

Repaint the floor in the station

Evaluate and address any concerns of overstressed structural concrete roof support beams in Pump No. 5 Room

Resolve leaks in the ceiling in Pump No. 5 Room and adjoining basement wall

Repair, re-point and apply protective coating to lower exterior south wall

Repoint/restore mortar joints at southeast corner of Boiler Room

Repaint soffit and fascia or cover with aluminum

Replace front door, threshold and hardware

Replace a metal cover on an underground pit and reset cap stones on the west side of the building

Fill settlement in the lawn area in front of the station next to the driveway and along the side of the front steps

Redirect the surface drain in the driveway pavement or remove it and re-slope the pavement to effect proper drainage of the pavement

Replace or repair the concrete steps in front of the station as needed

Remove vines and trees growing along the east, west and north sides of the station

Inspect, clean, test and renovate switchgear system

Replace Battery Backup system with UPS type system

Secure and/or conceal wires that are hanging from the back of the three of the four heaters in the pump area

Remove the temporary power wires inside the station to the power pole outside (by DLCO)

Replace the hot water tank in the Boiler Room

Cap open drain lines in basement (three places)

Install a grating cover over the sump opening in the basement floor

Replace and/or supplement existing ventilation system

Address problems with ventilation fan and damper in Pump No. 5 Room

Evaluate fire alarm system and upgrade as necessary to restore trouble-free service

Replace missing downspout on the north side of the garage and replace the split and disconnected downspout at Testing Lab

Evaluate and resolve any blockage of the downspout to the east of the front door

Remove old unused Limitorque valve actuators from the basement

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Herron Hill Reservoir

Condition: Floating Cover – In the South Cell a new larger float was installed by Layfield to support the influent pipe vacuum breaker and keep it from becoming submerged, as had occurred previously. There should be a second backup cover dewatering pump installed in each cell, although close monitoring of the failsafe operation of the cover pumps would minimize the chance of flooding conditions on top of the cover. An annual maintenance contract is being prepared for the floating cover by the Engineering Staff.

Reservoir Cover Appurtenances (Dewatering Pumps, ladders, vents, hatchways, barriers/railings) – Cover dewatering pump in the North Cell has been restored to service; however the pump canister in this cell and the South Cell are lifted out of the drainage troughs. In order to address this, either the float control needs to be adjusted to raise the shut off level and/or weights should be installed in the bottom of the pump canisters. Locks are off of most of the access hatch covers

Chlorine Building - Shingled roof is in very poor condition. The ventilation fan and damper motor work well, but the linkage at the damper needs to be adjusted

Chlorination Facilities – Only one of the two pumps are in service. Both pumps will be replaced with Prominent brand pumps in the near future. After the new chlorination systems at Lincoln, Allentown and Squirrel Hill are placed into full service and the automatic dosing control operation at these sites is evaluated, installation of onsite sampling and chlorine concentration analyzers may be considered at this site in the future. The old abandoned chlorine gas feed equipment is still in place. Pump support stand and all pipe supports are badly corroded

Miscellaneous – Posts supporting entrance fence gate to Chlorine bBilding need to be re-supported or replaced

Recommendations: Adjust the float control serving both cover pumps to raise the shut off level and/or install weights in the bottom of the pump canisters

Install locks on the access hatch covers where needed

Replace shingled roofing on Chlorine Building

Adjust the linkage at the ventilation intake damper

Replace both chlorine dosing pumps as planned

Evaluate automatic dosing control of chlorine and install a chlorine analyzer and sample line if warranted after evaluation

Remove the old abandoned gas chlorination equipment

Provide timer control operation for the vent fan to reduce the corrosive air conditions inside the chlorine room

Paint and/or replace (with fiberglass) the pipe and pump support stands

Re-support or replace posts at entrance gate to Chlorine Building

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Herron Hill Tank

Condition: Interior Tank – A contract has been executed to paint the interior and exterior of this tank in the spring. See "Herron Hill Pump Station" report to cover piping and pumping equipment , which is installed inside the base of the tank

Exterior Tank and Appurtenances – See above. A leak had been repaired in the exterior shell

Site Lighting – Air travel clearance light on top of tank requires frequent bulb change and is unsafe to access

Recommendations: Paint the interior and exterior of the tank under the current contract

Replace air travel clearance light on top of tank with an LED – strobe type of light

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Herron Hill Tank Pump Station

Condition: Pumping Equipment – Both pumps in good operating condition

Interior Valves and Piping (includes pump isolation, control and surge valves) – Dresser-style couplings on the suction and discharge lines of Pump No. 2 are leaking badly. Piping is badly rusted in the trenches beneath the pump floor, probably due to the constant leakage of water from the above pipes. Pump No. 2 suction butterfly valve is broken shut and the main suction valve will not provide a good shut. All the above issues should be addressed after the tank is drained for painting in the spring.

Site and Fencing – No problems noted

Instrumentation and SCADA System (includes flowmeters and suction/discharge pressure transmitters) – SCADA system will be evaluated in an upcoming project

Electrical System (includes lighting) – Switchgear system needs to be evaluated

Recommendations: Repair leaks at Dresser-style couplings on the suction and discharge lines of Pump No. 2

Resolve problems with suction valves or replace them

Repaint interior station piping

Replacement of SCADA system in upcoming project

Evaluate switchgear system

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Highland No. 1 Reservoir - Including Membrane Filtration Plant Facilities

Condition: Reservoir Conditions – Badly deteriorated sections of the concrete parapet wall around the reservoir were repaired; however large areas are in need of replacement, which should be addressed when a renovation project is planned. There is an accumulation of leaves in the reservoir which presents problems in the operation of the Membrane Filtration process in the spring period when the temperature related inversion occurs

Site Building (Old Chlorine Building) – This building is currently not being used; however the building needs to remain heated to protect water lines inside. The power panel in the basement operates the heating units, the reservoir lighting and power to the Restroom Building. Exterior is in good condition. Abandoned chlorination equipment should be removed. Ceiling paint is peeling badly. The heaters do not operate on the first floor. There are open core drilled openings in the basement wall to enable entry of rodents. Fire extinguisher in basement is outdated. The first floor door and hardware is in poor condition. The basement door is jammed tight. Heavy vegetation noted around the building and inside the fenced area

Site Conditions – Site lighting is in need of replacement, including installation of underground wiring. This should be addressed when a renovation project is planned

Instrumentation and SCADA System – The present SCADA system is not operational, however there is presently no data needed from this system, since the Old Chlorine Building is no longer in service and the reservoir level signal is now transmitted directly to the Membrane Filtration Plant

Membrane Filtration Plant – A second power feed has been provided from DLCO for backup power. Expansion of the plant from 20 MGD to 26 MGD is nearly completed. Pall Corporation has replaced all feed and filtrate piping at the Valve and Filter Module Racks with HDPE material to resolve failures due to corrosion from the higher concentration of treatment chemicals. At the same time the racks have been expanded and additional filter modules were installed to expand the flow capacity of the plant from 20 to 26 MGD. In order to comply with regulations of the DEP and ACHD, chlorination monitoring equipment will be installed at Highland Pump Station to monitor and control the disinfection dosing at the MFP from this location. All original modules have been replaced, as well as the computer control system and process/instrument air system. Pall has upgraded the feed pumps, and modified some of the chemical cleaning processes.

The heating facilities in this building do not provide adequate heat in the building. Cold temperatures in the building compromise the effectiveness of the rack chemical cleaning solutions for the filtering modules. The Caustic CIP and Neutralization

tanks vent inside the building. The check valve at the connection of the chemical waste line to the sewer outside the building allows chemical and sewage fumes to back-up into the building. The cooling fan on one of the electrical transformers at the back of the building operates very noisily and needs to be replaced. Coating on the floor of the chemical containment areas has failed and the underlying concrete has deteriorated in some locations

Recommendations: Replace deteriorated sections of the concrete parapet wall around the reservoir, which should be addressed when a renovation project is planned

Remove leaves from reservoir

Old Chlorine building – Remove abandoned chlorination equipment. Restore operation of heaters on first floor. Seal open core drilled openings in basement wall. Update charge in fire extinguisher in basement. Replace and/or repair doors and hardware as required. Remove vegetation noted around the building and inside the fenced area

Replace reservoir site lighting which includes installation of underground wiring, which should be addressed when a renovation project is planned

MFP – Continue coordination with Pall in expanding the flow capacity of the plant and replacement of valve and module rack piping. Supplement the heating facilities and/or install inline heaters on the chemical solution lines. Insulate the chemical solution lines between the solution tanks and the module racks. Vent Caustic CIP and Neutralization tanks outside the building. Replace the check valve or modify the connection of the chemical waste line to the sewer outside the building. Replace the cooling fan on one of the electrical transformers at the back of the building. Recoat the chemical containment areas using Stone Chem 441 and repair concrete substrate where needed

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

***Description*:** Highland No. 2 Reservoir

***Condition*:** Cover Conditions - The floating cover, which has prematurely deteriorated from ultraviolet radiation, will be replaced under a current contract next year. There is an accumulation of leaves on the cover and around the access roadway. There is significant ponding of water on the south corner, probably due to the Cover Dewatering Pump No. 4 being out of service and the need for installation of a dewatering pump at this location. A new pump is proposed to be installed at this south corner and operation of Pump No. 4 restored when the cover is replaced

Appurtenances (cover dewatering pumps, ladders, vents, hatchways, barriers, railings) – Cover Dewatering Pump No. 1 tripped the Motor Saver controller on "unbalance". Pump No. 2 and No. 3 run, but pump at a low flow rate. Pump No. 4 is out of service, as the power supply is shorted out. Problems have been noted with the Motor Saver controller at Pump No. 5, which were reconfirmed due to the need to reset it. Pump No. 6 initially was running without pumping water. After it was reset pumping operation was restored. It is noted that the present Motor Savers are more than 10 years old and should be replaced to provide reliable service

Chlorination Facilities - Only one of the two pumps are in service and is pumping reliably. The second pump is out of service. Both pumps will be replaced with new Prominent brand pumps in the near future. After the new chlorination systems at Lincoln, Allentown and Squirrel Hill are placed into full service and the automatic dosing control operation at these sites is evaluated, installation of onsite sampling and chlorine concentration analyzers may be considered at this site in the future. A vent from a sodium hypochlorite storage tank in the station is vented inside the building. The pump support stand and metal pipe supports in the chlorine room are badly rusted

Site Building Interior (Structural/Architectural) – The front window is badly deteriorated and can not be fully closed, allowing rain and cold air to enter the building. Damaged plaster and peeling paint noted in the main area of the building due to leaking roof. The damaged ceiling in the electrical room had been replaced temporarily with plywood. The heating unit in the main area of the building is inoperable. One of the two heaters in the Chlorine Room is inoperable. The hatch cover inside the station, which is heavy, rusted steel, has been replaced with a plywood cover temporarily. The doors are badly rusted, but operate. Ventilation fan in Chlorine Room works but the intake damper is stuck in a partially open position whereby outside air continuously enters the building. The brick at the top of the window jamb at the west side of the building is collapsing

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Highland Pump Station

Condition:

Pumping Equipment – Only Pump No. 3 is presently in service. Operations Staff are actively working to get the other two pumps into service. At Pump No. 2 the motor is being rebuilt or replaced and at Pump No. 1 the motor and the auto-transformer has failed due to deficiencies in the electrical rating of the switch gear starters. Since these pumps were replaced several years ago with higher speed single stage pumps there has been a significant increase in maintenance requirements. The Operations Staff has increased preventive maintenance tasks, including rebuilding these pumps to address replacement of worn or failed parts and replacing bearings routinely. Because the motors were sized to better suit the rating of the switchgear, there is concern that the motors may not be adequately sized to suit the pumping conditions for each of the three pumps. See "Electrical System", which discusses deficiencies with the electrical equipment

Interior Valves and Piping (includes pump isolation, control and surge valves) – Golden Anderson hydraulic-actuated piston-type control valves have numerous maintenance problems resulting in failures. Operations Staff reported that the present horizontal alignment of valves is not ideal. The condition of the piping in the pipe trenches beneath floor level should be evaluated, as pump seal water is discharged into these trenches

Instrumentation and SCADA System (includes flow meters and suction/discharge pressure transmitters) – Parts and components in the SCADA equipment have been failing. Replacement of entire SCADA System is being evaluated in an upcoming project

Pump Station Building Exterior (Structural Architectural) – Chlorine Room door, handrail, window screen, and exhaust louver are badly rusted. Half of the handrail in front of building is missing. Paint is deteriorated on soffit/eaves. Graffiti noted on back and side exterior walls and overhead door. The front door and hardware are in very bad condition

Pump Station Building Interior (Structural Architectural) – Pump bases and pipe trench floor plates are badly rusted. The paint is peeling on the floor around the pumps

Roofing – Good condition

Electrical System (includes lighting and battery backup systems) – A reduced voltage starting transformer at Pump No. 1 is presently being rebuilt. The switchgear starting equipment at Pump No.1 is unreliable. When the pumps were replaced several years ago the horsepower ratings were increased, resulting in

Site (Including Lighting and Fencing – Settlement and/or movement of the slope outside the reservoir are noted on the roadway on the east side of the reservoir; possibly resulting from the construction of a Slurry Wall around the reservoir in the past. The conditions do not appear to be much different than were noted last year. The retaining wall near the entrance of the site is partially collapsed

Roofing – Leaking condition at or near the roof-mounted vent fan

Instrumentation and SCADA System – The level sensor was replaced with a ultrasound-type unit. Replacement of entire SCADA System is being evaluated

Recommendations:

Replace the floating cover, appurtenances, a cover dewatering pump at the south corner and resolve problems with Pump No. 4 in upcoming project

Leaves should be removed from the reservoir cover and around the access roadway

Replace the pump Motor Savers at all pumps to maintain more reliable operations

Inspect and clean the pumps and canisters where the pumping flow rates are low

Replace both chlorination pumps

Install a chlorine analyzer and sample line to enhance control of chlorine dosing if warranted after evaluation

Extend vent from sodium hypochlorite storage tank to outside of building

Paint and/or replace (with fiberglass) the pipe and pump support stands

Provide timer control operation for the vent fan to reduce the corrosive air conditions inside the chlorine room

Replace all windows in building

Repair and repaint damaged plaster inside building

Repair or replace defective heaters

Replace the hatch cover with a light weight hinged door

Resolve problem with chlorine room air intake damper

Resolve problem with collapsing brick at the top of the window jamb at the west side of the building

Continue Monitoring of settlement or movement of reservoir slope

Reconstruct retaining wall near the entrance of the site

Repair leak in roof at the vent fan

Address replacement of SCADA System in an upcoming project

overload (overheating) conditions with the equipment in the MCC. Thermal overloads in the starters need to be replaced of an appropriate size to guard against malfunctions while in service. Switchgear system needs to be upgraded or replaced. Battery Backup system is in good condition. Emergency lighting units appear to be inoperable. The cover is off of the connection box at one of the heating recirculation pumps with wires hanging out

Heating and Ventilation Systems – Heating system in pump area is in good operating condition. The exhaust vent fan had been removed from the front of the building leaving the damper exposed, as it was replaced with a fan at the back of the building. The ventilation exhaust fan and intake damper and electric heater serving the Chlorine Rom do not operate.

Chlorination Facilities – The system is presently out of service. The chlorination facilities are being eliminated at this site, as the water being supplied to this station is being chlorinated from the Membrane Filtration Plant before entering the distribution system, which proves to be adequate. Two chlorine analyzers and radio communication equipment will be installed at this station to control chlorine dosage from the MFP

Auxiliary Systems – The fire alarm system is not in service. Its operation should be evaluated and the system upgraded as necessary to restore trouble-free service

Recommendations:

Restore operation of Pump No.'s 1 and 2

Evaluate operation and maintenance needs of the present single stage (3500 rpm) pumps for potential replacement. Evaluate the sizing for the pump motors

Replace all three pump control valves with cone-type valves with actuator, including proper orientation in a vertical position

Evaluate the condition of the piping in the pipe trenches beneath floor level

Replace SCADA system in upcoming project

Repair/replace exterior door, window screen, exhaust louver, and handrail at Chlorine Room

Replace handrail and repaint soffit/eaves on pump station building

Remove graffiti from building walls

Replace the front door and hardware ASAP

Paint pumps and trench floor plates

Repaint the floor in the station

Replace thermal overloads in the starters with a proper size to protect the motors

Resolve switchgear problems at Pump No.1 for the near term and upgrade/replace all station switchgear equipment

Restore operation of emergency lighting units

Re-install the cover on the connection box at one of the heating recirculation pumps

Install a louver on front of building where an exhaust fan had been removed

Resolve operational problem with ventilation exhaust fan, intake damper and heater in the Chlorine Room

Evaluate fire alarm system and upgrade as necessary to restore trouble-free service

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Howard Pump Station - Including Sewer Division Facility

Condition:

Pumping Equipment – Pump No. 7 is not operational and out of service and Pump No. 6 does not operate reliably. These two pumps are being replaced under a current contract. Pump No. 4 is off line due to the inoperation of its pump control valve. The remaining four pumps work well

Interior Valves and Piping (includes pump isolation, control and surge valves - Pump control valves and isolation gate at Pump No.'s 6 and 7 will be replaced with the pumps. Willamette ball-type control valves at Pumps No. 3 and No. 4 will be replaced with cone-type valves under the above contract. Valves at other pumps are difficult to maintain, as replacement parts are not available, but the Operations Staff addresses maintenance needs as needed. Valve No. 5 is leaking badly. Packing on discharge valve at Pump No. 2 is leaking. Surge valve S-2 serving McNaugher/Spring Hill is nonfunctional and out of service. The isolation valve for this surge valve is leaking and water is constantly leaking through the surge valve to drain

Instrumentation and SCADA System (includes flow meters, suction/discharge pressure transmitters) – Analog-type RTD devices (bearing temperature sensors) are obsolete and failing. Some have been removed and others are not functional. New devices will be installed at Pump No.'s 6 and 7. Replacement of entire SCADA System is being evaluated

Pump Station Building Interior (Structural/Architectural) – Station walls were not repainted following repointing work in the last upgrade contract. Structural steel, columns/bases and piping in basement are badly rusted, especially where water has leaked from the pumps overhead from the first floor. Rear access door latch does not work

Pump Station Building Exterior (Structural/Architectural) – Main double door is misaligned. Vines noted on north wall

Site (Including Fencing) – Sidewalk at rear of the station is in poor condition

Electrical System (includes lighting and battery backup systems) – Switchgear system needs to be evaluated ASAP according to the Operations Staff. Battery backup system is inoperable and needs to be replaced with a UPS type. Lighting in the basement is poor. Most of emergency light fixtures are inoperable. Telephone terminal box cover is off. Cover on electrical device box next to rear door is open with wires hanging out of it. Several lights are out in the pump area

Mechanical Systems (water, plumbing, sanitary) – Presently there is no hot water in the station bathrooms (hot water tank was previously removed). Toilet in station office area is nonfunctional

Heating and Ventilation – The boiler is in good running condition. The fan/motor in the unit heater on the north wall has been removed and the heater next to the Boiler Room does not work. Drive belt on east ventilation fan is loose and one of two belts is missing and the damper does not open. The ventilation fan on the north wall was restored to service. The air supply/intake damper serving the basement does not operate. The chimney cap is missing on the boiler flue pipe

Auxiliary Systems – The fire alarm system operation should be evaluated and the system upgraded as necessary to restore full trouble-free service

Roofing, Gutters and Downspouts – Pump Station roof is in good condition. Also see "Sewer Division Facility"

Miscellaneous - Overhead crane rail system and hoist were rehabilitated. The catch basin at the southwest corner of the station is grown over with vegetation

Sewer Services Division Facility - Offices and locker area facilities are in good condition. Walls in the vehicle storage area are in poor condition and need to be painted. The material storage area south of the station has been enclosed with an 8' high security fencing (with privacy slats), which included installation of a slide entrance gate and man gate. Two of three radiant heaters in vehicle storage area were repaired. Gutters around the Sewer Division section of building are clogged with leaves. Leaks noted in vehicle storage area roof, particularly at the northwest corner. There may be a leaking gutter along the south wall, where water is entering the vehicle storage area. As warranted, the manager has requested that the utility building on the north end of the main office area have the roof replaced and siding and overhead roll-up doors installed. He also requested that the utility building on the south side of the Vehicle Storage area have the roof replaced and siding be installed.

Recommendations:

Replace Pump No. 6 and No. 7 and check valves (including valves at Pump No.'s 3 and 4) under the current contract

Address maintenance needs of pump control valves as required, especially at Pump No. 5

Resolve problem with leaking packing on discharge valve at Pump No. 2

Rebuild one of surge valves in basement serving pumping line to McNaugher/Spring Hill

Replace analog-type RTD devices with digital type

Replace SCADA system in upcoming project

Paint interior walls of pump room

Repaint structural steel, columns/bases and piping in basement

Repair or replace rear door latch

Realign/repair or replace main double door to pump station building

Remove vines from north wall

Replace deteriorated sections of sidewalk at the rear of the station and remove vegetation growing out of the joints

Evaluate switchgear system

Replace battery backup system, which provides backup power for pump and valve status to the OC Center

Upgrade light fixtures in basement

Restore operation of emergency light fixtures

Install telephone terminal box cover

Reinstall cover on electrical device box next to rear door

Relamp fixtures in the pump area

Install hot water tank to serve the station

Pipe water leaking from packing at Pump No. 5 directly to the sump in basement

Repair toilet in station office area

Restore operation of the heating units on north wall and next to the Boiler Room

Service the ventilation fan on the east wall and restore operation of the air supply/intake damper serving the basement

Install a chimney cap on the boiler flue pipe

Evaluate fire alarm system and upgrade as necessary to restore trouble-free service

Remove vegetation from around the catch basin at the southwest corner of the station

Sewer Services Division Facility –

- Paint walls in the vehicle storage area
- Remove leaves from the gutters around the Sewer Division section of building
- Repair leaks on vehicle storage area roof
- Inspect gutter at vehicle storage area at the south wall and/or resolve leaking situation
- Replace roof shingles and install siding and overhead roll-up doors at the utility building on the north end of the main office area and replace roof shingles and install siding at the utility building on the south side of the Vehicle Storage area

PITTSBURGH WATER AND SEWER AUTHORITY
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December 2009

Description: Inline Pump Station at Coral & Pacific

Condition:

Pumping Equipment – One of the pumps was replaced. Both pumps are currently operating well

Interior Valves and Piping (includes pump isolation, control and surge valves) – Control valve operation is reliable

Pump Station Building Interior (Structural/Architectural) – Hatch cover, made of galvanized steel, and hardware were replaced. Floor and lower portion of station are badly rusted causing water infiltration

Ventilation System – Underground vent line has shifted causing a joint to open and leak groundwater into the station

Recommendations:

Repair station shell by lining the floor and lower portion of the walls with welded steel plate

Repair underground vent line

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Lanpher Reservoir

Condition: Cover Conditions – The floating cover is in good condition. An annual maintenance contract is being prepared for the floating cover by the Engineering Staff

Reservoir Appurtenances (cover dewatering pumps, ladders, vents, hatchways, barriers/railings) – Locks are missing from most of the hatch covers. All of the (8) cover pumps were tripped off for various conditions ('Reverse Phasing – RP; Over Current – OC; or Under Current - UC"). All were reset and normal pumping operation was restored except as noted below. SE pump in East cell was tripped on "RP" and is now pumping slowly. NE pump in East Cell was tripped on "UC" and the starter coil now emits a loud buzzing sound. The SW pump in the East Cell was tripped on "RP" and was restarted. NW pump in East Cell was tripped on "OC" and restarted. NE pump in West Cell was tripped on "RP" and restarted. SE pump in West Cell was tripped on "RP" and restarted. NW pump in West Cell was tripped on "RP" and the starter coil is now emitting a buzzing sound. SW pump in the West Cell was tripped on "OC", re-tripped at 0.5 amps and would not restart. Much of handrail and swing gates along the center wall of the reservoir are in need of repair. Most of this hand railing is loose where it is anchored into the concrete

Site Building Interior (Structural/Architectural) – There is presently no heat inside the building, which is causing heavy condensation and high humidity conditions. The dosing of the chlorine into the flumes inside the building creates corrosive conditions inside the building. Basement stairs and pipe supports are rusting, due to humid conditions and the presence of chlorine vapors. The electrical distribution panels are rusting and corroding. Also see "Site Building Heating, Ventilation, Plumbing and Electrical" for recommendations. A floor access hatch cover has been removed inside the building in line with the front door, posing a safety hazard

Site Building Exterior (Structural/Architectural) – Soffit and fascia around building is in poor condition. Section of downspout on the west side is damaged and a tree is growing inside of it. The joints in the rain gutters are leaking. All four exterior doors and hardware are badly rusted and deteriorated. The doors on the west side and in the basement are jammed so tightly that they can not be opened. Vines are growing on the building and fencing

Chlorination Facilities – The old W&T feed pumps are still in place with only one operable. Both pumps will be replaced with Prominent brand pumps in the near future. After the new chlorination systems at Lincoln, Allentown and Squirrel Hill are placed into full service and the automatic dosing control operation at these sites is evaluated, installation of onsite sampling and chlorine concentration analyzers may

be considered at this site in the future. Pump support stand and all pipe supports are badly corroded

Site Building Heating, Ventilation, Plumbing and Electrical – All heaters in the building first floor, basement and the Chlorine Room do not operate whereby there is no heat in this facility. One of the two vent fans on first floor are inoperable although automatic operation of the fan that runs could not be confirmed. All humidistat and thermostat controls are corroded and not functional. One of the dampers is stuck open. The vent fan in the basement does not operate and the associated intake damper will not close fully, whereby cold air constantly enters the building and the electrical starters are severely corroded. The water booster pumps are not operable, whereby there is presently no water service inside this facility, with no water supply to the toilet and lavatory in the basement. The starters for these pumps and the heaters are badly corroded. Ventilation fan in the Chlorine Room works, but intake damper does not. There are no working lights in the Chlorine Room

Miscellaneous - Concrete patches at some of the joints in the retaining wall next to Friday Road are deteriorated and material is loose, thereby posing a potential risk of falling patch material in damaging the cover. There is no fire extinguisher in the building (first floor or basement) except in the Chlorine Room

Recommendations: Install locks where missing from the hatch covers

Monitor cover dewatering pump operations, resolve problems as necessary to restored trouble free operation of unreliable pumps and consider installing an alarm beacon light at each pump control panel to provide notification of tripping failures when they occur

Repair handrail and swing gates and re-anchor all railing on the center walkway

Paint basement stairs, valve stands and pipe supports

Reinstall the floor hatch cover that was removed inside the building. Install a hinged cover if this would be more convenient for grabbing samples

Repair and repaint soffit and fascia on the site building

Repair or replace damaged section of downspout on the west side and remove tree growing inside of it. Seal gutter joints or replace the gutters

Replace all exterior doors using a corrosion resistant finish/material

Remove vines from building exterior and fencing

Replace both chlorine dosing pumps as planned

Evaluate automatic dosing control of chlorine and install a chlorine analyzer and sample line if warranted after evaluation

Paint or replace corroded steel pump stands and piping supports in Chlorine Room (with fiberglass material)

Provide timer control operation for the vent fan to reduce the corrosive air conditions inside the Chlorine Room

Restore heating to first floor, basement and Chlorine Room by repairing or replacing inoperable heating units, controls and/or starters as necessary

Repair or replace inoperable vent fans, dampers and controls as necessary. Supplement control operation for the vent fans by installing timers to reduce the corrosive air conditions inside the building

Restore operation of the water booster pumps, including probable replacement of the starters

Restore operation of the air intake damper in the Chlorine Room

Restore lighting in the Chlorine Room

Repair or replace the deteriorated joint repair patches in the concrete retaining wall

Provide fire extinguisher(s) in the building as needed

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Lincoln Pump Station

Condition: Pumping Equipment – Pump No. 2 is out of service, as it is inoperable. A contract is being prepared by PWSA to replace this pump. There is an excessive amount of seal water leaking from Pump No. 3

Interior Valves and Piping (includes pump isolation, control and surge valves) – The pump control valves have had many operational failures. Operation Staff have requested that these valves be replaced as they are old and unreliable. Control valve at all three pumps are proposed to be replaced under the above contract. There is a lot of water leaking through the pump control valve seals at Pump No.'s 1 and 3 to the sump or through penetrations in the floor. Water from valve no. 1 is being discharged onto the floor. Pump discharge piping in the basement was painted under an outside contract

Pump Station Building Exterior (Structural/Architectural) – Vines are growing on the north and east building walls and on the fencing around the electrical service security area. Fallen tree and yard debris noted in station yard

Pump Station Building Interior (Structural/Architectural) – Main door is in good condition, except door closer is broken. Storage room door in basement is deteriorated

Instrumentation and SCADA System (includes flow meters and suction/discharge pressure transmitters) – The bearing sensor devices at the pumps are old and do not include a local readout temperature. Replacement of entire SCADA System is being evaluated. The old abandoned flow indicating equipment should be removed from the station

Electrical System (includes lighting and battery backup systems) – Switchgear system needs to be evaluated and deficiencies addressed. Battery backup system needs to be replaced. A receptacle was removed from the east wall with wires left hanging out of the device box. A smoke detector was removed from the ceiling in the basement and wires left hanging out of the device box. An instrumentation device was removed from the basement and wiring left hanging out of the junction box. Several electrical junction box covers are off at the pump valve controls. The electrical termination box covers at the boiler recirculation pumps are off with wires hanging out

Heating and Ventilation – The boiler is in good operating condition. The hot water tank needs to be replaced due to reported problems with the controls

Auxiliary Systems – The fire alarm system is not in service. Its operation should be evaluated and the system upgraded as necessary to restore trouble-free service

Roofing – Vegetation and accumulation of silt noted on roof

Miscellaneous – Old test piping, including drain lines routed across floor (posing a tripping hazard) in basement has been abandoned

Recommendations: Replace Pump No. 2 and pump control check valves at all three pumps in upcoming contract.

Resolve leakage problem with packing at Pump No. 3

Contain leakage water from the check valve at Pump No. 1 and discharge it directly to the basement sump

Remove vines from north and east building walls and vegetation on fencing on east side and around the electrical service area

Remove fallen tree and debris in station yard

Replace/repair door closer

Remove or replace deteriorated door in basement

Evaluate operation of bearing sensor devices and consider replacing with a digital type unit that would include a local readout temperature

Replacement of SCADA System in upcoming project

Evaluate switchgear system and address deficiencies as required

Replace battery backup system for SCADA system

Remove old abandoned flow indicating equipment from the station

Evaluate and inspect electrical switchgear system

Reinstall receptacle on the west wall

Address disconnected wiring as noted and replace electrical box covers where noted

Reinstall the covers on the electrical termination box covers at the boiler recirculation pumps

Replace hot water tank

Evaluate fire alarm system and upgrade as necessary to restore trouble-free service

Clean and inspect rubber-covered roofing and address deficiencies as required

Remove old abandoned test piping including drain lines routed across floor in basement

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Lincoln Tank

Condition: Interior Tank – KTA-Tator conducted a detailed inspection of the tank interior, tank exterior, exposed portion of the tank foundation, corrosion protection systems (if present) and all tank appurtenances last year. As per their report it was recommended to re-inspect the tank within four years from now

Exterior Tank and Appurtenances – See above

Site Fencing – Fabric is deteriorated and patched in several areas, especially in the front of the site

Valve Vaults – Good

Tank Valves – Good

Instrumentation and SCADA System – Replacement of the entire SCADA System is being evaluated

Chlorination Facilities – BissNuss, along with PWSA, completed the installation, testing and start-up of the new booster chlorination facilities, which were provided to reduce the formation of THM's in the water distribution system

Recommendations: Address recommendations from KTA-Tator relative to the tanks and appurtenances as noted and required in their inspection report, including re-inspecting the tank within four years

Address repair or replacement of fencing

Replacement of SCADA System in an upcoming project

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: McNaugher Reservoir

Condition: Reservoirs – Concrete chamber on east side of larger reservoir is deteriorating

Access Road and Pavements – Section of stairs in front of Chlorine Building are deteriorated. One of steps on newer portion of stairs damaged where handrail post is embedded. The joint between the concrete drainage troughs around the reservoirs needs to be recaulked

Site and Fencing – There is an accumulation of leaves around both reservoirs and in the drainage troughs. Leaves are plugging the bee hive drains and causing the water to back up in the drain troughs. North half of fencing along Biggs Street is badly rusted. There is vegetation and trees growing on the fencing around the reservoirs

Site Building Interior (Structural/Architectural) - Good condition. The fire extinguisher cabinet should be remounted on the wall

Site Building Exterior (Structural/Architectural) – Soffit and fascia paint badly peeled. The coating on the lower foundation walls is peeling. A section of handrail in front of building needs to be repaired or re-secured

Mechanical Systems (water, plumbing, sanitary, ventilation, electrical) – Hot water tank is inoperable. Fan in basement does not work. Emergency lights do not test-light. The water runs constantly in the toilet. The outdoor key-type light switch is broken. The Chlorine Room ventilation fan and intake damper are not functional. The fan damper is stuck open. One of the heaters in the Chlorine Room doesn't work

Chlorination Facilities – The one Prominent brand pump is pumping reliably; however, the Operations Staff have ordered new pumps, which include built in VFD controls and an automatic degasification feature to replace the existing two pumps in the near future. Gasification/air-locking has been a problem at this site. After the new chlorination systems at Lincoln, Allentown and Squirrel Hill are placed into full service, and the automatic dosing control operation at these sites is evaluated, installation of onsite sampling and chlorine concentration analyzers may be considered at this site in the future

Roofing, Gutters and Downspouts – Shingled roofing in poor condition. Downspout on southeast corner of building is missing

Miscellaneous – Water leaking from the hillside behind the Chlorine Building may be from a water line on Biggs St. Fire extinguisher downstairs is outdated. The security sign on the fence next to the building is not legible

Recommendations: Repair/restore concrete chamber on east side of larger reservoir

Repair/replace damaged section of stairs in front of building

Repair/replace step on newer portion of stairs where handrail is embedded

Recaulk/seal the concrete drainage trough

Remove leaves from the drainage troughs and site

Replace or coat rusted sections of fencing along Biggs Street

Remove vegetation and trees from fencing around the site

Remount fire extinguisher cabinet on the wall

Paint soffit and fascia on building

Re-coat the lower foundation walls

Repair/secure hand railing

Replace hot water tank

Restore operation of fan in basement

Restore operation of emergency lights

Replace flapper valve in toilet

Replace light key-switch and resolve operational problem with ventilation fan and damper and one of the heaters in the Chlorine Room

Replace both chlorine dosing pumps as planned

Evaluate automatic dosing control of chlorine and install a chlorine analyzer and sample line if warranted after evaluation

Provide timer control operation for the vent fan to reduce the corrosive air conditions inside the Chlorine Room

Replace shingled roof

Install downspout where missing

Investigate source of and resolve underground water leak in embankment behind the Chlorine Building

Update fire extinguisher charge

Replace or repaint the security sign next to the building

Description: Millvale Pump Station

Condition: General - Station constructed several years ago but never placed in operation, as water line piping in Millvale's distribution system failed in the test runs of the station. The use of this pump station in the future is not known at this time. If operation of the station is planned in the future then the deficiencies noted below would need to be addressed

Pumping Equipment – Pumps and motors have been flooded in the past. Their present operating condition is not known as they have not been run since the flooding condition several years ago

Instrumentation and SCADA System (includes flowmeters, suction/discharge pressure transmitters) – System is out of service, as parts were taken from the RTU to use elsewhere. System upgrade is planned in the near future (if station operation is implemented)

Pump Station Building Interior (Structural/Architectural) – Areas on floor and sidewalls are rusted. The access hatch cover has been damaged and jammed by traffic loading, whereby it is very difficult to open or latch closed

Electrical System (includes lighting and battery backup systems) – Battery in UPS system will need to be replaced. Switchgear/pump control panel, heater and dehumidifier were flooded in the past. The present operating condition of the switchgear is not known as the pumps have not been operated since the test runs prior to the flooding condition several years ago

Recommendations: Inspect all components of station, which may have been affected from flooding

Remove, bake-dry, and test two pump motors

Replace SCADA system components (if station operation is implemented)

Touch-up paint rusted parts of floor and sidewalls in pump station

Address problems with the hatch cover

Replace battery in UPS system

Replace dehumidifier and heater

Inspect electrical controls and replace any damaged or defective components

Description: Mission Pump Station - Including Mission Sewer Division Facilities

Condition: Pumping Equipment – All five pumps are in good running condition

Interior Valves and Piping (includes pump isolation, control and surge valves) – The pump check valves work well; however there is a lot of water bleeding through the vent lines at valve no.'s 2 and 3. Water is leaking from the stem of valve no. 2 onto the floor and into the basement. One surge valve on discharge header line has a pinhole in the casing. Piping, including flange bolts, in the discharge valve vaults is badly rusted. A leak is suspected on the suction line in the center suction valve vault where it enters the basement, as water is leaking through the pipe wall penetration. The two suction valves inside the valve pits on northwest area of station lack operating nuts, gears and/or handwheels. Water is leaking into Discharge Valve Vault No. 4 where it abuts to the building, probably related to the damaged roof downspout located directly over this vault

Instrumentation and SCADA System (includes flow meters and suction/discharge pressure transmitters) – The SCADA system is in poor condition. Replacement of the total SCADA System will be evaluated. The bearing sensor devices at the pumps are old and do not include a local readout temperature

Site and Fencing – Manager has requested that security cameras be installed to provide better site security. He also requested that a change of the gate key be considered to prohibit unauthorized access during nonworking hours. One of suction vaults has been covered over by sand/gravel stockpiles, thereby preventing operating the valve in the vault through the valve operator cover in the lid. There is vegetation growing inside the fenced transformer area. The concrete jumper walk on the east side of the building is improperly sloped and has no handrail, which poses a safety concern. Barbed wire is off of the fence and vines are growing on it at the southeast corner of the property

Pump Station Building Interior (Structural/Architectural) – Plaster ceiling in north office is badly damaged and partially collapsed, caused from previous roof leaks (now resolved). Walls, ceiling and drain line piping in men's locker room are in poor condition, also affected from previous roof leaks and water penetrating through the Vehicle Storage area floor above. Areas were noted in the ceiling under the Vehicle Storage area that are in a state of potential eminent failure. A detailed inspection and analysis on the structural condition of the floor in the Vehicle Storage area is planned soon. The Manager was advised to keep materials and equipment off of the affected areas. The Floor coating in the Vehicle Storage area is badly damaged and lifted in most areas, thereby allowing water and road salt to penetrate the concrete floor. Structural steel, piping, and conduit in the basement ceiling area

beneath the pumps are rusted from water, which had leaked from the pumps and valves through the floor openings. Manager requested that the room next to the first floor bathroom be converted to a women's bathroom and the present bathroom be designated as a men's room. Paint on walls of upstairs bathroom is peeling. Sand and gravel that entered the northwest vault needs to be removed. Paint on walls of the discharge valve vaults is badly peeled. Some of the concrete in the southeast valve pit is deteriorated. At the base of both sides of the overhead door in the basement there are openings that enable free access for rodents to enter the building

Pump Station Building Exterior (Structural/Architectural) – Windows (Lexan material) in pump station area are badly weathered and can't be viewed through. Mortar joints in lower stone facing and much of brick around station are in poor condition. Water appears to be leaking into the soffit at northeast corner of building. Water may be leaking at the crenellation ledge at the north end of east wall where it abuts brick wall, as evidenced by the efflorescence noted on the interior wall at this location. Sections of seam flashing on fascia on west wall are detached. Man door on east side of the building basement level is in poor condition and is not usable. The overhead door at the east side of building needs to be repaired. The door at the north penthouse is jammed in the frame and difficult to open/close. Material handling equipment for stockpiles against the building has damaged brick and stone and a roof drain downspout on the north wall is buried in the gravel stock piles

Electrical System (includes lighting and battery backup systems) – Switchgear system needs to be evaluated. Battery backup system (inverter type) works but should be replaced with a stand alone UPS type unit to minimize the possibility of surges. All lighting in pump station is in poor condition. Many of the exterior light fixtures do not work and should be replaced as requested by the Manager. Lighting in the north penthouse does not function. Exposed wires noted in a conduit at northeast corner of basement. A cover is missing and exposed wires noted in a junction box next to lighting panel in Vehicle Storage area. Some of the light fixtures in the former locker room area have been removed, but this area is no longer being used

Heating and Ventilation Systems – Presently there is no ventilation in the office on north side of pump area. One of the three unit heaters in the pump area and one of the heaters in the basement are inoperable. Two of four heaters in the Vehicle Storage area are inoperable. The first floor offices have no radiators for heat, only uninsulated piping, which poses a burning hazard and inability to control the heat. Pressure relief valve on the water service line near the Boiler Room was repaired. The exhaust duct on the outside of the north wall of the Vehicle Storage area is damaged, rusted and missing a bird screen

Plumbing System – Lavatory, shower, toilet fixtures and partitions in the men's basement locker room and the first floor bathroom are in poor condition and in need of replacement. One of the sinks upstairs was removed. Shower area in locker room needs to be upgraded. A hot water tank at the east end of the basement is not operational, as the gas supply has been disconnected. The drains in the upstairs bathroom clog readily and the slop sink drain is presently clogged. An open

and abandoned line that is tied into a drain line in the basement bathroom area should be removed and sealed

Auxiliary Systems – The fire alarm system is not in service. Its operation should be evaluated and the system upgraded as necessary to restore trouble-free service

Roofing, Gutters and Downspouts – The upper sloped, tiled roof on northeast corner appears to be leaking into the soffit area. Leak noted at the northwest roof drain line in the Vehicle Storage area. PVC roof downspout on the south side is split. A downspout at the northeast corner of building is damaged and partially removed

Miscellaneous – Crane hoist was previously inspected with unsafe deficiencies noted and reported. Wooden storage enclosure in the vehicle area is in poor condition and lighting in this room is nonfunctional due to roof leaks in the past. Manager requested that the wooden storage enclosure be removed and a security fence be installed around this storage area. Old unused Limitorque valve actuators are lying scattered in the basement and should be removed

Recommendations: Contain and convey leakage water from Pump Check Valve No. 2 to drain

Repair/replace surge valve on discharge header line

Replace rusted flange bolts and paint the flange and surrounding piping in valve vaults

Perform exploratory excavation on suction line outside basement

Provide/install operating nuts on two suction valves inside valve pits on north side of station

Seal the leak at Discharge Valve Vault No. 4 where it abuts to the building foundation

Replace SCADA system in upcoming project

Evaluate operation of bearing sensor devices and consider replacing with a digital type unit that would include a local readout temperature

Evaluate installation of security cameras and change of the gate access key as requested

Move sand and gravel stockpiles away from the entire north side of the building, construct additional storage bins along the fence line and remove materials from inside the northwest valve vault

Remove vegetation growing inside the fenced transformer area

Reconstruct the concrete jumper walk on the east side of the building and install hand railing or remove it entirely

Reinstall barbed wire on the fence and remove vines that are growing on it at the southeast corner of the property

Replace plaster ceiling in office area of pump station

Repair/repaint walls, ceiling, and drain line in men's locker room

Address recommendations following submission of the detailed inspection and analysis on the structural condition of the floor in the Vehicle Storage area

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Saline Pump Station

Condition:

Pumping Equipment – All pumps are in good operating condition. Pump No. 1 had failed but was rebuilt recently under the Motor and Pump Repair Contract. The capacitor was replaced at Pump Motor No. 3. The bases of Pump No.'s 2 and 3 are rusted

Interior Valves and Piping (includes pump isolation, control and surge valves) – The three new Willamette cone-type pump check valves are prematurely leaking. Piping in the subfloor trenches is rusted and/or paint peeling

Instrumentation and SCADA System (includes flowmeters, suction/discharge pressure transmitters) – Analog-type RTD Bearing sensor devices are failing. Some have been removed and others are not functional. New sensors and temperature monitoring equipment will is being installed at the motor bearings of Pump No. 1 under the Pump and Motor Repair contract. Replacement of entire SCADA System is being evaluated

Access Road and Pavements – The sidewalk/driveway in the front area of the pump station is badly deteriorated

Site Fencing – Vegetation is growing on fencing at rear and north side of the station

Pump Station Building Interior (Structural/Architectural) – Ceiling paint peeled where roof has leaked

Electrical System (includes lighting and battery backup systems) – Switchgear system needs to be evaluated. The battery backup system is no longer operable and needs to be replaced. The old formerly abandoned battery backup system should be removed from the station. The electrical service pole, conduit and cable are in poor condition and need to be replaced

Heating and Ventilation Systems – Bird screen on ventilation air intake is damaged and the damper does not operate automatically as intended. The two heaters work well

Roofing – Holes were noted in the roofing membrane at the base of the parapet wall flashing. Roofing is actively leaking during rain events. Soft spots have been noted in the roofing insulation. There is a deteriorated section of concrete docks plank overhead near the front door that should be replaced

Drainage System – Copper drain lines piped from pump base plates are too small to handle drainage water from pump packing

Auxiliary Systems – At least one of the smoke alarms is actively working, although the full operation of the fire alarm system should be evaluated and the system upgraded as necessary to restore trouble-free service

Recommendations:

Paint bases at Pump No.'s 1, 2 and 3

Resolve leaking problem at the three new Willamette cone-type pump check valves

Paint piping in the subfloor trenches

Replace analog-type RTD devices at Pump No.'s 2 and 3 with digital type

Replace SCADA system in upcoming project

Replace sidewalk/driveway in front area of pump station

Remove vines and vegetation from fence at rear and north side of site

Repaint ceiling in pump station after any roof leaks are resolved

Inspect/clean switchgear system and address deficiencies as needed

Replace battery backup system with UPS type system and remove the old formerly abandoned system

Replace the electrical service pole, conduit and cable

Repair/replace bird screen and damper at ventilation air intake louver

Repair or replace leaking roofing

Replace a deteriorated section of concrete docks plank overhead near the front door

Replace copper drain lines from pump bases and pump control valve vents with larger 1-1/2-inch minimum diameter drain piping

Evaluate fire alarm system and upgrade as necessary to restore trouble-free service

Recoat the floor in the vehicle storage area to prevent water migration into the concrete floor and the basement area below it

Prepare and coat the rusted structural steel, piping and conduit in basement area beneath the pumps

Evaluate conversion of the first floor bathroom to a women's bathroom

Repaint walls of upstairs bathroom

Remove sand and gravel from inside northwest vault

Paint walls of the discharge valve vaults and repair deteriorated concrete in the southeast valve pit

Seal opening at the base of both sides of the overhead door in the basement

Replace dulled Lexan window panes in pump station building at select locations

Repoint mortar joints in lower stone facing and brick around station

Inspect/resolve leaking condition at soffit at northeast corner of building

Inspect and reseal crenellation ledge around pump station, especially at north end of the east wall

Reattach seam flashing on fascia on pump station building

Replace man door and hardware on east side of building

Repair overhead door at the east side of building

Resolve problem with north penthouse door

Evaluate switchgear system

Replace battery backup system (inverter type) with a stand alone UPS type unit

Replace light fixtures in many areas of the station including the exterior fixtures and in the north penthouse

Address exposed wires in a conduit at northeast corner of basement

Reinstall cover and conceal exposed wires noted in a junction box next to lighting panel in vehicle storage area

Install exhaust vent fan and intake louver in the office on north side of pump area

Repair/replace inoperable unit heaters in pump area, basement, and Vehicle Storage area

Install radiators in office areas and insulate the steam piping

Repair, replace, coat and/or install bird screen at the exhaust duct on the outside of the north wall of the Vehicle Storage area

Replace plumbing fixtures in first floor bathroom

Replace plumbing fixtures and the shower in the basement locker area

Remove abandoned water heater in pump basement

Clean drains or replace drain piping in the upstairs bathroom

Remove and seal an open and abandoned line that is tied into a drain line in the basement bathroom area

Evaluate fire alarm system and upgrade as necessary to restore trouble-free service

Inspect gutters on leaking upper sloped, tiled roof in northeast corner for blockages

Investigate leak at the northwest roof drain line in the Vehicle Storage area

Replace PVC downspout with metal one on the south side of the building and confirm that drain boot is not clogged

Repair or replace downspout at northeast corner of building

Address deficiencies with the Crane Hoist

Replace wooden storage enclosure with fencing installed around storage area

Remove old unused Limitorque valve actuators from the basement

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Spring Hill Tanks

Condition: Interior Tank – KTA-Tator conducted a detailed inspection three years ago of the tank interior, tank exterior, exposed portion of the tank foundation, corrosion protection systems (if present) and all tank appurtenances. As per their report it was noted that both tanks were in good condition; however they recommended to spot paint the exterior of both tanks and re-inspect them within two years from now

Exterior Tank and Appurtenances – See above

Tank Appurtenances (ladders, hatchways, overflows, drains) – See above

Instrumentation and SCADA System – SCADA System is not functional, whereby the PLC needs to be replaced as soon as possible. Currently there is no level reading transmitted to the OC Center for this site. Replacement of the entire SCADA System is being evaluated

Site Fencing – Poor condition with sections collapsing. Heavy vegetation is growing on many sections

Recommendations: Address recommendations from KTA-Tator's inspection and report relative to the tanks and appurtenances

Replace SCADA system PLC to restore communication with the OC Center in the interim period until the SCADA system is replaced

Replace fencing

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Squirrel Hill Water Storage Tank

Condition: Interior Tank – A contract has been executed to paint the interior and exterior of this tank in the spring and address any other issues noted in an inspection report prepared previously by KTA Tator

Exterior Tank and Appurtenances – See above

Site Fencing – Some vegetation noted growing on fencing around site. Barbed wire missing from sections

Site Lighting – Air travel clearance light on top of tank requires frequent bulb change and is unsafe to access

Site Building Exterior (Structural/Architectural) – Metal shed, which is housing the level and telemetry equipment, is in poor condition

Chlorination Facilities – BissNuss, along with PWSA, completed the installation, testing and start-up of the new booster chlorination facilities, which were provided to reduce the formation of THM's in the water distribution system

Recommendations: Paint the interior and exterior of the tank as planned and address recommendations from KTA-Tator relative to the tanks and appurtenances as noted and recommended in their inspection report

Remove vegetation and replace missing barbed wire on site fencing

Replace air travel clearance light on top of tank with an LED strobe type of light

Replace site building to house and protect level and telemetry equipment; including electrical, lighting, heating and ventilation equipment facilities

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Water Treatment Plant

Clarifiers and Residual Sludge Distribution Chamber

Condition: Clarifier Building Exterior (Structural/Architectural) – Expansion joints in tank walls continue to leak despite having been resealed in the past. Leaks in the exterior clarifier walls still persist in (10) of the (14) joints, of which (5) are substantial leaks. Leaks at two of the joints on the north side of clarifiers are causing major icing problems on the access roadway. These joint leaking problems will be addressed initially in Clarifier No. 2 in the very near future

Clarifier Building Interior (Structural/Architectural) – The clarifier expansion joints on the interior walls, which are common to the influent and effluent flumes, have major leaks. The common horizontal joint between the influent and effluent flumes also leaks. This condition makes it very difficult to isolate the screening facilities from the clarifier influent flume and to perform maintenance activities in a drained basin. These leaking problems will be addressed in an upcoming project. Cracks are present in the underside of the concrete access walkway along the side of the clarifier flumes in several locations

Electrical and Controls – The covers are off of I/O Racks 15 and 16. The Motor Control equipment is being replaced in the Clarifier Equipment Replacement project. The electrical room will be climate controlled. Conduit with exposed wires noted lying on the ground at northeast corner of clarifiers. Cover panel was removed from one of MCC cabinet sections

Heating and Ventilation Equipment – (4) of the (8) vent fans on the clarifier roof appear to not be operational despite the controls being turned on. Although (4) fans are running, some of the intake louvers are closed (not opening automatically). The heating system air handlers on the Screen Room roof are not producing much heat, as at least half of the steam coils are defective, whereby there is presently little, if any, heat being delivered to the Clarifier Building. See report for "Screen Room", where the heating units are located, for recommendations

Roofing, Gutters and Downspouts – Metal roof is badly rusted over the entire area, being more concentrated along the edges of all panels. Several rain gutters and downspouts are rusted and leaking. Vent flashing boots at the east end of the roof are deteriorated and leaking water through the roofing

Mechanical Systems (water, plumbing, sanitary) - Sections of the insulation and jacketing on the steam piping in the exterior trench along the south side of the clarifiers have been damaged

Clarifier Equipment – Sludge collecting drive units, chain and flights and screw conveyors in Clarifier No. 4 have been replaced in a previous contract. Most of the sludge collection equipment is not operational in Clarifier No. 1, 2 and 3. Sludge collecting drive units, chain and flights and screw conveyors in these three Clarifiers are being replaced in the Clarifier Equipment Replacement project

Many of the effluent troughs leak in the clarifiers whereby maintenance activities in a drained basin are hampered. This problem is being addressed in the upcoming project relating to the repair of the Clarifier joints. The grating had broken at the center sludge collecting pit at Clarifier No. 2 and been removed. The same grating needs replaced in the pit in Clarifier No. 4 due to it being deteriorated

Valves and Gates – Operations Staff has replaced all four Sludge Valves recently, as the present valves wear out quickly due to the frequent operating service

Residual Sludge Distribution Chamber – Sluice gates, valves and instrumentation are in good working condition. A substantial accumulation of sludge is noted in the river at the outfall of this chamber

Exterior - Site - Accumulated silt material in the steam-piping trench should be removed to reduce the growth of the vegetation. Concrete sidewalk near carbon unloading area is deteriorated

Recommendations: Resolve leaks in the interior and exterior clarifier joints, in the slab between the influent and effluent flumes, and in the effluent troughs. Leakage water from the joints on the north side of the clarifiers should be conveyed to the nearest storm sewer until the joint leaks are resolved

Address repair of cracks in the underside of the concrete access walkway along the side of the clarifier flumes in several locations

Reinstall covers on I/O Racks 15 and 16

Address conduit with exposed wires lying on the ground at northeast corner of clarifiers

Reinstall cover of MCC cabinet section

Resolve malfunctions and/or insure that all vent fans and intake louvers are operational

Prepare and paint rusted areas on metal clarifier roof

Repair/replace leaking gutters and downspouts

Resolve leaks at vent flashing boots on the roof

Replace damaged sections of steam piping insulation and jacketing in the exterior trench along the south side of the clarifiers

Replace sludge collecting equipment including, drives, sprockets, chains and flights in the upcoming project

Replace damaged grating at the center sludge collecting pit at Clarifier No.'s 2 and 4

Remove accumulation of sludge in the river at the outfall of the Sludge Distribution Chamber

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Water Treatment Plant
Gatehouses, Fluoride Building, and Clearwell

Condition: Inlet Gatehouse - Vegetation is growing on walls of building. The supply fan or humidistat controls and air louver actuator are inoperable This condition contributes to the corrosion taking place in this building. Lighting and heating unit are in good condition. Electrical starter cabinets are badly corroded. Noted open conduit that passes through the front of the building, thereby enabling rodents to enter the building. The open tee section on the heater flue pipe should be closed with a metal cap in lieu of the plastic cover. Minor rust noted on roof. Clearwell level instrumentation was replaced but this information can not be transmitted back to the OC because the RTU at Aspinwall PS, where this signal is sent to, is not fully operational. See "Aspinwall Pump Station". The door threshold has been removed. The gravity ventilator above the attic space is off of the roof vent duct, thereby allowing rain water to enter the building. The sluice gates have not been operated for several years, therefore their operating condition in not known. Two of the three gates in this building are very old.

Outlet Gatehouse - Vegetation is growing on the walls of the building and around the building especially at the boat launch area (east side) and the south side of the building. The supply fan operates, but the exhaust air louver actuator is inoperable and stuck open. Lighting and heating unit are in good condition. The coating on the roof is peeling. Paint on soffit and fascia is peeling. The roof downspout at the northeast corner has been disconnected. Wiring is exposed at the unit heater and thermostat. Handwheel is off of the stand of one of the flume drain valves. The sluice gates have not been operated for several years, therefore their operating condition is not known. The sluice gates in this building are very old

Fluoride Building – The corrosive environment inside this building is deteriorating everything inside of it, including equipment, controls, heaters, exhaust ducts, thermostats, wall paint etc. Wall coating is peeling. One of the two vent fans operates only in the "manual" mode and the second one can not be operated due to deteriorated controls. The two supply air louver actuators are inoperable with one in an open position. Because chemical fumes accumulate inside the building, the method of control of ventilation should be evaluated. See "Recommendations". Two of four unit heaters are not functional. Wires are hanging from the two new heaters. A control thermostat is hanging off west wall with exposed wiring. Lighting fixtures

are in poor condition and some fixtures have fallen off the ceiling due to inadequate supports. Wires are hanging unsupported between some of the fixtures. Lights are not working above the chemical tanks. Proper operation of the emergency lighting system needs to be verified. Vegetation is growing on the walls of building and around the south and west sides of building. A tree is growing very close to the north side of building and should be removed. Soffit and fascia on west side needs to be painted. The safety shower has been removed from the building, whereby no safety protection is available. The hatch covers over the exterior chemical piping and electrical conduit access pits are badly deteriorated. Both of the two tank level indicators have been replaced. One of the two abandoned air compressors and the electrical disconnect switch was removed from the building, but a second abandoned compressor is still present.

Filtered Water Reservoir (Clearwell) - The outside lighting is in poor condition and/or nonfunctional. The access roadway is in poor condition. There is no record as to when this structure had ever been cleaned or any rehabilitation work performed since its construction nearly 95 years ago. Because this structure includes only one cell there is no backup redundant service available. There are no bypass capabilities for this structure. If the structure was to fail or the operation interrupted water could not be distributed to the water system. The Clearwell A project study has been previously conducted and report completed by HDR and Malcolm Pirney regarding the Upgrading of the Clearwell. It addressed the cleaning, structural and mechanical renovation of the Clearwell, and installation of a dividing wall and bypass facilities

Recommendations: Inlet Gatehouse

Remove vegetation from the walls of building

Resolve operational problems with vent fan and replace supply air louvers and actuators

Ventilation fans should be tied into the light circuit and also be activated using a timer and an overriding thermostat

Coat electrical starter cabinets

Seal open conduit that passes through the front of the building

Cap the open tee section on the heater flue pipe

Restore functioning of Clearwell level instrumentation

Reinstall the door threshold

Install a new gravity ventilator above on the roof vent duct

Exercise and test the operation of the sluice gates

Outlet Gatehouse

Remove vegetation on the building and around the building at the boat launch area (east side) and the south side of the building

Replace supply air louver actuator

Recoat the roof

Repaint the soffit and fascia

Reconnect roof downspout at the northeast

Conceal exposed wiring at the unit heater and thermostat

Install handwheel on stand of one of flume drain valves

Exercise and test the operation of the sluice gates

Fluoride Building

Prepare and repaint walls

Ventilation fans should be tied into the light circuit and be activated otherwise using a timer and an overriding thermostat

Replace deteriorated and/or malfunctioning controls for HV equipment

Replace two inoperable heating units or remove these abandoned units and controls if not needed. Remove nonfunctional thermostat controls, which were abandoned when the new heaters were installed with built in thermostats

Conceal wires at two new heaters

Re-secure control thermostat on west wall; or remove if not used

Replace supply air louver actuators

Replace lighting fixtures with a chemical-resistant sealed type fixture, provide adequate supporting and conceal exposed wires between some of the fixtures

Restore lighting above the chemical tanks

Resolve operational problems with emergency lights

Remove vegetation from the walls of building, tree next to building and around the south and west sides of building

Repair or replace deteriorated sections of soffit and fascia and repaint on the west side of building

Install a safety shower

Replace hatch covers over the exterior chemical piping and electrical conduit access pits with corrosion resistant material

Remove second abandoned air compressor

Repair/replace closer device on east door

Filtered Water Reservoir (Clearwell)

Replace outside lighting

Restore access roadway

Continue planning for cleaning, structural and mechanical renovation of the Clearwell, and installation of a dividing wall and bypass facilities

Remove accumulated silt material from the exterior steam piping trench at the south side of the clarifiers

Replace deteriorated concrete sidewalk near carbon unloading area

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Water Treatment Plant
Operations Building, Operations Control Center, and Laboratory

Condition:

Building Exterior (Structural/Architectural) – Cracked concrete and exposed rebar noted on wall corner at loading dock. Both Dock Levelers are inoperable. Operations Staff recommends removal of both units replacing one of them and plating over the second one. The concrete pad at the air conditioning unit is undermined

Building Interior (Structural/Architectural) – Old wood grid ceilings, along with lighting fixtures and ventilation diffusers, were replaced in all areas, where present, under the Laboratory Renovation project. Water leaches through cracks in the floor of the basement. If necessary a sump pump may be warranted to reduce ground water pressure and/or cracks should be pressure-grout sealed. There is an open pipe core in Mechanical Room wall that would enable entry of rodents. The sub-basement steam pipe trenches are no longer flooded since the sump pump that drains these trenches has been replaced. There is; however, a lot of debris in these trenches

Heating and Ventilation – The ventilation blower housings and duct connectors on the roof are deteriorated, whereby water may be able to enter the building. One of instrument air compressor cylinders in Mechanical Room is out of service. Water leaking from condensate unit in Mechanical Room is not contained and floods the floor. Some of the damper motors in the air handling system in the building are unreliable and need to be replaced or reset. Unit heater in walkway to Filter Building is not operational. The heat and ventilation duct system needs to be cleaned for the entire building. Ventilation grills above the toilet area on first floor are missing. There is only one heater in the Stock Room, which is not working well. Due to this condition the Stockroom is not heated to a comfortable temperature. Installation of operable windows in the Stockroom to provide ventilation in the summer months is being evaluated, as there is no AC in this space. The ventilation blower serving the hood above the Autoclave unit does not function

Electrical Systems – Various emergency lighting units throughout the building do not appear to be operable. A receptacle cover is missing on the exterior south wall in the basement access area. Lighting in the Mechanical Room is poor. Covers were removed from two electrical junction boxes with exposed wiring at northeast corner of basement. A cover is off one of the compartments of the MCC in the Mechanical Room

Mechanical Systems (water, plumbing, gas, sanitary) – It is noted that there is no main shut off valve on the gas service line inside the building. Cover is off the water fountain in the first floor bathroom. The water fountain was removed from the wall in the dock area while a leak in the drain line was repaired

Roofing – Good condition, although a recent inspection by Phoenix Roofing noted that there are a few repairs that are recommended to be made

Operations Control Center SCADA System – Upgrade/replacement of SCADA system is planned in the near future. It was reported that there are few spare parts available to service and to maintain the operations of the SCADA system with minimal interruption when equipment failures occur. The Filter Work Station in the OC Center will be replaced soon under an upcoming project with Lou Gesmond

Laboratory - The laboratory furniture and equipment has been replaced under the Laboratory Renovation project.

Miscellaneous – The Chromalox pavement heat control unit at the loading dock has detached from the supporting conduit and is hanging from its electrical power wire. Settlement of the concrete ramp, for which this controller serves, has probably damaged the heating elements; therefore repair of the system is probably not warranted. The unsupported control unit should be removed. Fire extinguisher is missing in the Mechanical Room. There are a lot of unused materials, equipment and archive records in the basement that need to be organized and consolidated

Recommendations:

Repair cracked concrete and exposed rebar on the wall corner at loading dock

Remove both inoperable dock levelers; replace one unit and plate over the second one

Install stone fill at concrete pad at the outdoor air conditioning unit

Address problem with water infiltration through the basement floor

Seal open pipe core in the wall of Mechanical Room

Remove debris from the sub-basement steam pipe trenches

Repair or seal the ventilation blower housings and duct connectors on the roof

Restore full operation of instrument air compressor in Mechanical Room

Collect and convey water leakage from the condensate unit to a drain in the Mechanical Room

Replace or reset the air handler damper motors as necessary

Replace unit heater in walkway to Filter Building

Clean heat and ventilation duct system serving the building

Replace missing ventilation grills above the toilet area in the first floor bathroom

Restore effective operation of the heater in the Stock Room

Install operable windows in the Stockroom if proposed

Restore operation of the ventilation blower serving the hood above the Autoclave unit

Restore operation of emergency lighting units in building

Replace receptacle cover on south exterior wall in the basement door access area

Upgrade lighting in Mechanical Room

Reinstall covers on two electrical junction boxes at northeast corner of basement

Reinstall a cover that is off of a compartment of the MCC in the Mechanical Room

Install a main shut off valve on the gas service line inside the building

Reinstall cover on water fountain in the first floor bathroom

Reinstall the water fountain in the dock area or permanently cap the utility lines

Address minor roof repairs as noted in the recent inspection

Upgrade/replace SCADA system in upcoming project

Procure spare parts as needed to service and to maintain reliable operations of SCADA system in the interim period until the system is replaced

Replace Filter Work Station in the OC Center

Remove the pavement heat control unit at the loading dock

Provide a fire extinguisher in the Mechanical Room

Organize and consolidate materials and equipment and archive records in the basement and discard unusable items

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Water Treatment Plant
Rapid Sand Filters

Condition:

Filters – Filtering system, including the underdrains, filtering media, backwash/air manifold piping and control panels, are being replaced under a project currently under design by CDM. The Operations Staff has completed installing filter media in many of the filters where it was low in order to maintain effective filtering operations. All filters are presently in service

Interior Valves – The hydraulic cylinder actuator on the 84-inch control valve from the Sedimentation Basins has been replaced by the Operations Staff. Many of the filters are experiencing numerous mechanical problems with the effluent and backwashing valves, resulting in cumbersome manual backwashing operations. Many of the hydraulic valve actuators in the piping gallery are leaking. Valve actuators will be rebuilt and/or replaced in the upcoming Filter Renovation project

Interior Piping – The backwash piping at the northwest area of the Pipe Gallery is badly corroded. The coupling on the backwash line at the west end of the Pipe Gallery is leaking. Many of the air scour lines piped into the underside of the filters are leaking through the pipe penetrations in the concrete ceiling in the North and South Garages, especially at Filter No.'s 6 and 10. The above problems will be addressed in the upcoming renovation project

Filter Control System (Electronic and Hydraulic systems) – Noted leaking utility water control lines and isolation valves at some of the Leopold Valve Packs. System components will be replaced/upgraded in the upcoming rehabilitation project

Backwash Pump and System – The pressure regulating valve in the Backwash valve pit is leaking water through a disconnected control line pipe. The Backwash Pump, including the spare unit, will be rebuilt under the upcoming filter renovation project

Filter System Auxiliary Systems - Some of fiberglass backwash troughs in the filters have been damaged in the past, resulting from failure of their support at the wall. The integrity of the trough supports will be evaluated and deficiencies addressed in the upcoming project

Air Scour Blower Room - Air Scour Blower No. 2 is off and out of service. Heater in this room has been repaired/replaced. Damper was removed on the air supply duct

Backwash Wastewater – Design and construction of a backwash water holding tank with pumping facilities and dedicated force main will be constructed in the upcoming filter renovation project to provide more efficient recycling of backwash water to the head of the plant. See discussion under "Raw Water Intakes - Backwash Retention Basin", which is located next to the West Intake Structure

Instrumentation - Abandoned BIF Backwash Valve Control instrumentation at west end of South Garage should be removed

Building Interior (Structural/Architectural) – Some of the cracks in the ceiling of the North and South Garage (beneath the filters) leak water from the filters. The grating over the piping/valve pits at the east end of the North Garage and the west end of the South Garage and Pipe Gallery are badly rusted and deteriorated. Some replacement grating was installed in the west end of the North Garage recently, but there is still grating in the South Garage that is in need of replacement. Water that is discharging from a pipe penetration at the Backwash pipe/valve pit at the west end of the South Garage was identified as coming from the sheared drain line pipe from the South Effluent Water conduit. This pipe/valve pit remains flooded due to overloading of the sump pump until the sheared pipe is repaired, with the excess water overflowing to the river. The concrete floor has settled in the Pipe Gallery adjacent to this sheared drain line. The repair of the sheared pipe and grouting of the voids under the floor will be addressed under a contract which is currently being executed. The valve pit at the west end of the North Garage is filled with water, which is backed up from the flooded pit in the South Garage. The frame of the access door from the Pipe Gallery to the west end of South Garage was knocked out of alignment. Exterior door at east end of North Garage has been repaired. The roll up housing was removed from the overhead door at the west end of the South Garage. The door at the west side is out of adjustment. There are spalled areas of concrete noted in the ceiling in the north garage

Building Exterior (Structural/Architectural) – Areas of spalling and deterioration of concrete walls noted at the west half of the south side of the building exterior. Some minor deterioration also noted on the north side and south end of the west side of the building

Electrical System (includes lighting) – Some new light fixtures were installed in the South Garage, but the old replaced fixtures were abandoned and left in place. There are many lighting lamps out in the Filter and the Pipe Galleries. Many of the lights in the garage areas are not lit or are not operational. Some light fixtures have been removed in the North Garage and wiring left exposed. Many of the emergency lighting fixtures do not operate throughout the Filter Building. Electrical junction box covers are off, with wiring hanging out at the sewage sump in South Garage and at the heating unit at the east end of North Garage. Receptacles and covers were removed in North Garage at Filters No.'s 2, 4 and 8. Cover was removed from the control panel at the overhead door at the west end of the North Garage. Some of the flood lights are not operational in the filter area. Wires are hanging exposed at the heater near the west end of the South Garage

Heating and Ventilation – Leaks in the condensate line at east end of North Garage were repaired. Presently there is no heat being delivered into the North Garage, resulting in conditions of high humidity and formation of heavy condensation. One of the heating system condensate pumps on the east end of North Garage area was repaired and put into service. Air handling-type heating unit at east end of South Garage has been abandoned, as it has been replaced with an overhead steam unit heater. The heating units at the west and east ends of the North Garage are not

operable. Condensate unit at the east end of South Garage is leaking water. Inoperable heaters in the Filter Gallery have been repaired or replaced. Half of the unit heaters in the Pipe Gallery are not operable. The two heat/ventilation fans between the Pipe Gallery and the two garages are off, as there is inadequate heat in the Pipe Gallery available to supplement heat to the Garage areas. The vent fan at the exterior southwest corner of building has been removed. Vent fan next to sewage sump in South Garage has been removed and the wall closed with plywood. The fan was left lying on the ground outside the building. The motor operators on the louvers at all four corners of the Filter Building have been removed, rendering the automatic louvers non-functional. Steam-flash hammering is present in the steam piping system at the east end of the North and South Garages. The heaters at each end of the South Garage have leaking coils. The heating unit at the east end is still in operation. Operation has been restored at four of the six ventilation fans on the Filter Building roof, but two are running with no air being discharged

Plumbing – The toilet at the east end of the South Garage is out of service

Roofing – Good condition, although a recent inspection noted that there are a few repairs that are recommended to be made

Drainage System and Sump Pumps – Operations Staff replaced the nonfunctional drainage sump pump at east end of the North Garage. One of sewage sump pumps in the south garage was replaced and a check valve replaced for the second unit. The abandoned controls at the sump pump at the west end of the South Garage should be removed

Chemical Storage and Feed Systems – Construction of containment walls around Sodium Hypochlorite tanks and pumps at the east end of the North Garage to serve the Prefilter Chlorination process and tanks at the west end of the North Garage to serve as a backup for the Disinfection Chlorination process is being addressed under a contract that is currently being executed. See "Ross Pump Station and Chemical Facilities; Chemical Conveying/Piping Systems"

Miscellaneous – Weather hood on airline at the south end of the exterior west wall is turned sideways. The top is missing from the fire extinguisher cabinet at the gasoline pump. Noted that there are no fire extinguishers in the Filter Gallery. The Chromalox pavement heat control unit at the east door has detached from the supporting conduit and is hanging from its feed wire. Metal lid on chemical line vault on north side of filters is broken (section missing). Noted core-drilled opening in exterior wall in the North Garage at Filter No. 10, which would enable entry of rodents. The VeederRoot leak detection system at the gasoline storage tank is working well

Recommendations: Address malfunctions with filter backwash and effluent valve operations by repairing or replacing faulty hydraulic valve actuators and/or hydraulic system control devices, (As required until addressed in upcoming filter renovation project). Maintain a supply of spare parts and components on hand, including complete actuators as needed

Resolve leaks in corroded piping and at coupling on backwash line at the west end of Pipe Gallery

Repair leaks in air scour lines piped into the underside of filters in the North and South Garages, especially at Filter No.'s 6 and 10

Resolve leaks in utility and hydraulic water lines and valves at filter valve control station racks in Pipe Gallery

Reconnect control line on pressure regulating valve in the Backwash Valve pit

Rebuild Backwash Pump, including the spare unit under the upcoming filter renovation project

Evaluate integrity of fiberglass backwash trough supports at the filter walls and address deficiencies

Restore operation of Air Scour Blower No. 2 in Blower Room. Reinstall operable damper on the air supply duct

Remove abandoned BIF instrumentation at west end of South Garage

Reseal major leaking cracks in ceiling of the North and South Garages, beneath filters

Replace deteriorated grating over the piping/valve pits in the west end of South Garage and Pipe Gallery and east end of the North Garage

Address repair of the sheared drain line at Effluent Water Conduit and grout filling of voids under the concrete floor at the west end of the Pipe Gallery under upcoming contract

Realign and re-anchor the door frame at southwest area of Pipe Gallery

Resolve problem with exterior door at east end of North Garage

Reinstall roll up cover on overhead door at the west end of the South Garage

Adjust and/or resecure the door at the west side

Closely inspect the ceiling in the Garages to identify spalled areas of concrete and address repairs as needed

Repair deteriorated areas of concrete walls of the building exterior where noted

Remove abandoned light fixtures in the South Garage

Re-lamp and/or replace nonfunctional or missing light fixtures in the Filter Gallery, Pipe Gallery and Garage areas as needed

Restore operation of emergency lighting fixtures throughout the Filter Building

Reinstall electrical junction box covers at the sewage sump in South Garage and at the heating unit at the east end of North Garage

Reinstall receptacles and covers where removed in North Garage at Filters No.'s 2, 4 and 8

Reinstall cover on control panel at the overhead door at west end of North Garage

Restore operation of flood lights in the filter area

Conceal wiring at the heater near the west end of the South Garage

Repair leak in steam piping at east end of South Garage and collect and convey seal water to drain

Repair heating unit at west end of the North Garage or replace it with an overhead steam unit heater and remove the abandoned heating unit

Remove abandoned air handler system at east end of the South Garage or restore its operation

Replace the vent fans at the southwest corner of building and next to the sewage pumps that have been removed

Repair the unit heaters in the Pipe Gallery

Install actuator devices to automate the operation of the air intake louvers at the four corners of Filter Building

Resolve steam-flash hammering in the piping system at east end of the North and South Garages. Operations Staff suggests placing heaters on the condensate line

Resolve leaks in the heaters at each end of the South Garage

Restore operation of two ventilation fans on the Filter Building roof

Restore operation of toilet at the east end of the South Garage

Address minor roof repairs as noted in the recent inspection report

Remove abandoned controls at the sump pump at the west end of the South Garage

Install containment walls around the Sodium Hypochlorite tanks at both locations in the North Garage as planned in upcoming project

Rotate weather hood on the air line at south end of the west exterior wall

Replace the top of the fire extinguisher cabinet at the gasoline pump

Provide fire extinguishers in the Filter Gallery as required

Resupport or remove the pavement heat control units at the east overhead door

Replace metal lid on chemical line vault on north side of filters

Seal core-drilled opening in exterior wall at Filter No. 10

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Water Treatment Plant
Raw Water Intakes – East and West Intake Facilities and Backwash Retention Basin

Condition: East Intake Building – The entrance door and hardware are in poor condition. Because the door can not be closed, leaves enter the building and accumulate. Fire extinguisher is missing and cabinet door glass is broken. Vegetation noted growing on building. Sample pump is in good operating condition. The grade of the ground in front of the building is very uneven, as previous excavations were never leveled off

East Intake Sluice Gates Screens - Sluice gates are in working condition. The two bar screens are in poor condition and in need of replacement. There is much debris and river sediment in front of the screens

West Intake Building - The entrance door and hardware is in poor and inoperable condition. Entrance access sidewalk in front of building is badly settled and/or missing. The soffit and fascia is deteriorated. Lighting is poor and should be upgraded to Metal Halide or HPS

West Intake Gates - The down-river sluice gate gear operator is out of service and needs to be rebuilt. The second gate is very hard to operate. The eight sluice gates outside the building are totally inoperable; however restoration of their operation is not warranted at this time. A cover is off of a receptacle in the building. Some of the concrete on the revetment wall at the river and the access steps next to the intake structure are deteriorated

Backwash Retention Basin – After the construction of a new storage tank and recycle pumps at the Filter Building under the Backwash Facilities project, this existing tank will be utilized as an overflow structure to serve an emergency back up operation for the new recycle pump station. See "Rapid Sand Filters". Mixer in this basin does not operate although it probably will not be needed in the future. The isolation / control valve on the effluent discharge line has been removed and should be replaced in order to be able to isolate this basin from river water when maintenance work is required at this basin. The concrete at the outside face of the south wall is noted to be in very poor condition. A valve access cover is off of the top of the tank

Recommendations: East Intake Building, Sluice Gates and Screens
Replace the entrance door and hardware
Repair fire extinguisher cabinet and provide an extinguisher

Remove vegetation from outside of building
Replace the bar screens; remove sediment from front of screens
Regrade and level the ground in front of the building

West Intake Building and Sluice Gates
Replace the entrance door and hardware
Replace sidewalk
Repair/replace and paint the soffit and fascia
Upgrade Lighting to Metal Halide or HPS
Refurbish the sluice gates and operators as required
Install cover on receptacle in the building
Repair or replace deteriorated concrete at the revetment wall and the access steps next to the structure

Backwash Retention Basin
Remove mixer in the basin
Replace isolation / control valve on effluent discharge line
Repair/restore concrete at the outside face of the south wall of basin
Install valve access cover on top of the tank

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Water Treatment Plant
Ross Pump Station and Chemical Facilities

Condition: Pumps – Pump No. 2 was rebuilt and is currently in service. Pump No.1 is running well. Pump No. 5 is out of service due to the inoperation of its check valve and problems with the switchgear. Pump No. 3 is currently being rebuilt under the Motor and Pump Repair contract. Pump No. 4 is presently not being used due to the high flow capacity of it and switchgear problems. Installation of a VFD controller is being proposed for this pump under the upcoming Switchgear Replacement project in order to operate it effectively at a lower flow rate. A pump inspection and recommended repairs are also proposed for Pump No. 4 in this project

Interior Valves and Piping (includes pump isolation, control and surge valves) – The hydraulic controls for the Pump No. 2 control check valve were replaced under the pump repair contract. The hydraulic controls at pump control valves at Pump No.'s 1, 4 and 5 are not operational or reliable, requiring a lot of maintenance. These controls are proposed to be replaced in the upcoming Switchgear Replacement project. The main butterfly valve at Pump No. 3 does not operate. The controls on the electric actuator of the 72" influent suction control valve do not work

Outside Valves and Piping - A leak is present in one of the distribution drain valves in front of the pump station, which discharges water continuously into the emergency access tunnel area. This water is discharged into the main building sump, as the tunnel drain is piped to the building sump. At the northeast corner of the station a washed out sink hole was noted, along with notable depressions in a large area of the yard, due to previous and/or the above present underground leak. The sidewalk also has been damaged. A valve manhole at the northeast corner of the station is open without a cover over it

Instrumentation and SCADA System – The bearing sensor devices at Pump No.'s 1, 4 and 5 (including the motors) are old and do not include a local readout temperature. The sensors at Pump No.'s 2 and 3 were replaced under the Motor and Pump Repair contract. Upgrade/replacement of the entire SCADA system is being evaluated

Pump Station Building Interior (Structural/Architectural) – Operation Staff is actively painting the Chemical Handling area. Rusting and deterioration of the electrical conduits, hand railing and piping and peeling paint on the walls noted at the northeast corner of the pump area. Interior wall between the chemical area and Boiler Room, constructed of drywall, is badly damaged, especially near the loading dock. Door and frame were removed from the west door of the Electrical Room in

the Chemical area and the door on east side of the room is jammed. Door at the Sewage Pump Room is jammed tight. Door frame in the locker room is loose from the wall. The closer is off of the west door into the chemical area. A floor cover plate at the first floor door going to the second floor is missing, posing a tripping hazard. Floor in the lime handling area is deteriorated. Some of wall control joints in pump area and in the suction valve pit at Water Pump No. 2 leak ground water and should be grout sealed. Noted and reported that chemical dust migrates from the chemical handling area to the control/office areas. Noted obsolete and unusable materials and parts stocked on the second and third floor. Old clarifier equipment will be removed after the completion of the Clarifier Renovation project

Pump Station Building Exterior (Structural/Architectural) – Stone on the lower portion of the south wall of station is badly deteriorated. Areas of stone facing around the station need to be repointed or recaulked. The pipe penetration on the east brick wall needs to be patched or sealed. Vegetation is growing on the front and sides of the station

Electrical System (includes lighting and battery back-up systems) – The batteries in the Battery Backup system have been replaced. Many light bulbs in the pump area are out. These light fixtures are old mercury vapor type, which warrant replacement. Lighting fixtures on the second floor (including the air handler equipment room) and third floor chemical areas are in poor condition with many lamps out. The Motor Control equipment is outdated and unreliable. Replacement of the MCC equipment is being addressed in the upcoming Switchgear Replacement project. The problem with the electrical exciter at Pump No. 3 motor was repaired. Emergency light fixtures throughout station do not operate. Cover is off of electrical junction box and wires hanging out near the Deaerator Unit on third floor. Poor lighting is noted in the Sewage Sump Room. A cover is off of an electrical box in Pump No. 1 Dehumidifier Pit, with wires hanging out. Wires are hanging out of a motor connection box at one of the Ferric Chloride Feed pumps. The exit sign is off of the west door on the second floor

Heating and Ventilation – Two roof-mounted belt driven ventilation fans on third floor operate, but the exhaust damper at the west fan does not open and the air intake louvers need adjusted or do not operate. There appears to be no ventilation in the chemical feed area. One of the two vent fans in the ceiling of the overhead walkway is not operable. The vent fan in the Sewage Pump Room is not functional. Air dryer at the compressor on the third floor is not operable. The old abandoned compressor in this area should be removed

Plumbing System – Packing is leaking badly at valve on 6" water line at northwest corner of station at the lower mezzanine platform. Many of the isolation valves on the house water line do not shut tightly. The PRV on the water service line near Bin No. 9 leaks continuously

Auxiliary Systems – The pump bearing pressure lubrication systems and pump priming systems work well

Dehumidifying System in Valve Vault at Pump No.'s 1 and 2 – Dehumidifier is not operational. Piping and grating in the East Valve Pit is badly rusted and needs to be

painted. Water previously noted to be constantly flowing from Discharge Valve No. 1 in this pit was resolved. The metal roofing is rusted over the entire pit. The top of the concrete valve vault next to the Dehumidifier enclosure is deteriorated, probably due to missing roof downspout in this area

Roofing, Gutters and Downspouts – Metal roof rusted in areas mainly at the pipe penetrations. Roof drain downspout missing on the northeast corner of station and lower portion of downspout is missing on southeast corner

Drainage System and Sump Pumps – Turbine type drainage pump in pump area is in poor condition and out of service. The gas-driven stand-by pump in pump area is inoperable, intended to handle flooding waters. One of the submersible sump pumps has a bad seal, although it is still in service. The other pump needs to be re-stabilized often, as it keeps moving of off of its support base on the sump bottom. Since it has been reported that these pumps have many maintenance issues, consideration should be given to replacing them with a different brand of pump. Sump pump at Water Pump No. 3 is out of service and been temporarily replaced with a portable submersible pump. Sewage sump pit cover is open

Gas Building on the east side of station - Door is in poor condition and lower panel is missing

Chemical Storage and Feed Equipment and Systems – The Bindicator level devices for dry chemicals are not functional. The Bindicator liquid tank level devices are not functional. The Potassium Permanganate Feeder equipment does not provide reliable operation and does not adequately contain chemical dust. Operations Staff is proposing to replace the present potassium permanganate feed system with one that would feed liquid sodium permanganate. Initially the chemical would be stored and pumped from the three spare chemical waste holding tanks next to the Boiler Room. Operations Staff is evaluating a concept to ultimately utilize the Sodium Hypochlorite storage tanks for the liquid sodium permanganate. See "Chemical Conveying/Piping Systems" below. Bin dust-collectors on third floor have not been inspected or serviced for an extended period of time to verify effective and efficient operation. Old abandoned dust collectors that are stored on the third floor should be removed from the station. The soda ash product is delivered at times with solid clumps, whereby the feeders readily clog. To address this, consideration should be given to install a screen at the chemical fill line inside the two bins. The soda ash pump at Bin No. 4 operates noisily, and is reported to routinely have couplings fail. This feed pump and motor, as well as the second Soda Ash pump and motor at Bin No. 7, is proposed to be replaced soon. Vibrator at Bin No. 7 is inoperable. Ferric Chloride pumps are old and in need of replacement to maintain reliable service. One of these pumps will be replaced soon with a Prominent brand pump. The dry chemical feeder totalizers do not work at Bin No.'s 4, 7 and 9.

Sodium Hypochlorite Building – The building is in good condition, however, sections of roofing counter flashing are dislodged and need to be recaulked. The Sodium Hypochlorite tank that is presently serving as a caustic soda tank has not been relabeled as such. Leaking noted at pressure gauge tap, level instrument piping and outlet shut-off valve at above tank. Numerous leaks noted in caustic soda piping

system. East safety shower pedal actuator is broken. Both vent fans do not operate. Sodium Hypochlorite pumps are experiencing operational problems with the VFD controls. Operations Staff have purchased a new Prominent brand pump with a built in VFD and degasification feature to replace one of the four existing pumps

Chemical Conveying/Piping Systems - The lime piping to the Screen Room is clogging often and being "pigged out" and or jet cleaned routinely. The sodium hypochlorite feed piping throughout the plant has been a continued maintenance problem whereby it readily clogs, especially at valves and fittings due to the deposition of minerals in the dilution water. One of the lines has been jet cleaned and the other line is presently being jet cleaned. The Operations Staff had installed storage tanks at the east and west end of the North Garage beneath the Rapid Sand Filters in order to be closer to the dosing points, eliminating the need to be conveyed through the clogging-prone piping system. This chemical is presently being fed exclusively from this location. Also see "Rapid Sand Filters" where these storage tanks are installed. Operations Staff are evaluating the permanent relocation of the sodium hypochlorite storage pumping facilities to the west side of the Filter Building, to be housed in a proposed building structure

PWSA continues to deal with problems whereby the underground soda ash piping clogs up often from Ross Pump Station to the discharge point in the Inlet Gatehouse, due to total blockage from chemical deposition. Operations Staff are evaluating the permanent relocation of the storage and feed equipment for soda ash to the Fluoride Building or a location closer to the injection point in the Inlet Gatehouse

Miscellaneous – Overhead crane rail system and hoist are old, although in working condition. Old equipment and grating removed from the lime area was left outside the pump station at the southeast corner

Recommendations: Incorporate a VFD controller at Pump #4, inspect the pump, and obtain repair recommendations for this pump under the upcoming Switchgear Replacement contract

Repair or replace the present hydraulic controls for pump control valves at Pump No.'s 1, 4 and 5 with a Rodney Hunt controller under the upcoming contract

Resolve problem with Pump No. 3 butterfly valve

Resolve problems with the controls on the electric actuator of the 72" influent suction control valve

Resolve leak in one of distribution drain valves in front of the pump station

Fill in and regrade the sink hole and depressions in the yard at the northeast corner of the station and replace damaged sidewalk (after all leaks are resolved)

Install a cover over the valve manhole at the northeast corner of the station

Replace bearing temperature monitoring equipment at Pump No.'s 1, 4 and 5

Upgrade/replace SCADA system, including all computer equipment

Coat and/or replace rusted deteriorated conduits, hand railing and piping and paint walls at the northeast corner of pump area

Replace damaged areas of drywall in chemical area with a more durable building material

Reinstall and/or resolve problems with doors on Electrical Room, Locker Room, Chemical area, and Sewage Pump Room

Reinstall floor cover plate at the first floor door going to the second floor

Repair and coat floor in the lime handling area

Grout-seal the leaking wall control joints in pump area

Evaluate construction of a partition wall with access door and viewing windows between chemical handling area and control/office area

Remove obsolete and unusable materials and parts from second and third floors

Repair/restore stone on the lower portion of south wall

Repoint and/or recaulk areas of the stone facing around station

Patch/seal pipe penetration on the east wall

Remove vegetation from the building

In the pump area replace mercury vapor type lights with metal halide or high-pressure sodium type

Replace lighting fixtures on the second floor (including the air handler equipment room) and third floor chemical areas with chemically resistant sealed type of fixtures

Replace MCC equipment in upcoming project

Restore operation of emergency light fixtures throughout station

Reinstall cover on electrical junction box near the Deaerator Unit on third floor

Restore or improve lighting in the Sewage Sump Room

Reinstall cover on electrical box in Pump No. 1 Dehumidifier Enclosure

Address wires hanging out of a motor connection box at one of the Ferric Chloride Feed pumps

Install exit at the west door on the second floor

Resolve problem with exhaust damper on the west roof vent fan and the air intake dampers on the third floor.

Provide ventilation facilities in the chemical feed area including exhaust fan(s) and motorized air intake damper(s)

Restore operation of vent fan in ceiling of overhead walkway

Restore operation the vent fan in the Sewage Pump Room

Restore operation of the Air Dryer at the compressor on the third floor

Remove the old abandoned compressor on the third floor

Resolve problem with leaking packing at valve on 6" water line at northwest corner of station at lower Mezzanine platform

Resolve leaking problems with the isolation valves on the house water line or replace the valves

Resolve leaking problem at the PRV on the water service line near Bin No. 9

Restore operation of dehumidifier unit in outside valve pit

Paint piping and replace grating in east valve pit in Dehumidifier enclosure with fiberglass material

Repair and/or recoat rusted areas of the Dehumidifier enclosure roof

Repair or reconstruct top of the concrete valve vault next to the Dehumidifier enclosure

Coat rusted areas of metal roof at pipe penetrations on pump station

Replace missing roof drain downspouts

Restore operation of turbine type drainage pump or replace with a submersible type pump

Restore operation of gas driven stand-by flood water drainage pump

Resolve problems with the main submersible sump pumps or replace them with a different brand of pump

Restore operation of sump pump at Water Pump No. 3

Close/seal sewage sump pit cover

Replace the door on the Gas Building

Replace Bindicator level equipment for dry chemicals and repair or replace the level devices at the liquid bins

Replace the present potassium permanganate feed system with liquid sodium permanganate using the three spare chemical waste holding tanks next to the boiler room initially and then converting the Sodium Hypochlorite tanks later

Inspect and service chemical bin dust-collectors on third floor to verify effective and efficient operation

Remove old abandoned dust collectors on the third floor from the station

Install a screen at chemical fill line inside two soda ash bins

Replace both Soda Ash pumps at Bin No.'s 4 and 7

Repair or replace vibrator at Bin No. 7

Replace Ferric Chloride pumps (at least one initially as proposed)

Restore operation of dry chemical feeder totalizers at Bin No.'s 4, 7 and 9

Sodium Hypochlorite Building

- Resecure and recaulk roofing counter flashing
- Relabel Sodium Hypochlorite tank that is presently serving to store caustic soda
- Cap pressure gauge tap and resolve leak at outlet valve and level instrument piping at large converted caustic soda storage tank
- Resolve leaks in caustic soda piping system

- Repair east safety shower pedal actuator
- Restore operation of both vent fans
- Install a new Prominent brand pump to replace one of the four existing Hypo Feed pumps

Operations Staff to evaluate the permanent relocation of the sodium hypochlorite storage pumping facilities to the west side of the Filter Building, to be housed in a proposed building structure

Operations Staff to evaluate the permanent relocation of the storage and feed equipment for soda ash to the Fluoride building or a location closer to the injection point in the Inlet Gatehouse

Remove old lime equipment and grating outside the pump station at the southeast corner

PITTSBURGH WATER AND SEWER AUTHORITY
Facilities Evaluation

December 2009

Description: Water Treatment Plant

Screen Room, Flash Mix Tanks and Carbon Facilities

Condition: Traveling Screens and Sluice Gates – The two traveling screens have been replaced, new debris compactor unit has been installed, and the four isolation sluice gates have been rebuilt in theTraveling Screen Replacement project

Screen Room Exterior (Structural/Architectural – Good condition, although the man door on the east side is in poor condition and the overhead door and controls in the lower level are in poor condition, although it does operate. A new concrete ramp was constructed at the loading area to accommodate the fork truck in managing the screen debris hoppers

Screen Room Interior (Structural/Architectural – The Flash Mix Tank "sight pipe" openings in the floor should have a cap installed over them (two places in Screen Room and one in the Electrical Room). Water continuously leaks through the construction joint next to the lower Carbon Slurry Transfer pit, causing water damage to equipment and piping systems. This water was confirmed to be treated water, thereby indicating that there may be an underground leak in a utility water line in this area. Panic hardware on one of the Electrical Room doors has been reinstalled. The concrete hatch covers have been replaced with a hinged and motor-operated aluminum hatch cover under the Traveling Screen Replacement project to accommodate frequent use in emptying the screen debris hoppers. The bathroom door frame has detached from its wall supports. The sink and lab bench in the Screen Control Room are in poor condition

Carbon Feed Equipment – The two Carbon Slurry Transfer pumps are in poor condition and unreliable. One of the three Carbon Transfer pumps was recently replaced. A second pump is planned to be replaced in the near future. The third pump is in good operating condition. Two of the three Rotodip Carbon Feeders and all three of the Carbon Feeder Mixers do not operate. The carbon unloading system is old, leaks carbon dust and provides inefficient operation. It was reported that one of the carbon storage tanks fills with water as noted when the tank is taken out of service

Flash Mix Tanks – Flash Mixer No. 1 and No. 2 were recently replaced by the Operations Staff and Flash Mixer No. 3 and No. 4 are scheduled to be replaced soon

Instrumentation and SCADA System - Bindicator level equipment at carbon feeders is not operational and one unit is missing. Upgrade/replacement of SCADA system is anticipated in the near future

Electrical System (includes lighting) – Lights in the Screen Room were re-lamped and lenses cleaned and the motor control center was replaced under the Traveling Screen Replacement project. The plunger type light switches on the lower level are stuck and do not function

Heating and Ventilation – A new ventilation fan and automatic air intake louver was installed under the Traveling Screen Replacement project to serve the Screen Room. Condensate tank and associated piping in Carbon Slurry Transfer pit area are badly deteriorated. The electric heater in the Carbon Transfer Pump area and the heater in the Carbon Slurry Transfer pit are inoperable. Wiring had been pulled out of the conduit at the heater in the Carbon Transfer pit. Ventilation fan serving the Carbon Slurry Transfer pit area is not operational. Abandoned wiring at the removed heating unit in Flash Mix Tank area is exposed. The flexible duct connector at the north rooftop air handler is deteriorated, thereby allowing rainwater to enter the unit and leak through the roof. Both rooftop air handling units are presently operating in a reduced capacity due to leaking coils. The condensate unit in the Screen Room has been taken out of service and the condensate directed back to Ross PS by gravity. This abandoned equipment should be removed. The two ventilation fans in the Electrical Room and the fan in the bathroom are off and/or not operational. A recessed wall-mounted heater had been removed in the Screen Room, leaving an opening in the wall. The steam heater serving the lower level operates very noisily. A drive belt is off of one of the instrument air compressor cylinders in the Electrical Room. There appears to be an air leak at the air dryer at the compressor and the cooling coil is very dirty. Piping insulation is damaged on water and steam lines. It had been removed from the water line next to the Screen Control Room causing excessive condensation and the insulation fell off of steam lines in the lower level

Roofing, Gutters and Downspouts – Many leaks are noted in the roof with major leakage noted at the roof hatch. Some leakage may be attributed to the deteriorated duct connector at the rooftop air handler unit. Moss is growing along the edges of the roof. Curb caps at the air handler units are rusting. The PVC roof drain piping at the east end is cracked. Roof repairs are being proposed under an active contract

Mechanical Systems (water, plumbing, sanitary) – Lavatory is missing in bathroom. The floor drains in the Screen Room were unclogged

Vault for 48" Influent Control Valve – Piping is rusted and needs painted. Access door is jammed and frame is loose. Flowmeter works well. The Influent Control Valve works most of the time, with periodic malfunctions. The heaters do not appear to be working, whereby there presently is no heat in the valve vault

Miscellaneous – The fire extinguisher is missing from the carbon feed area

Recommendations: Repair or replace man door

Evaluate replacement of overhead door and controls

Cover the Flash Mix tank "sight" holes in the floor (three places)

Investigate and/or resolve problem with probable leaking underground water line next to Carbon Slurry Transfer pit

Resecure the bathroom door frame

Replace the sink and lab bench in the Screen Control Room

Replace two Carbon Slurry Transfer pumps, one Carbon Transfer pump, two Carbon Rotodip Feeders, and three Carbon Feeder Mixer motors

Upgrade the carbon unloading equipment to a more efficient system

Replace two Flash Tank Mixers as scheduled

Service or replace Bindicator level equipment at Carbon Feeders

Upgrade SCADA system

Address the malfunction of the plunger type light switches on the lower level

Replace condensate tank, heating unit and associated piping in the lower Carbon Slurry Transfer pit area. Restore wiring at the heating unit

Replace electrical heater in the Carbon Transfer Pump area

Service or replace the ceiling-mounted ventilation fan serving the Carbon Slurry Transfer pit area

Remove heater wiring back to junction box at a Flash Mix Tank area heater

Replace flex duct connector at both rooftop air handler units and restore full operation to both units

Remove abandoned condensate unit in the Screen Room

Restore operation of two ventilation fans in the Electrical Room and the fan in the bathroom

Close/trim opening in wall where recessed wall-mounted heater had been removed

Resolve noise problem with the steam heater serving the lower level

Reinstall the drive belt on one the instrument air compressor cylinders in the Electrical Room

Fix air leak at the air dryer at the above compressor and clean the cooling coil

Repair and/or replace damaged/missing piping insulation on water and steam lines

Closely inspect condition of roofing and address repairs or total replacement as needed under an active contract. Coat the rusted curb caps

Provide a lavatory in bathroom

Prepare and paint piping in 48" Valve Vault

Resolve problems with access door at 48" Valve Vault

Address malfunctions with the 48" Influent Control Valve

Resolve problems with the heaters in the 48" Valve Vault

Provide a fire extinguisher in the Carbon Feed area

Description: Water Treatment Plant
Sedimentation Basins

Condition: Access Road and Pavements – Poor condition.

Site – Drainage problems on the north side of site with water ponding. Surface runoff water entering the basins along the north side

Fencing – Fencing is in poor condition with many patches noted and sections partially collapsed on the north and east sides of site

Gate chamber sluice gates - Operating condition is not known, as they have not been operated for several years.

Old Administration Building – Plywood window closures and soffit and fascia need painted. More than half of the roof gutters and downspouts are missing. Vines growing on walls of building

Instrumentation and SCADA System (includes level pressure transmitter) – Upgrade/replacement of system is planned in the near future. The level instrument is no longer being received at the OC Center

Miscellaneous – Yard hydrants are very old and may not be operable. One unit at the East Gate Chamber was torn out of the ground. Two manholes at the east side of the building are missing castings and lids, posing a safety hazard

Recommendations: Pave the roadway from the shopping center to the Old Administration Building

Grade the area immediately adjacent to the basins to drain surface water away from the basins on the north side

Replace damaged sections of fencing and posts as needed

Paint plywood window panels and soffit and fascia

Install new gutters and downspouts where missing

Remove vines from building walls

Evaluate instrumentation and SCADA requirements

Restore operation of basin level instrumentation

Replace yard hydrants

Install lids on open manholes

Description: Water Treatment Plant
Site and Grounds

Condition: Access Road and Pavements – Access road to Inlet Gatehouse is in very poor condition. Sections of pavement at the north side of Aspinwall Pump Station are in poor condition. Many potholes noted throughout the roadways within the plant site

Fencing – The fence on the east and south sides of Ross Pump Station is deteriorated and collapsing. Heavy vegetation is also growing on both sides of the fence northwest of the pump station and on the outside of the fence on the east side of the station. Fencing at northeast corner of the Clarifiers has been replaced with new posts

Emergency Access Tunnel – Tunnel is flooded with water, probably due to clogged drain(s) from leaves and vegetation. Because of the flooded condition this tunnel is not usable for emergency access or egress. Water continuously discharges from a wash out line from the yard piping. See "Ross Pump Station – Outside Valves and Piping"

Miscellaneous – The railroad crossing signs in front of the plant should be upgraded for better visibility

Recommendations: Repair or replace deteriorated sections of concrete pavement as noted above, seal cracks and patch potholes throughout the plant site

Remove vegetation from the fencing at Ross Pump Station and East Gate Chamber and repair or replace the fencing as necessary

Remove leaves and vegetation from clogged drain(s) at Emergency Access Tunnel

Upgrade railroad crossing signs for better visibility

APPENDIX F

MUNICIPAL BOND INSURANCE POLICY

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FINANCIAL SECURITY ASSURANCE®

MUNICIPAL BOND INSURANCE POLICY

ISSUER:

BONDS:

Policy No.: -N

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.
31 West 52nd Street, New York, N.Y. 10019

(212) 826-0100

Form 500NY (5/90)

APPENDIX G

INFORMATION REGARDING THE BANKS

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Series 2008C-1A Letter of Credit.

Northwest Bancshares, Inc. ("Northwest Bank") is a Pennsylvania banking association organized under the laws of the Commonwealth of Pennsylvania, with its principal executive offices located in Warren, Pennsylvania. Northwest Bancshares, Inc. is a holding company of Northwest Savings Bank. The Northwest Bancshares, Inc. is engaged in a general consumer banking, commercial banking and trust business, offering a wide range of commercial, corporate, international, financial market, retail and fiduciary banking services. As of March 31, 2010, Northwest Bancshares, Inc. had consolidated assets of $8.1 billion, consolidated deposits of $5.7 billion and stockholder's equity of $1.3 billion based on regulatory accounting principles.

Additional information regarding Northwest Bancshares, Inc is set forth in its Annual Report on Form 10-K for the fiscal year ended December 31, 2009, together with any subsequent documents it filed with the Securities and Exchange Commission (the "*SEC*") pursuant to the Securities Exchange Act of 1934, as amended (the "*Exchange Act*"). Reference for its description is found at: NASDAQ Global Select Market - NWBI.

Additional information regarding the foregoing is available from the filings made by the Northwest Bancshares, Inc with the SEC, which filings can be inspected and copied at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549, United States, at prescribed rates. In addition, the SEC maintains a website at http://www.sec.gov, which contains reports, proxy statements and other information regarding registrants that file such information electronically with the SEC.

The information concerning Northwest Bancshares, Inc contained herein is furnished solely to provide limited introductory information and does not purport to be comprehensive. Such information is qualified in its entirety by the detailed information appearing in the documents and financial statements referenced herein.

Northwest Bancshares, Inc will provide copies of the most recent Northwest Bancorp, Inc Annual Report on Form 10-K, any subsequent reports on Form 10-Q, and any required reports on Form 8-K (in each case as filed with the SEC pursuant to the Exchange Act), and the publicly available portions of the most recent quarterly Call Report of Northwest Bancshares, Inc delivered to the Comptroller of the Currency, without charge, to each person to whom this document is delivered, on the written request of such person. Written requests should be directed to:

Northwest Bancshares, Inc
100 Liberty Street
Warren, PA 16365
Attention: Corporate Communications

PAYMENTS OF PRINCIPAL AND INTEREST ON THE 2008C-1A TERM BONDS WILL BE MADE FROM DRAWINGS UNDER THE 2008C-1A LETTER OF CREDIT. PAYMENTS OF THE PURCHASE PRICE OF THE 2008C-1A BONDS WILL BE MADE FROM DRAWINGS UNDER THE 2008C-1A LETTER OF CREDIT IF REMARKETING PROCEEDS ARE NOT AVAILABLE. THE 2008C-1A BONDS ARE NOT INSURED BY THE FEDERAL DEPOSIT INSURANCE CORPORATION OR ANY OTHER GOVERNMENTAL AGENCY AND ARE SUBJECT TO CERTAIN INVESTMENT RISKS, INCLUDING POSSIBLE LOSS OF THE PRINCIPAL AMOUNT INVESTED.

The delivery hereof shall not create any implication that there has been no change in the affairs of Northwest Bancshares, Inc since the date hereof, or that the information contained or referred to in this Appendix G is correct as of any time subsequent to its date.

Series 2008C-1B Letter of Credit.

ESB Bank is a wholly owned subsidiary of ESB Financial Corporation (referred herein as "ESB Bank"), a Pennsylvania banking association organized under the laws of the Commonwealth of Pennsylvania, with its principal executive offices located in Ellwood City, Pennsylvania. ESB Bank is engaged in a general consumer banking, commercial banking and trust business, offering a wide range of commercial, corporate, international, financial market, retail and fiduciary banking services. As of June 30, 2010, ESB Bank had consolidated assets of $1.9 billion (unaudited), consolidated deposits of $993 million (unaudited), and stockholder's equity of $173 million (unaudited), based on regulatory accounting principles.

Additional information regarding ESB Bank is set forth in its Annual Report on Form 10-K for the fiscal year ended December 31, 2009, together with any subsequent documents it filed with the Securities and Exchange Commission (the "*SEC*") pursuant to the Securities Exchange Act of 1934, as amended (the "*Exchange Act*"). Reference for its description is found at: NASDAQ - ESBF.

Additional information regarding the foregoing is available from the filings made by the ESB Bank, with the SEC, which filings can be inspected and copied at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549, United States, at prescribed rates. In addition, the SEC maintains a website at http://www.sec.gov, which contains reports, proxy statements and other information regarding registrants that file such information electronically with the SEC.

The information concerning ESB Bank contained herein is furnished solely to provide limited introductory information and does not purport to be comprehensive. Such information is qualified in its entirety by the detailed information appearing in the documents and financial statements referenced herein.

ESB Bank will provide copies of the most recent ESB Bank Annual Report on Form 10-K, any subsequent reports on Form 10-Q, and any required reports on Form 8-K (in each case as filed with the SEC pursuant to the Exchange Act), and the publicly available portions of the most recent quarterly Call Report of the ESB Bank delivered to the Comptroller of the Currency, without charge, to each person to whom this document is delivered, on the written request of such person. Written requests should be directed to:

ESB Financial Corporation
Attn Frank D. Martz
600 Lawrence Avenue
Ellwood City, PA 16117

PAYMENTS OF PRINCIPAL AND INTEREST ON THE 2008C-1B TERM BONDS WILL BE MADE FROM DRAWINGS UNDER THE 2008C-1B LETTER OF CREDIT. PAYMENTS OF THE PURCHASE PRICE OF THE 2008C-1B BONDS WILL BE MADE FROM DRAWINGS UNDER THE 2008C-1B LETTER OF CREDIT IF REMARKETING PROCEEDS ARE NOT AVAILABLE. THE 2008C-1B BONDS ARE NOT INSURED BY THE FEDERAL DEPOSIT INSURANCE CORPORATION OR ANY OTHER GOVERNMENTAL AGENCY AND ARE SUBJECT TO CERTAIN INVESTMENT RISKS, INCLUDING POSSIBLE LOSS OF THE PRINCIPAL AMOUNT INVESTED.

The delivery hereof shall not create any implication that there has been no change in the affairs of ESB Bank since the date hereof, or that the information contained or referred to in this Appendix G is correct as of any time subsequent to its date.

Series 2008C-1C Letter of Credit.

On December 7, 2009, Washington Federal Savings Bank received official notification that its application to convert to a Pennsylvania state savings bank had been approved. Effective December 28, 2009, the Bank became Washington Financial Bank – a state chartered savings bank regulated by the Commonwealth of Pennsylvania and the FDIC. The Bank remains 100% owned by WFSB Inc. which is 100% owned by WFSB Mutual Holding Company. The Bank is headquartered in Washington Pennsylvania with branch locations throughout Washington County, Pennsylvania. Washington Financial Bank is engaged in general consumer banking and commercial banking, offering a wide range of commercial, and retail banking services. As of June 30, 2010, Washington Financial Bank had consolidated assets of $782 million (unaudited), deposits of $647 million (unaudited) and Retained Earnings of $88 million (unaudited) based on regulatory accounting principles.

Additional information regarding Washington Financial Bank is set forth in its Annual Report for the fiscal year ended June 30, 2010. Quarterly financial information may be found on the FDIC web site.

The information concerning Washington Financial Bank contained herein is furnished solely to provide limited introductory information and does not purport to be comprehensive. Such information is qualified in its entirety by the detailed information appearing in the documents and financial statements referenced herein.

Washington Financial Bank will provide copies of the most recent Annual Report.

Washington Financial Bank
77 S. Main Street
Washington PA, 15301

PAYMENTS OF PRINCIPAL AND INTEREST ON THE 2008C-1C TERM BONDS WILL BE MADE FROM DRAWINGS UNDER THE 2008C-1C LETTER OF CREDIT. PAYMENTS OF THE PURCHASE PRICE OF THE 2008C-1C BONDS WILL BE MADE FROM DRAWINGS UNDER THE 2008C-1C LETTER OF CREDIT IF REMARKETING PROCEEDS ARE NOT AVAILABLE. THE 2008C-1C BONDS ARE NOT INSURED BY THE FEDERAL DEPOSIT INSURANCE CORPORATION OR ANY OTHER GOVERNMENTAL AGENCY AND ARE SUBJECT TO CERTAIN INVESTMENT RISKS, INCLUDING POSSIBLE LOSS OF THE PRINCIPAL AMOUNT INVESTED.

The delivery hereof shall not create any implication that there has been no change in the affairs of Washington Financial Bank since the date hereof, or that the information contained or referred to in this Appendix G is correct as of any time subsequent to its date.

APPENDIX H

CERTAIN INFORMATION CONCERNING FEDERAL HOME LOAN BANK OF PITTSBURGH

APPENDIX H

CERTAIN INFORMATION CONCERNING FEDERAL HOME LOAN BANK OF PITTSBURGH

The Federal Home Loan Bank of Pittsburgh (the "***Federal Home Loan Bank***"), a corporation organized and existing under the laws of the United States of America that is exempt from all federal, state, and local taxation except for real property taxes, is one of twelve district Federal Home Loan Banks (the "***FHLBanks***"). As of June 30, 2010 the Federal Home Loan Bank had total assets of approximately $61 billion, total advances to members of approximately $36 billion, total consolidated bonds and notes outstanding of approximately $54 billion, total deposits of approximately $1.1 billion and capital of approximately $3.9 billion.

The Federal Home Loan Bank, together with member institutions and the Office of Finance under the supervision of the Federal Housing Finance Agency (the "***Finance Agency***"), comprise the FHLBank System (the "***System***"). The System serves the public by enhancing the availability of residential mortgage and targeted community development credit.

The FHLBanks are wholesale banking institutions that provide a readily available, low cost source of funds, reliable correspondent operating services, and opportunities for affordable housing and community development to their member institutions. Regulated financial depositories and insurance companies engaged in residential housing finance are eligible to apply for membership. All members are required to purchase stock in the Federal Home Loan Bank.

The Finance Agency, which is an independent agency in the executive branch of the U.S. government, supervises and regulates the FHLBanks. The Finance Agency ensures that the FHLBanks carry out their housing mission, remain adequately capitalized, are able to raise funds in the capital markets, and operate in a safe and sound manner. Also, the Finance Agency establishes policies and regulations governing the operations of the FHLBanks. Each FHLBank is operated as a separate entity and has its own management, employees, and board of directors.

The System debt instruments (consolidated obligations), which are the joint and several obligations of all FHLBanks, are the primary source of funds for the FHLBanks. Deposits, other borrowings, and the issuance of capital stock, which is owned by the FHLBanks' members, provide other funds. The Federal Home Loan Bank and certain other FHLBanks also provide member institutions with correspondent services such as settlement.

Except to the limited extent described herein, this summary does not describe the business or analyze the condition, financial or otherwise, of the Federal Home Loan Bank or otherwise describe any risks associated with the Federal Home Loan Bank or the Advice of Confirmation. Prospective purchasers of the Bonds must rely on their own knowledge, investigation and examination of the Federal Home Loan Bank and its creditworthiness. The Federal Home Loan Bank makes no representation regarding the Bonds or the advisability of investing in the Bonds.

The following documents filed by the Federal Home Loan Bank with the Securities and Exchange Commission (the "***SEC***") are incorporated herein by reference:

(1) The Federal Home Loan Bank's 2009 Annual Report reported on Form 10-K; and

(2) The Federal Home Loan Bank's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010.

Any documents filed by the Federal Home Loan Bank pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act of 1934, as amended, after the date of this Reoffering Circular and prior to the termination of the offering of the Bonds offered hereby shall be deemed to be incorporated by reference in this Reoffering Circular and to be a part hereof. Any statement contained in a document incorporated or deemed to be incorporated by reference herein, or contained in this Reoffering Circular, shall be deemed to be modified or superseded for purposes of this Reoffering Circular to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement.

Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Reoffering Circular.

The Federal Home Loan Bank files annual, quarterly and special reports, information statements and other information with the SEC under File No. 000-51395. Copies of the SEC filings (including (1) the Federal Home Loan Bank's 2009 Annual Report on Form 10-K and (2) the Federal Home Loan Bank's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010) are available (i) over the Internet at the SEC's web site at http://www.sec.gov; (ii) at the SEC's public reference room in Washington D.C.; and (iii) over the Internet at the Federal Home Loan Bank's web site at www .fhlb-pgh.com.

APPENDIX I

SUMMARY OF THE LETTERS OF CREDIT AND REIMBURSEMENT AGREEMENTS

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APPENDIX I

DEFINITIONS OF TERMS AND SUMMARIES OF CERTAIN PROVISIONS OF

THE LETTERS OF CREDIT AND REIMBURSEMENT AGREEMENTS

THE FOLLOWING SUMMARIES ARE OF CERTAIN PROVISIONS OF THE LETTERS OF CREDIT AND REIMBURSEMENT AGREEMENTS. THEY ARE NOT FULL STATEMENTS OF ANY OF THE DOCUMENTS AND REFERENCE SHOULD BE MADE TO THE DOCUMENTS THEMSELVES FOR ALL OF THEIR TERMS AND PROVISIONS.

There are three separate Letters of Credit and Reimbursement Agreements. They are substantially similar as to terms and conditions, except that each will apply to the corresponding series of Reoffered Bonds.

Certain Definitions.

*"**A Drawing**," "**B Drawing**," or "**C Drawing***" have the meanings given to such terms in the Letter of Credit or Confirming Letter of Credit, as the case may be.

*"**Alternate Base Rate**"* shall mean a fluctuating rate of interest per annum equal to the higher of (i) the Overnight Effective Federal Funds Rate for such day as quoted in the *"Composite Closing Quotations for U.S. Government Securities"* published by the Federal Reserve Bank of New York plus 0.50% and (ii) the Prime Rate. Each change in the Alternate Base Rate shall take effect simultaneously with the corresponding change or changes in the Prime Rate or Overnight Effective Federal Funds Rate, as the case may be.

*"**Authority**"* has the meaning given to such term in the recitals to the Reimbursement Agreement.

*"**Bank**"* has the meaning given to that term in the introductory paragraph to the Reimbursement Agreement.

*"**Bank Bond**"* means each Reoffered Bond held by a Bank Bondholder.

*"**Bank Bondholder**"* means the Bank (but only in its capacity as owner (which as used herein shall mean beneficial owner if at the relevant time Bank Bonds are Book Entry Bonds) of Bank Bonds pursuant to the Reimbursement Agreement) and any other Person to whom the Bank has sold Bank Bonds (or the Bond Insurer, to the extent of payments made on Bank Bonds under the Bond Insurance Policy).

"***Bank Rate***" means for each day of determination, the rate equal to the Prime Rate plus 3%; *provided, however,* that the Bank Rate shall never exceed the Maximum Interest Rate. Notwithstanding the foregoing, so long as the Bond Insurance Policy has not been cancelled or released, the term "Bank Rate" shall mean, with respect to any payments hereunder made or to be made and which are paid or payable by the Bond Insurer, the Alternate Base Rate plus 1%; *provided, however,* that the Bank Rate shall never exceed the Maximum Interest Rate.

*"**Bond Insurance Policy**"* means the municipal bond insurance policy issued by the Bond Insurer guaranteeing the regularly scheduled payment of the principal of and interest (including interest at the Bank Rate) on the Reoffered Bonds when due (including all endorsements attached thereto), and any Substitute Bond Insurance Policy (as defined in the Indenture) with respect to the Reoffered Bonds obtained pursuant to the Indenture with the prior written consent of the Bank.

*"**Bond Insurer**"* means Financial Security Assurance Inc., a New York financial guaranty insurance company, and the issuer of any replacement municipal bond insurance policy obtained pursuant to the Indenture with respect to the Reoffered Bonds.

*"**Bonds**"* has the meaning given to such term in the Indenture.

"***Book Entry* Bonds**" means the Reoffered Bonds so long as the book entry system with DTC or any other securities depository is used for determining beneficial ownership of the Reoffered Bonds.

"***Business Day***" has the meaning given to such term in the Amended Second Supplement.

"***Closing Date***" means the date on which Reoffered Bonds are initially remarketed and delivered by the Authority.

"***Confirming Bank***" means the issuer of any Confirming Letter of Credit then in effect. The initial Confirming Bank is the Federal Home Loan Bank of Pittsburgh, as issuer of the initial Confirming Letter of Credit.

"***Confirming Letter of Credit***" means, initially, with respect to the Reoffered Bonds, the irrevocable confirming letter of credit issued by the Confirming Bank on the Closing Date in the initial Stated Amount of the Letter of Credit, and each other Liquidity Facility (as defined in the Amended Second Supplement) issued from time to time to confirm a Letter of Credit.

"***Default***" means the occurrence of any event which, with the passage of time, the giving of notice, or both, would become an Event of Default.

"***Default Rate***" means the Bank Rate plus 2%; *provided, however,* that the Default Rate shall never exceed the Maximum Interest Rate. Notwithstanding the foregoing, so long as the Bond Insurance Policy has not been cancelled or released, the term "Default Rate" shall mean, with respect to any payments hereunder made or to be made and which are paid or payable by the Bond Insurer, the Alternate Base Rate from time to time in effect plus 4% *provided, however,* that the Default Rate shall never exceed the Maximum Interest Rate. The Default Rate shall change as and when the Bank Rate or Alternate Base Rate, as the case may be, changes.

"***Event of Default***" has the meaning given to such term in **Section 6.1** of the Reimbursement Agreement.

"***Fitch***" means Fitch Ratings, Inc., its successors and assigns.

"***Indenture***" means the Subordinate Trust Indenture dated as of July 15, 1995 between the Authority and the Trustee, as successor trustee to PNC Bank, National Association (the "***Initial Subordinate Indenture***"), as supplemented by a First Supplemental Subordinate Indenture dated as of March 1, 1998 (the "***First Supplement***"), as further supplemented by a Second Supplemental Subordinate Indenture dated as of June 1, 2008 (the "***Second Supplement***"), and as amended by an Amending Supplement to the Initial Subordinate Indenture and Second Supplemental Subordinate Indenture dated as of November 1, 2009 (the "***Amendment***").

"***Insurer Default***" means any of the following:

(i) (A) any principal or interest due on any Reoffered Bond is not paid by the Authority when due and such principal or interest is not paid by the Bond Insurer when, as, and in the amounts required to be paid pursuant to the terms of the Bond Insurance Policy, or (B) the Bond Insurer shall default in any payment or payments of amounts payable by it when due under any bond insurance policy or policies (other than the Bond Insurance Policy) with respect to publicly-rated debt representing an obligation of the Bond Insurer on a parity with or senior to the Bond Insurer's obligations under the Bond Insurance Policy, and such default shall continue for a period of seven (7) days (other than a situation whereby the Bond Insurer contests in good faith its liability under such policy or policies in light of the claim or claims made thereunder);

(ii) (A) the President or any Executive Vice President of the Bond Insurer shall, in writing, claim that the Bond Insurance Policy, with respect to the payment of principal of or interest on the Reoffered Bonds, is not valid and binding on the Bond Insurer in accordance with its terms, or shall repudiate the obligations of the Bond Insurer under the Bond Insurance Policy with respect to payment of principal of and interest on the Reoffered Bonds, or shall deny that the Bond Insurer has any or further liability or obligation under the Bond Insurance Policy to the extent set forth in the Bond Insurance Policy, (B) any material provision relating to payment under the Bond Insurance Policy at any time for any reason ceases to be valid and binding on the Bond Insurer in accordance with the terms of the Bond Insurance Policy or is declared null and void by a court or other governmental agency of

appropriate jurisdiction, or (C) the validity or enforceability of the Bond Insurance Policy with respect to payment of principal of or interest on the Reoffered Bonds is contested by the Bond Insurer;

(iii) (A) a proceeding is instituted in a court having jurisdiction in the premises seeking an order for relief, rehabilitation, reorganization, conservation, liquidation or dissolution in respect to the Bond Insurer or for any substantial part of its property under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or for the appointment of a receiver, liquidator, assignee, custodian, trustee or sequestrator (or other similar official) and such proceeding is not terminated within sixty (60) consecutive days of commencement or such court enters an order granting the relief sought in such proceeding; or (B) the Bond Insurer shall institute or take any corporate action for the purpose of instituting any such proceeding; or (C) the Bond Insurer shall become insolvent or unable to pay its debts as they mature or claims under any of its municipal bond insurance policies as such claims are made, shall commence a voluntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, shall consent to the entry of an order for relief in an involuntary case under any such law or shall consent to the appointment of or taking possession by a receiver, liquidator, assignee, trustee, custodian or sequestrator (or other similar official) of the Bond Insurer or for any substantial part of its property, shall make a general assignment for the benefit of creditors, shall fail generally to pay its debts or claims as they become due, or shall take any corporate action in furtherance of any of the foregoing; provided, however, that the Bond Insurer's failure to make payments on any financial guaranty insurance policies or surety bonds because of a legitimate dispute between the Bond Insurer and the beneficiary of such policies or surety bonds shall not in and of itself constitute a failure of the Bond Insurer to generally pay its debts or claims as they become due; or

(iv) the date when the financial strength ratings assigned to the Bond Insurer by Moody's, S&P and Fitch shall fall below "Aa3", "AA-" and "AA-", respectively, and such financial strength ratings shall remain below "Aa3", "AA-" and "AA-", respectively, for a period of 90 consecutive days.

*"**Interest Component**"* has the meaning given to such term in the Letter of Credit.

"***Interest Payment Date***" with respect to Reoffered Bonds which are not Bank Bonds, shall have the meaning assigned in the Amended Second Supplement and, with respect to Bank Bonds, means each of the days described in Section 2.6(c) of the Reimbursement Agreement; provided that, notwithstanding the foregoing, if any time payment on the Bank Bonds is made by the Bond Insurer, "Interest Payment Date" means solely the first Business Day of each calendar month.

*"**Materially Adverse Effect**"* means (a) with respect to any Person, a materially adverse effect upon such Person's business, assets, liabilities, financial condition, results of operations or business prospects, and (b) with respect to any agreement or obligation, a materially adverse effect upon the binding nature, validity or enforceability of such agreement or obligation.

*"**Maximum Interest Rate**"* means the lesser of (a) 25% per annum and (b) the Maximum Lawful Rate.

*"**Maximum Lawful Rate**"* means the maximum non-usurious rate of interest on the relevant obligation permitted by applicable law.

*"**Moody's**"* means Moody's Investors Service, its successors and assigns.

"***Obligation***" has the meaning given to such term in **Section 2.14** of the Reimbursement Agreement.

*"**Official Statement**"* means the Official Statement dated June 11, 2008 (including any documents incorporated therein by reference and any exhibits or attachments thereto and any amendments thereof or supplements thereto), prepared in connection with the initial sale and delivery of the 2008C-1 Bonds.

*"**Outstanding**"* has the meaning given to such term in the Indenture.

*"**Person**"* means an individual, a corporation, a partnership, an association, a trust or any other entity or organization, including a government or a political subdivision or an agency or instrumentality thereof.

"***Prime Rate***" means the interest rate announced by the Bank from time to time as its prime rate or, if none, the then-current prime rate of interest published by the Wall Street Journal, or its successor, from time to time. Any change in the Prime Rate shall be effective as of the date such change is announced by the Bank.

"***Principal Component***" has the meaning given to such term in the Letter of Credit.

"***Purchase Contract***" means the bond purchase or remarketing agreement relating to the initial remarketing and delivery on the Closing Date of the Reoffered Bonds.

"***Rating Agency***" means Moody's, S&P or Fitch.

"***Receipts and Revenues***" has the meaning given to such term in the Indenture.

"***Reimbursement Agreement***" means the Letter of Credit and Reimbursement Agreement dated as of November 10, 2009, between the Authority and the Bank, as the same may be supplemented and amended from time to time in accordance with its terms.

"***Reimbursement Obligations***" means obligations and liabilities of the Authority to the Bank arising under the Reimbursement Agreement.

"***Related Documents***" means the Reimbursement Agreement, the Indenture, the Reoffered Bonds, the Official Statement, the Remarketing Memorandum, the Purchase Contract, the Bond Insurance Policy, and the Remarketing Agreement, as the same may be amended or modified from time to time in accordance with their respective terms and the terms hereof.

"***Remarketing Agent***" means Boenning & Scattergood, Inc., and its successors and assigns, or any alternate remarketing agent appointed by the Authority for the Reoffered Bonds with the prior written consent of the Bank.

"***Remarketing Agreement***" means the Remarketing Agreement with respect to the Reoffered Bonds, between the Authority and the Remarketing Agent, as the same may be modified or amended, and if the Remarketing Agent has been replaced by a successor remarketing agent, any similar agreement between the Authority and such successor Remarketing Agent.

"***Remarketing Memorandum***" means the Reoffering Circular to the Official Statement (including any documents incorporated therein by reference and any exhibits or attachments thereto and any amendments thereof or supplements thereto), prepared in connection with the remarketing of the Reoffered Bonds.

"***S&P***" means Standard & Poor's Rating Services, a division of The McGraw-Hill Companies, Inc., its successors and assigns.

"***Securities Depository***" means any entity acting as securities depository for the Reoffered Bonds, initially DTC.

"***Stated Amount***" means, on any day, the sum of the Principal Component and the Interest Component, in each case, as of such day.

"***Stated Expiration Date***" has the meaning given to such term in the Letter of Credit.

"***Substitute Liquidity Facility***" means a replacement letter of credit or other liquidity facility which is accepted by the Trustee as an Alternate Liquidity Facility pursuant to and as defined in the Indenture.

"***Substitution Date***" means the date on which a Substitute Liquidity Facility is accepted by the Trustee and becomes effective.

*"**Tendered Bonds**"* means, as of any date, Eligible Bonds which are tendered or deemed tendered for purchase pursuant to **Section 2-6.01** or **Section 2-6.02** of the Amended Second Supplement and which, in any case, the Remarketing Agent has been unable to remarket.

*"**Term Mode**"* has the meaning given to such term in the Amended Second Supplement.

*"**Term Rate**"* has the meaning given to such term in the Amended Second Supplement.

*"**Term Rate Period**"* has the meaning given to such term in the Amended Second Supplement.

*"**Trustee**"* shall have the meaning given to such term in the introductory paragraph to the Reimbursement Agreement.

*"**Water and Sewer System**"* has the meaning given to such term in the Indenture.

*"**Written**"* or *"**In Writing**"* means any form of written communication or a communication by means of telecopier or other telecommunication device capable of creating a writing.

"***2008C-1 Bonds***" means the Authority's (Variable Rate Demand) Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1 of 2008 in the original principal amount of $51,910,000.

Reimbursement.

The Authority agrees to pay the Bank (i) any amount drawn under the Letter of Credit pursuant to any A Drawing or B Drawing and, following cancellation of the Bond Insurance Policy or the occurrence of an Insurer Default, that portion of the purchase price corresponding to principal and that portion of the purchase price corresponding to interest drawn under the Letter of Credit pursuant to a C Drawing, immediately after payment by the Bank of such drawing (and before **4:00 p.m.** prevailing Eastern Time on the same Business Day of the Bank's payment of such drawing), plus (ii) interest at the Default Rate payable on demand, and on the date of payment in full, on any amount remaining unpaid by the Authority to the Bank under clause (i) above, from the date such amount becomes due and payable until payment in full. Notwithstanding the foregoing, even if amounts drawn under the Letter of Credit pursuant to a C Drawing are reimbursed on the same Business Day as provided herein, the Authority shall reimburse the Bank immediately upon receipt of its invoice therefor any interest expense incurred by the Bank in order to fund such draw.

Tender Advances.

If the Bank shall make any payment of that portion of the purchase price corresponding to principal and interest of the Reoffered Bonds from amounts drawn under the Letter of Credit pursuant to a C Drawing, such payment shall constitute a tender advance made by the Bank to the Authority on the date and in the amount of such payment, each such tender advance being a "***Tender Advance***." Interest on Tender Advances shall be payable in the manner and at the rate set forth in **Section 2.6** of the Reimbursement Agreement.

Prepayments; Reinstatement of Letter of Credit Amounts.

(a) The Authority may prepay the outstanding amount of any Tender Advance in whole or in part, together with accrued interest to the date of such prepayment on the amount prepaid. The Authority shall notify the Bank on the date of such prepayment of the amount to be prepaid, which notice shall be given prior to such payment. In addition, the Authority shall, forthwith, prepay or cause to be prepaid pursuant to this subsection (a) any amount owing to the Bank as a result of any Tender Advance for the purpose of paying the purchase price of any Reoffered Bond delivered to the Trustee, if the Remarketing Agent failed, for any reason, to pay or tender payment of the purchase price of such Reoffered Bond when due to or for the account of the person entitled thereto and such failure is continuing or any other person shall assert that such person has a lien on or security interest in

such Reoffered Bond. Upon payment to the Bank of the amount of such Tender Advance to be prepaid pursuant to this subsection, together with accrued interest on such Tender Advance to the date of such prepayment on the amount to be prepaid, the principal amount outstanding of Tender Advances shall be reduced by the amount of such prepayment, interest shall cease to accrue on the amount prepaid and the Bank shall release or cause to be released to the Trustee, in accordance with the terms of the Indenture, a principal amount of Reoffered Bonds, if any, then held under pledge equal to the principal amount of such prepayment.

(b) Prior to or simultaneously with the resale of Reoffered Bonds acquired by the Trustee with the proceeds of one or more draws under the Letter of Credit, the Authority shall prepay the then outstanding Tender Advances (in the order in which they were made) by paying to the Bank an amount equal to the sum of (i) the portion of the purchase price corresponding to the aggregate principal amount of the Reoffered Bonds being resold or to be resold, plus (ii) the portion of the purchase price corresponding to the aggregate amount of accrued and unpaid interest on such Reoffered Bonds, plus (iii) the aggregate amount of accrued and unpaid interest on such Tender Advances, less the amount paid pursuant to the immediately preceding clause (ii). Such payment shall be applied by the Bank in reimbursement of such drawings (and as prepayment of Tender Advances resulting from such drawings in the manner described above), and, the Authority irrevocably authorizes the Bank to reinstate the Letter of Credit in accordance therewith. In connection with a prepayment of Tender Advances from proceeds of the resale of Reoffered Bonds, the Authority or its designee shall deliver notice to the Bank, prior to **10:00 a.m.** prevailing Eastern Time on the date of such proposed prepayment, directing the Bank to deliver or cause to be delivered Reoffered Bonds held by or on behalf of the Bank or its designee to the Remarketing Agent for sale pursuant to the Indenture, and specifying the principal amount of Reoffered Bonds to be sold, which notice may be given by telephone (promptly confirmed in writing).

(c) The Authority agrees that, pursuant to the provisions of the Indenture, Reoffered Bonds purchased with proceeds of a drawing under the Letter of Credit shall be (i) at the option of the Bank, registered by the Trustee in the name of the Bank and held by the Bank or its designee (including the Trustee), as agent and bailee of the Bank, expressly subject to the pledge in favor of the Bank, and deemed held by the Trustee, as agent and bailee for the account of the Bank and (ii) in the event Reoffered Bonds shall be certificated, held by the Trustee as agent and bailee for the account of the Bank or, at the Bank's election, delivered by the Trustee to the Bank or its designee. All such Reoffered Bonds are to be held by the Bank or its agent, bailee or designee in pledge as collateral securing the Authority's payment obligations to the Bank hereunder as provided for in Section 2.14 of the Reimbursement Agreement. Upon payment to the Bank of the amount of such drawings, together with accrued interest, if required due to failure to pay such amounts on the date when due, on such amount, calculated at the Default Rate, to the date of payment, and upon reinstatement of the Letter of Credit in an amount sufficient to cover all principal and accrued interest on the Reoffered Bonds so released for up to 195 days at 12% per annum, with respect to Reoffered Bonds purchased with proceeds of such drawings, the Bank shall release, in accordance with the terms of the Indenture, a principal amount of Reoffered Bonds, if any, then held under the pledge equal to the amount of such payment corresponding to the principal portion of such Reoffered Bonds.

Payments and Computations.

The Authority shall make each payment hereunder (a) representing reimbursement pursuant to **Section 2.4** of the Reimbursement Agreement to the Bank immediately after payment by the Bank of drawings made under the Letter of Credit (and before **4:00 p.m.** prevailing Eastern Time on the same Business Day of the Bank's payment of such drawing), and (b) not later than **12:00 noon** prevailing Eastern Time for all other payments, on the day when due in lawful money of the United States of America to the Bank at its address referred to in **Section 7.5** of the Reimbursement Agreement in same day funds. The Authority authorized the Bank, if and to the extent payment is not made when due hereunder, to charge from time to time against any of the Authority's accounts with the Bank, any amount so due. Computations of the Prime Rate, Bank Rate, the Default Rate and of any fees or commissions hereunder, including the fees payable under **Section 2.3** of the Reimbursement Agreement shall be made by the Bank on the basis of a year of 360 days for the actual number of days (including the first day but excluding the last day) elapsed. Whenever any payment to be made hereunder shall be stated to be due on a day which is not a Business Day, such payment shall be made on the next succeeding Business Day and such extension of time shall in such case be included in the computation of payment of interest, fee or commission, as the case may be.

Extension of the Stated Expiration Date.

The term of the Letter of Credit shall commence on the Closing Date and shall expire on the earlier of its Stated Expiration Date or the earlier termination thereof; provided, however, that not later than 180 days prior to the Stated Expiration Date, the Bank, at its option and upon written request of the Authority, by one or more amendments delivered to the Trustee, may extend the Letter of Credit as provided therein, in which case the Letter of Credit shall expire as set forth in such amendment(s), it being understood that the Bank shall have no obligation to grant any such extension(s). The Authority may cause the Letter of Credit to be terminated at any time prior to the Stated Expiration Date or earlier termination date by replacing the Letter of Credit with an Substitute Liquidity Facility pursuant to the Indenture and causing the Letter of Credit to be returned to the Bank. All requests and notices made pursuant to **Section 2.13** of the Reimbursement Agreement shall also be delivered to the Trustee.

Bond Insurance Policy.

So long as the Reoffered Bonds are outstanding:

(a) If the Bank is not reimbursed for amounts drawn under the Letter of Credit for the payment of regularly scheduled principal and interest from amounts held under the Indenture, the Bank may direct the Trustee to present a claim under the Bond Insurance Policy in accordance with the claims procedures set forth in the Indenture and the Bond Insurance Policy, and the Bank will cooperate with the Trustee and the Bond Insurer to assign or subrogate the Bank's right to payment from the Authority to the Bond Insurer upon payment of such claim.

(b) In the event of a mandatory tender of Reoffered Bonds, all Bank Bonds which are not remarketed after such event will be held pursuant to the terms of the Reimbursement Agreement and continue to be insured as to scheduled principal and interest payments by the Bond Insurer. Upon the occurrence of an Insurer Default, the Bank shall succeed to the rights of the Bond Insurer under the Indenture with respect to the Reoffered Bonds as and to the extent provided in the Indenture.

(c) As provided in the Amended Second Supplement, the Bank shall, upon the occurrence of an Insurer Default, have the option to cause the cancellation, through endorsement, of the Bond Insurance Policy with respect to the Reoffered Bonds. In such case, the Bank shall succeed to the Bond Insurer's rights under the Indenture with respect to the Reoffered Bonds and shall be entitled to, and shall have the benefit of, all rights and remedies of the Bond Insurer thereunder.

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APPENDIX J

FORMS OF LETTERS OF CREDIT AND CONFIRMING LETTER OF CREDIT

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FORM OF LETTER OF CREDIT

November 10, 2009

Irrevocable Letter of Credit No. _____

The Bank of New York Mellon Trust Company, N.A.,
as Trustee
Global Corporate Trust
525 William Penn Place, 7th Floor
Pittsburgh, PA 15259

Re: $[par] aggregate principal amount of The Pittsburgh Water and Sewer Authority Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1[ABC] of 2008 (Term Mode)

Ladies and Gentlemen:

At the request of The Pittsburgh Water and Sewer Authority (the "***Authority***"), we hereby establish this Irrevocable Letter of Credit in your favor as Trustee under the Subordinate Trust Indenture dated as of July 15, 1995 between the Authority and the Trustee, as successor trustee to PNC Bank, National Association (the "***Initial Subordinate Indenture***"), as supplemented by a First Supplemental Subordinate Indenture dated as of March 1, 1998 (the "***First Supplement***"), as further supplemented by a Second Supplemental Subordinate Indenture dated as of June 1, 2008 (the "***Second Supplement***"), and as amended by an Amending Supplement to the Initial Subordinate Indenture and Second Supplemental Subordinate Indenture dated as of November 1, 2009 (the "***Amendment***" and, together with the Initial Subordinate Indenture, the First Supplement and the Second Supplement, the "***Indenture***"), pursuant to which $[par] principal amount of the Authority's Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1[ABC] of 2008 (Term Mode) (the "***2008C-1[ABC] Bonds***") have been issued. We hereby authorize you to draw on us an amount not exceeding $[LOCamt] (the "***Initial Stated Amount***" and, as the same may from time to time be reduced and thereafter reinstated as hereinafter provided, the "***Stated Amount***") of which: (i) subject to the provisions below reducing amounts available hereunder, an aggregate amount not exceeding $[par] may be drawn on in respect of principal or the portion of the purchase price corresponding to principal of the 2008C-1[ABC] Bonds (the "***Principal Component***"); and (ii) subject to the provisions below reducing amounts available hereunder, an aggregate amount not exceeding $[interest], may be drawn on in respect of the payment of up to 195 days' interest or the portion of the purchase price corresponding to up to 195 days' interest on the 2008C-1[ABC] Bonds at an assumed per annum interest rate of 12% based on a 360-day year comprising twelve 30-day months (the "***Interest Component***") effective immediately and expiring at **5:00 p.m.** prevailing Eastern Time at our Presentation Office (as hereinafter defined) on November 9, 2011 (the "***Stated Expiration Date***") or as hereinafter provided.

Multiple and partial drawings may be made under this Letter of Credit, but no single drawing under this Letter of Credit shall be honored in an amount exceeding the Stated Amount. Any and all payments made under this Letter of Credit will be made with our own funds.

Funds under this Letter of Credit are available to you against a sight draft drawn on us, stating on its face "Drawn under [MEMBERBANK] Irrevocable Letter of Credit No. _____", presented for payment on a Business Day (as defined in the Second Supplement, as amended by the Amendment (the "***Amended Second Supplement***"), and accompanied by a written certificate:

(a) in the form of Annex A attached hereto (an "***A Drawing***") if the drawing is made with respect to payment of principal of the 2008C-1[ABC] Bonds upon the acceleration, redemption or stated maturity thereof;

(b) in the form of Annex B attached hereto (a "***B Drawing***") if the drawing is made with respect to payment of interest on the 2008C-1[ABC] Bonds on or prior to their stated maturity date or upon the acceleration or redemption thereof; and

(c) in the form of Annex C attached hereto (a "***C Drawing***") if the drawing is made with respect to payment of the purchase price of 2008C-1[ABC] Bonds tendered, or deemed tendered, for purchase pursuant to **Section 2-6.02** of the Amended Second Supplement.

The demand for payment hereunder shall not exceed the Stated Amount. The Stated Amount shall be reduced by delivery to us of your certificate in the form of Annex D in the amount specified in such certificate.

The Principal Component of the Stated Amount shall be further automatically and permanently reduced by the amount of each A Drawing. The Stated Amount shall also be reduced by the amount of any drawing hereunder, except that (i) the amount of each B Drawing honored in respect of interest shall immediately and automatically be reinstated upon the honoring of such drawing (except as provided in the next following sentence); and (ii) the amount of each C Drawing shall be restored upon receipt by you of notice from us confirming that the Authority has reimbursed us for such drawing. In the case of a B Drawing delivered in connection with a redemption, acceleration or stated maturity (but not purchase) of 2008C-1[ABC] Bonds as indicated on Annex B, there shall be a pro rata permanent reduction of the Interest Component as provided in such Annex B.

The Letter of Credit shall terminate, effective immediately, on the earliest to occur of any of the following: (i) **5:00 p.m.** prevailing Eastern Time on the Stated Expiration Date, (ii) the close of business on the second Business Day following a conversion of the interest rate on the 2008C-1[ABC] Bonds to a rate other than the Covered Rate (as defined in the hereinafter referenced Reimbursement Agreement), (iii) the date on which we honor a draft drawn hereunder pursuant to **Section 8.03** of the Indenture following the occurrence of an Event of Default thereunder and an acceleration of the 2008C-1[ABC] Bonds, (iv) the date this Letter of Credit is surrendered to us by you for cancellation following acceptance by you of an Alternate Liquidity Facility (as defined in the Indenture), (v) the date on which we honor a draft drawn hereunder to purchase the 2008C-1[ABC] Bonds following your receipt of written notice from us that an Event of Default under the Letter of Credit and Reimbursement Agreement dated as of November 10, 2009 (the "***Reimbursement Agreement***") between the Authority and us has occurred and is continuing and a written notice from us directing a mandatory tender for purchase of the 2008C-1[ABC] Bonds pursuant to **Section 2-6.02** of the Amended Second Supplement, and (vi) the date on which we receive from you a certificate in the form of Annex E hereto. This Letter of Credit shall be promptly surrendered to us by you upon such termination. The Stated Expiration Date may be extended by us at our discretion at any time or from time to time, by our giving written notice of such extension to you specifying a new Expiration Date.

The aforesaid certificates, which form an integral part of this Letter of Credit, shall have all blanks appropriately filled in and shall be signed by your authorized officer, and any sight draft and the aforesaid certificates shall be in the form of a letter on your letterhead either delivered to us at our office located at _____ (the "***Presentation Office***") on a Business Day or delivered to us by facsimile (at telecopier number (___) _____ - Attn: _____) on a Business Day (or at such other address or telecopier

number as we may designate in a written notice delivered to you). The originals of all documents telecopied to us pursuant to which a drawing is made hereunder shall be delivered to us immediately following such facsimile. If demand for payment is made hereunder not later than **12:00 noon** prevailing Eastern Time on any Business Day, and provided that such demand for payment and the documents presented in connection therewith conform to the terms and conditions hereof, payment of the amount demanded shall be made in immediately available funds not later than **9:30 a.m.** prevailing Eastern Time (**12:00 noon** prevailing Eastern Time if that certain Advice of Confirmation No. _____ issued by the Federal Home Loan Bank of Pittsburgh is not then in effect with respect to this Letter of Credit (the "***Confirmation***")) on the next succeeding Business Day. If demand for payment is made hereunder after **12:00 noon** prevailing Eastern Time on any Business Day, and provided that such demand for payment and the documents presented in connection therewith conform to the terms and conditions hereof, payment of the amount demanded shall be made in immediately available funds, not later than **9:30 a.m.** prevailing Eastern Time (**12:00 noon** prevailing Eastern Time if the Confirmation is not then in effect with respect to this Letter of Credit) on the second succeeding Business Day.

This Letter of Credit is transferable in its entirety (but not in part) to any transferee whom you certify to us has succeeded you as Trustee under the Indenture. Transfer of the available balance of this Letter of Credit to a successor transferee shall be effected by the presentation to us of this Letter of Credit accompanied by a written certificate in the form of Annex F attached hereto.

Only you (or a transferee as permitted by the terms of this Letter of Credit) may make a drawing under this Letter of Credit. Upon payment to you or your account of the amount demanded hereunder, we shall be fully discharged of our obligation under this Letter of Credit with respect to the respective demand for payment and we shall not thereafter be obligated to make any further payments under this Letter of Credit in respect of such demand for payment. By paying to you an amount demanded in accordance herewith we make no representation as to the correctness of the amount demanded. 2008C-1[ABC] Bonds that are registered in the name of, or held by or for the account of the Authority or are held or required to be held for our benefit pursuant to the Indenture ("***Bank Bonds***") shall not be entitled to any benefit of this Letter of Credit.

This Letter of Credit sets forth in full the terms of our undertaking and shall not in any way be amended, amplified or limited by reference to any document, instrument or agreement referred to herein or in which this Letter of Credit is referred to or to which this Letter of Credit is related, except for the certificates referred to herein; and any such reference shall not be deemed to incorporate herein by reference any document, instrument or agreement except for such certificates.

This Letter of Credit, except as otherwise expressly stated herein, is subject to the International Standby Practices 1998, and any subsequent revisions thereof to the extent not inconsistent with Article 5 of the Uniform Commercial Code in effect in the Commonwealth of Pennsylvania.

[MEMBERBANK]

By:_____
Title:_____

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Annex A

DRAWING CERTIFICATE
(Principal)

[Date]

[MEMBERBANK]
_____
_____

Re: $[par] aggregate principal amount of The Pittsburgh Water and Sewer Authority Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1[ABC] of 2008 (Term Mode)

Ladies and Gentlemen:

The Bank of New York Mellon Trust Company, N.A., in its capacity as Trustee (the "***Trustee***"), hereby certifies to [MEMBERBANK], in its capacity as issuer of the Letter of Credit (the "***Bank***"), with reference to Irrevocable Letter of Credit No. _____ (the "***Letter of Credit***"; the terms "***2008C-1[ABC] Bonds***", "***Stated Amount***", "***Principal Component***", and "***Indenture***" as used herein having their respective meanings set forth in the Letter of Credit) that:

1. The Trustee is the Trustee under the Indenture.

2. The Trustee is making a demand for payment under the Letter of Credit with respect to $_____ to be used for the payment of principal of the 2008C-1[ABC] Bonds.

3. The amount of principal of the 2008C-1[ABC] Bonds which is due and payable is $_____ and is the amount of the sight draft accompanying this Certificate.

4. The amount of this demand for payment and the sight draft accompanying this Certificate was computed in compliance with the terms and conditions of the 2008C-1[ABC] Bonds and the Indenture, is made in accordance with the Indenture and does not exceed the Principal Component of the Stated Amount of the Letter of Credit.

5. Upon receipt by the undersigned of the amount demanded hereby, (a) the undersigned will apply the same directly to the payment when due of the principal of the 2008C-1[ABC] Bonds pursuant to the Indenture, (b) no portion of said amount shall be applied by the undersigned for any other purpose, and (c) no portion of said amount shall be commingled with any other funds held by the Trustee.

[6.] [Only if applicable] [This drawing is being made on account of an Event of Default under the Indenture and an acceleration of the 2008C-1[ABC] Bonds in accordance with **Section 8.03** of the Indenture.]

The undersigned acknowledges that upon the Bank's honoring the sight draft accompanying this Certificate, the Principal Component of the Stated Amount of the Letter of Credit shall be permanently reduced by the aggregate amount of such sight draft.

IN WITNESS WHEREOF, the Trustee has executed and delivered this Drawing Certificate (Principal) as of the _____ day of _____, 20__.

The Bank of New York Mellon Trust Company, N.A., as Trustee

By:_____

Annex B

DRAWING CERTIFICATE
(Interest)

[Date]

[MEMBERBANK]
_____
_____

Re: $[par] aggregate principal amount of The Pittsburgh Water and Sewer Authority Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1[ABC] of 2008 (Term Mode)

Ladies and Gentlemen:

The Bank of New York Mellon Trust Company, N.A., in its capacity as Trustee (the "***Trustee***") hereby certifies to [MEMBERBANK], in its capacity as issuer of the Letter of Credit (the "***Bank***"), with reference to Irrevocable Letter of Credit No. _____ (the "***Letter of Credit***"; the terms "***2008C-1[ABC] Bonds***", "***Stated Amount***", "***Interest Component***", and "***Indenture***" as used herein having their respective meanings set forth in the Letter of Credit) that:

1. The Trustee is the Trustee under the Indenture.

2. The Trustee is making a demand for payment under the Letter of Credit with respect to $_____ to be used for the payment of interest on the 2008C-1[ABC] Bonds on or prior to their stated maturity date.

3. The amount of interest on the 2008C-1[ABC] Bonds which is due and payable is $_____ and is the amount of the sight draft accompanying this Certificate.

4. The amount of this demand for payment and the sight draft accompanying this Certificate was computed in compliance with the terms and conditions of the 2008C-1[ABC] Bonds and the Indenture, is made in accordance with the Indenture, and does not exceed the Interest Component of the Stated Amount of the Letter of Credit.

5. Upon receipt by the undersigned of the amount demanded hereby (a) the undersigned will apply the same directly to the payment when due of the interest on the 2008C-1[ABC] Bonds pursuant to the Indenture, (b) no portion of said amount shall be applied by the undersigned for any other purpose, and (c) no portion of said amount shall be commingled with any other funds held by the Trustee.

[6.] [Only if applicable] [The amount drawn hereby is to be used to pay interest on 2008C-1[ABC] Bonds redeemed and not purchased. The undersigned acknowledges that upon the Bank's honoring the sight draft accompanying this Certificate, the Interest Component of the Stated Amount of the Letter of Credit shall be permanently reduced by an amount equal to 195 days' interest on the principal amount of the 2008C-1[ABC] Bonds being redeemed computed at the rate of 12% per annum based on a 360-day year comprising twelve 30-day months.]

[7.] [Only if applicable] [This drawing is being made on account of an Event of

Default under the Indenture and an acceleration of the 2008C-1[ABC] Bonds in accordance with **Section 8.03** thereof.]

IN WITNESS WHEREOF, the Trustee has executed and delivered this Drawing Certificate (Interest) as of the _____ day of _____, 20__.

The Bank of New York Mellon Trust Company, N.A., as Trustee

By:_____

Annex C

DRAWING CERTIFICATE
(Purchase Price)

[Date]

[MEMBERBANK]
_____
_____

Re: $[par] aggregate principal amount of The Pittsburgh Water and Sewer Authority Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1[ABC] of 2008 (Term Mode)

Ladies and Gentlemen:

The Bank of New York Mellon Trust Company, N.A., in its capacity as Trustee (the "***Trustee***") hereby certifies to [MEMBERBANK], in its capacity as issuer of the Letter of Credit (the "***Bank***"), with reference to Irrevocable Letter of Credit No. _____ (the "***Letter of Credit***"; the terms "***2008C-1[ABC] Bonds***", "***Amended Second Supplement***", "***Indenture***", "***Stated Amount***" and "***Bank Bonds***" as used herein having their respective meanings set forth in the Letter of Credit) that:

1. The Trustee is the Trustee under the Indenture.

2. The Trustee is making a demand for payment under the Letter of Credit to be applied to the payment of the portion of the purchase price of 2008C-1[ABC] Bonds tendered, or deemed tendered, for purchase pursuant to **Section 2-6.02** of the Amended Second Supplement, equal to the principal amount thereof. The amount of such portion of the purchase price equal to the principal amount of such 2008C-1[ABC] Bonds is $_____.

3. The Trustee is making a demand for payment under the Letter of Credit to be applied to the payment of the portion of the purchase price of 2008C-1[ABC] Bonds tendered, or deemed tendered, for purchase pursuant to **Section 2-6.02** of the Amended Second Supplement, equal to the amount of accrued and unpaid interest on such 2008C-1[ABC] Bonds to the date of purchase thereof. The amount of such portion of the purchase price equal to accrued and unpaid interest on such 2008C-1[ABC] Bonds to the date of purchase thereof is $_____.

4. The amount of this demand for payment is $_____ (the sum of the amounts in Paragraphs 2 and 3 above) and the sight draft accompanying this Certificate was computed in compliance with the terms and conditions of the 2008C-1[ABC] Bonds and the Indenture, is made in accordance with the Indenture, and does not exceed the Stated Amount of the Letter of Credit.

5. Upon receipt of the undersigned of the amount demanded hereby, (a) the undersigned will apply the same directly to the payment when due of the appropriate amount owing on account of the purchase price of 2008C-1[ABC] Bonds tendered, or deemed tendered, pursuant to the Indenture, (b) no portion of said amount shall be applied for any other purpose and (c) no portion of said amount shall be commingled with any other funds held by the Trustee.

6. If the 2008C-1[ABC] Bonds are in certificated form, the Trustee agrees to hold, as the designee and agent for the Bank, the 2008C-1[ABC] Bonds tendered for purchase and, upon

request, will deliver the 2008C-1[ABC] Bonds with respect to which this drawing relates and the purchase price of which demand is made hereunder to the Bank as Bank Bonds entitled to a security interest in favor of the Bank.

[7.] [Only if applicable] [This drawing is being made on account of an Event of Default under the Reimbursement Agreement and a written notice from us directing a mandatory purchase of the 2008C-1[ABC] Bonds in accordance with **Section 2-6.02** of the Amended Second Supplement.]

IN WITNESS WHEREOF, the Trustee has executed and delivered this Drawing Certificate (Purchase Price) as of the _____ day of _____, 20__.

The Bank of New York Mellon Trust Company, N.A., as Trustee

By:_____

Annex D

REDUCTION CERTIFICATE

[Date]

[MEMBERBANK]
_____
_____

Re: $[par] aggregate principal amount of The Pittsburgh Water and Sewer Authority Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1[ABC] of 2008 (Term Mode)

Ladies and Gentlemen:

The Bank of New York Mellon Trust Company, N.A., in its capacity as Trustee (the "***Trustee***") hereby certifies to [MEMBERBANK], in its capacity as issuer of the Letter of Credit (the "***Bank***"), with reference to Irrevocable Letter of Credit No. _____ (the "***Letter of Credit***"; the terms "***2008C-1[ABC] Bonds***", "***Indenture***" and "***Stated Amount***" as used herein having their respective meanings set forth in the Letter of Credit) that:

1. The Trustee is the Trustee under the Indenture.

2. The Trustee hereby notifies you that on or prior to the date hereof $_____ amount of the 2008C-1[ABC] Bonds have been paid, or defeased pursuant to the Indenture other than with funds drawn under the Letter of Credit.

3. Following the payment or the defeasance referred to in paragraph (2) above, the aggregate principal amount of all the 2008C-1[ABC] Bonds outstanding is $_____.

4. The amount of interest (computed at a rate of 12% per annum based on a 360-day year comprising twelve 30-day months), accruing on the 2008C-1[ABC] Bonds referred to in paragraph 3 above for a period of 195 days is $_____.

5. Upon receipt by the Bank of this Certificate, the Stated Amount of the Letter of Credit is reduced to $_____ (such amount being equal to the amounts specified in paragraphs 3 and 4 above).

IN WITNESS WHEREOF, the Trustee has executed and delivered this Reduction Certificate this _____ day of _____, 20__.

The Bank of New York Mellon Trust Company, N.A., as Trustee

By:_____

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Annex E

TERMINATION CERTIFICATE

[Date]

[MEMBERBANK]
_____
_____

Re: $[par] aggregate principal amount of The Pittsburgh Water and Sewer Authority Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1[ABC] of 2008 (Term Mode)

Ladies and Gentlemen:

The Bank of New York Mellon Trust Company, N.A., in its capacity as Trustee (the "***Trustee***") hereby certifies to [MEMBERBANK], in its capacity as issuer of the Letter of Credit (the "***Bank***"), with reference to Irrevocable Letter of Credit No. _____ (the "***Letter of Credit***"; the terms "***2008C-1[ABC] Bonds***" and "***Indenture***" as used herein having their respective meanings set forth in the Letter of Credit) that:

1. The Trustee is the Trustee under the Indenture.

2. The Trustee hereby notifies you that all the 2008C-1[ABC] Bonds have been paid, redeemed or defeased pursuant to the Indenture.

3. The Letter of Credit is attached hereto and is being surrendered to you herewith.

IN WITNESS WHEREOF, the Trustee has executed and delivered this Termination Certificate this ___ day of _____, 20__.

The Bank of New York Mellon Trust Company, N.A., as Trustee

By:_____

Annex F

TRANSFER CERTIFICATE

[Date]

[MEMBERBANK]
_____
_____

Re: $[par] aggregate principal amount of The Pittsburgh Water and Sewer Authority Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1[ABC] of 2008 (Term Mode)

Ladies and Gentlemen:

We refer to Irrevocable Letter of Credit No. _____ (the "***Letter of Credit***"), issued in favor of The Bank of New York Mellon Trust Company, N.A., in its capacity as Trustee under the Indenture (as defined in the Letter of Credit).

For value received we hereby irrevocably transfer to _____, hereinafter referred to as the transferee, all rights of the undersigned to draw under the above Letter of Credit in its entirety.

By this transfer, all rights of the undersigned in such Letter of Credit are transferred to the transferee and the transferee shall have the sole rights relating to any amendments, whether increases or extensions or other amendments and whether now existing or hereafter made. All amendments are to be advised direct to the transferee without necessity of any consent of or notice to the undersigned.

The Letter of Credit is returned herewith for the purpose of effecting such transfer.

Please notify the transferee of this transfer and the conditions of the Letter of Credit.

Very truly yours,

_____
(Signature of Transferor)

Signature Authenticated

_____
(Bank)

_____
(Authorized Signature)

ADVICE OF CONFIRMATION NO. [Advice#]

November 10, 2009

The Bank of New York Mellon Trust Company, N.A.
Global Corporate Trust
525 William Penn Place, 7th Floor
Pittsburgh, PA 15259

Ladies and Gentlemen:

1. This Confirmation is issued to you as Trustee under the Subordinate Trust Indenture dated as of July 15, 1995 between The Pittsburgh Water and Sewer Authority (the "***Issuer***") and you, as successor Trustee to PNC Bank, National Association (the "***Initial Subordinate Indenture***"), as supplemented by a First Supplemental Subordinate Indenture dated as of March 1, 1998 (the "***First Supplement***"), as further supplemented by a Second Supplemental Subordinate Indenture dated as of June 1, 2008 (the "***Second Supplement***"), and as amended by an Amending Supplement to the Initial Subordinate Indenture and Second Supplemental Subordinate Indenture dated as of November 1, 2009 (the "***Amendment***" and, together with the Initial Subordinate Indenture, the First Supplement, and the Second Supplement, the "***Indenture***"), pursuant to which $[par] aggregate principal amount of the Issuer's Water and Sewer Revenue Refunding Bonds, Series C-1[ABC] of 2008 (Term Mode) (the "***2008C-1[ABC] Bonds***") have been issued. Capitalized terms used and not defined herein shall have the meanings ascribed to such terms in the Letter of Credit (hereinafter defined).

2. At the request and for the account of [MEMBER] ("***[MEMBER]***"), a _____ banking association having its principal offices in _____, Pennsylvania, and in order to facilitate a transaction entered into between Issuer and [MEMBER], the Federal Home Loan Bank of Pittsburgh ("***FHLB***"), hereby confirms [MEMBER]'s Irrevocable Letter of Credit No. _____ (the "***Letter of Credit***") issued in your favor as security for the payment of principal of, interest on and purchase price of the 2008C-1[ABC] Bonds. This Confirmation is for the maximum amount of $_____ (as reduced and reinstated from time to time, the "***Confirmation Amount***"). This Confirmation is effective immediately and expires at **5:00 p.m.** on November 9, 2011 or, if such day is not a Business Day (as defined in the Second Supplement, as amended by the Amendment), on the next succeeding Business Day (the "***Scheduled Expiration Date***"), unless, at the option of FHLB, FHLB delivers to you a written amendment signed by an authorized signer (specifically referring to "[MEMBER] Advice of Confirmation No. [Advice#]) extending the Scheduled Expiration Date to the date set forth in such amendment, in which case this Confirmation shall expire on such extended Scheduled Expiration Date unless further extended, it being understood that FHLB shall be under no obligation herein to grant any such extension. This Confirmation is subject to automatic termination as provided in paragraph 6 hereof.

3. FHLB hereby authorizes you to draw on FHLB from time to time upon presentation to FHLB of (1) a copy of a draft (which may be a proposed draft as provided in **Annex 1**) and accompanying certificate in the form provided for drawing under the Letter of Credit strictly conforming to the terms of the Letter of Credit (each such draft together with the accompanying certificate being herein called a "***Letter of Credit Draft***") and (2) your certificate in the form of **Annex 1** hereto (a "***Nonpayment Certificate***"). Any Letter of Credit Draft constituting an A Drawing or B Drawing under the Letter of Credit accompanied by a Nonpayment Certificate is herein called a "***Confirmation Payment Draft***", and any C Drawing under the Letter of Credit accompanied by a Nonpayment Certificate is herein called a "***Confirmation Liquidity Draft***". References to any time of day in this Confirmation shall refer to Eastern standard time or Eastern daylight savings time, as in effect in the Commonwealth of Pennsylvania on such day.

4. All documents presented to FHLB in connection with any demand for payment hereunder, as well as all notices and other communications to FHLB in respect of this Confirmation, shall be in writing and addressed and presented to FHLB at its office at 601 Grant Street, Pittsburgh, Pennsylvania 15219-4455, Attention: Credit Department -Letter of Credit Desk, or such other address as FHLB hereafter designates by written notice to you, and each Nonpayment Certificate shall be either (i) in the form of a letter on your letterhead manually signed by one of your officers and addressed to FHLB at such office or (ii) in the form of a telecopy transmission of the letter described in clause (i) of this sentence to Telecopier No. 412-288-7326, Attention: Margaret Pauli and Thomas A. Westerlund -Letter of Credit Desk (with transmission confirmed by call to Telephone No. 412-288-3459; provided, however, that the failure to provide telephonic confirmation will not adversely affect such demand for payment) or such other telecopier and telephone numbers that may be designated by FHLB by written notice delivered to you. If a drawing under this Confirmation is made by telecopier, it must contain an additional certification by you that originals of the Confirmation Payment Draft or Confirmation Liquidity Draft, as applicable, manually signed by one of your officers will be sent to FHLB concurrently by express delivery service. If FHLB receives your Confirmation Payment Draft at such office, all in strict conformity with the terms and conditions of this Confirmation, at or prior to **10:30 a.m.**, on a Business Day, FHLB will honor the same in accordance with your payment instructions by **2:00 p.m.** on the same Business Day; and if FHLB receives your Confirmation Payment Draft at such office, all in strict conformity with the terms and conditions of the Confirmation, after **10:30 a.m.**, on a Business Day, FHLB will honor the same in accordance with your payment instructions by **12:00 noon** on the Business Day immediately following the Business Day on which you present to FHLB such Confirmation Payment Draft. If FHLB receives your Confirmation Liquidity Draft at such office, all in strict conformity with the terms and conditions of this Confirmation, at or prior to **10:30 a.m.**, on a Business Day, FHLB will honor the same in accordance with your payment instructions by **2:00 p.m.** on the same Business Day; and if FHLB receives your Confirmation Liquidity Draft at such office, all in strict conformity with the terms and conditions of this Confirmation, after **10:30 a.m.**, on a Business Day, FHLB will honor the same in accordance with your payment instructions by **12:00 noon** on the Business Day immediately following the Business Day on which you present to FHLB such Confirmation Liquidity Draft. For purposes of this Confirmation, FHLB shall be deemed to have "honored" a draft at the time at which FHLB commences a wire transfer of immediately available funds in accordance with your instructions.

5. Demands for payment under the Letter of Credit or the Confirmation honored by [MEMBER] or FHLB, as applicable, shall not exceed the Confirmation Amount, as the Confirmation Amount may have been reduced or reinstated as provided below. Each draft honored under the Letter of Credit or this Confirmation shall pro tanto reduce the Confirmation Amount; provided that (a) the Confirmation Amount shall be reinstated with respect to any amount drawn and honored by [MEMBER] under the Letter of Credit if and to the extent that the amount available under the Letter of Credit is reinstated pursuant to the terms thereof and (b) in the event of a drawing honored under this Confirmation, the Confirmation Amount shall be reinstated with respect to such drawing only as follows:

(1) In the case of a drawing under this Confirmation with a Confirmation Payment Draft comprised of a B Drawing and a Nonpayment Certificate, this Confirmation shall automatically reinstate at the close of business on the10th calendar day following the day on which FHLB honored such Confirmation Payment Draft, unless before such close of business you receive a notice from FHLB in writing that such reinstatement shall not occur because (A) FHLB has not been reimbursed for such drawing or (B) an Event of Default as defined in the Irrevocable Standby Letter of Credit Reimbursement Agreement dated November 10, 2009, between [MEMBER] and FHLB (the "***Confirmation Agreement***") has occurred and is continuing, and directing you to cause mandatory tender of the 2008C-1[ABC] Bonds.

(2) In the case of a drawing under this Confirmation with a Confirmation Liquidity Draft, this Confirmation shall automatically reinstate when and to the extent that FHLB is

reimbursed for such drawing, unless before such reinstatement you receive notice from FHLB in writing that such reinstatement shall not occur because a Confirmation Payment Draft (as described in subparagraph 5(b)(1) above) has been honored by FHLB and FHLB previously gave written notice to you as Trustee during the ten (10) day period immediately following the honoring of such a Confirmation Payment Draft that such reinstatement would not occur because an Event of Default as defined in the Confirmation Agreement has occurred and is continuing.

(3) In the case of any other drawing under this Confirmation, if and to the extent that FHLB, in its sole discretion, expressly agrees to such reinstatement, it being understood that FHLB shall have no obligation to reinstate this Confirmation with respect to any amount drawn hereunder except as provided in clauses (1) and (2) above.

In addition, the Confirmation Amount shall also be reduced by the amount of any reduction in the amount available under the Letter of Credit pursuant to the delivery by the Trustee to [MEMBER] of a certificate in the form of **Annex D** to the Letter of Credit (a "***Reduction Certificate***") and the honoring of the same by [MEMBER]. By acceptance of this Confirmation, you agree to promptly provide FHLB at the address set forth in paragraph 4 hereof with a copy of each such Reduction Certificate delivered to [MEMBER], together with a certificate confirming that [MEMBER] honored the same and the Stated Amount of the Letter of Credit immediately following the honoring of such Reduction Certificate (assuming the reinstatement of interest in accordance with the Letter of Credit).

6. This Confirmation shall automatically terminate upon the first to occur of: (a) the Scheduled Expiration Date (as such date may have been extended), (b) the date on which FHLB receives a certificate from you in the form of **Annex 2** hereto that this Confirmation has been terminated, (c) the date the Letter of Credit terminates pursuant to its terms, or (d) the date on which the final drawing available hereunder (other than a drawing hereunder subject to reinstatement under clause (1) or (2) of paragraph 5(b) hereof) is honored. This Confirmation shall be promptly surrendered to FHLB by you upon such termination.

7. This Confirmation is transferable in its entirety (but not in part) with the consent of FHLB, which consent shall be given for any transferee who you certify to FHLB has succeeded you as Trustee under the Indenture, and may be successively transferred in the same manner. Transfer of this Confirmation to such transferee shall be effected by the presentation to FHLB of this Confirmation accompanied by a certificate substantially in the form of **Annex 3** hereto appropriately completed and executed.

8. Only you (or a transferee permitted by the terms of this Confirmation) may make drawings under this Confirmation. Upon the payment to you or your account of the amount specified in a Confirmation Payment Draft or Confirmation Liquidity Draft, FHLB shall be fully discharged on its obligation under this Confirmation with respect to such Confirmation Payment Draft or Confirmation Liquidity Draft, and FHLB shall not thereafter be obligated to make any further payments under this Confirmation with respect to such Confirmation Payment Draft or Confirmation Liquidity Draft.

9. This Confirmation sets forth in full the terms of FHLB's undertaking, and this undertaking shall not in any way be modified, amended, amplified or limited by reference to any document, instrument or agreement referred to herein or in which this Confirmation is referred to or to which this Confirmation relates, except only the Letter of Credit and the drafts and certificates referred to herein; and any such reference shall not be deemed to incorporate herein by reference any document, instrument or agreement, except the Letter of Credit and such drafts and certificates. All drafts and certificates referred to herein that are presented to FHLB from time to time shall become an integral part of this Confirmation and shall be binding on any transferee permitted by the terms of this Confirmation. Payment of all drawings honored under this Confirmation will be made with funds of FHLB.

10. This Confirmation is governed by the Federal Home Loan Bank Act, Rules and Regulations of the Federal Housing Finance Board and policies, guidelines and directives of the Federal Housing Finance Board and, to the extent state law is applicable, shall be governed by the laws (exclusive of the choice of law provisions) of the Commonwealth of Pennsylvania, including Article 5 of the Uniform Commercial Code as in effect in the Commonwealth of Pennsylvania. It is further agreed that this Confirmation is issued subject to the International Standby Practices 1998, and any subsequent revisions thereof to the extent not inconsistent with Article 5 of the Uniform Commercial Code in effect in the Commonwealth of Pennsylvania.

Very truly yours,

FEDERAL HOME LOAN BANK OF PITTSBURGH

By:_____

Title:_____

By:_____

Title:_____

1487935_2

ANNEX 1 To
Advice of Confirmation No. [Advice#]

To: Federal Home Loan Bank of Pittsburgh
601 Grant Street
Pittsburgh, PA 15219-4455
Attention: Credit Department -Letter of Credit Desk

NONPAYMENT CERTIFICATE WITH RESPECT TO IRREVOCABLE LETTER OF CREDIT NO. [LOC#] (THE "***LETTER OF CREDIT***") ISSUED BY [MEMBER] SUPPORTING THE PITTSBURGH WATER AND SEWER AUTHORITY WATER AND SEWER SYSTEM SUBORDINATE REVENUE REFUNDING BONDS, SERIES C-1[ABC] OF 2008 (TERM MODE) (THE "***2008C-1[ABC] BONDS***") ISSUED BY THE PITTSBURGH WATER AND SEWER AUTHORITY (THE "***ISSUER***")

The undersigned, a duly authorized officer of The Bank of New York Mellon Trust Company, N.A., as trustee (the "***Trustee***") under the Subordinate Trust Indenture dated as of July 15, 1995 between the Issuer and you, as successor Trustee to PNC Bank, National Association (the "***Initial Subordinate Indenture***"), as supplemented by a First Supplemental Subordinate Indenture dated as of March 1, 1998 (the "***First Supplement***"), as further supplemented by a Second Supplemental Subordinate Indenture dated as of June 1, 2008 (the "***Second Supplement***"), and as amended by an Amending Supplement to the Initial Subordinate Indenture and Second Supplemental Subordinate Indenture dated as of November 1, 2009 (the "***Amendment***" and, together with the Initial Subordinate Indenture, the First Supplement, and the Second Supplement, the "***Indenture***"), hereby certifies, with reference to Advice of Confirmation No. [Advice#] (the "***Confirmation***") issued by Federal Home Loan Bank of Pittsburgh ("***FHLB***") in favor of the Trustee (the capitalized terms used herein and not defined herein shall have the meanings ascribed to them in the Confirmation), that:

1. The Trustee is the Trustee under the Indenture for the holders of the 2008C-1[ABC] Bonds.

2. This Certificate accompanies a copy of the draft drawn by the Trustee on [MEMBER] in the amount of $_____ together with a certificate of the Trustee in the form prescribed by the Letter of Credit, which together are a Letter of Credit Draft constituting a _____(1)___ under the Letter of Credit strictly conforming to the terms of the Letter of Credit. This Certificate and the Letter of Credit Draft described in this paragraph constitute a _____(2)____ under the Confirmation. The Letter of Credit Draft described in this paragraph was presented to [MEMBER] in strict compliance with the terms of the Letter of Credit. [MEMBER] has failed to honor such Letter of Credit by confirming the Federal Reserve Bank confirmation number relating to its wire transfer of immediately available funds to the Trustee in the amount specified in such Letter of Credit Draft (and such Letter of Credit Draft has not otherwise been honored prior to the presentation of this Certificate). The Trustee has not been advised by [MEMBER] that such Letter of Credit Draft does not comply with the terms of the Letter of Credit (3).

OR

2. This Certificate accompanies a copy of the proposed draft which would have been submitted by the Trustee to [MEMBER] in the amount of $_____ together with a certificate of the Trustee in the form prescribed by the Letter of Credit, which together are a Letter of Credit Draft constituting a _____(1)___ under the Letter of Credit. This Certificate and the Letter of Credit Draft described in this paragraph constitute a_____(2)___ under the Confirmation. [MEMBER] or a governmental authority acting on its behalf has notified the Trustee that the Letter of Credit has been

repudiated by or on behalf of [MEMBER] or actions by [MEMBER] or a governmental authority with respect to [MEMBER] have led the Trustee to reasonably conclude that the Letter of Credit has been repudiated by or on behalf of [MEMBER]. Accordingly, the Letter of Credit Draft described in this paragraph has not been presented to [MEMBER] (3).

OR

2. This Certificate accompanies a copy of the proposed draft drawn by the Trustee on [MEMBER] in the amount of $_____ together with a certificate of the Trustee in the form prescribed by the Letter of Credit, which together are a Letter of Credit Draft constituting a _____(1)___ under the Letter of Credit strictly conforming to the terms of the Letter of Credit. This Certificate and the Letter of Credit Draft described in this paragraph constitute a _____(2)___ under the Confirmation. The Trustee has obtained, either by notice or in the ordinary course of business, actual knowledge of a proceeding under Article _____ of the _____ corporate insolvency law or a suspension of payments by banking authorities with respect to [MEMBER]. Accordingly, the Letter of Credit Draft described in this paragraph has not been presented to [MEMBER] (3).

3. The amount of the Letter of Credit Draft described in paragraph 2 above (i) does not exceed the Confirmation Amount, as reduced and reinstated in accordance with the terms of the Confirmation, (ii) was computed in accordance with the terms and conditions of the Indenture, and (iii) shall be applied pursuant to the provisions of the Indenture to the payment of principal of, purchase price of and/or accrued interest on 2008C-1[ABC] Bonds.

4. Upon receipt of payment of the Letter of Credit Draft accompanying this Certificate, the Trustee shall immediately pay or cause to be paid by wire transfer of immediately available funds to FHLB an amount not to exceed the amount of such Letter of Credit Draft to the extent funds are available therefor pursuant to the Indenture.

5. If the Letter of Credit Draft and this Certificate are initially presented by telecopier, the originals of such Letter of Credit Draft and this Certificate on the Trustee's letterhead manually signed by one of its officers are being sent to FHLB concurrently by express delivery service.

IN WITNESS WHEREOF, the Trustees has executed and delivered this Certificate as of the ____ day of _____, 20__.

The Bank of New York Mellon Trust Company, N.A.,
as Trustee

By:_____

Name:_____

Title:_____

_____

(1) Complete with one of the following, as applicable: A Drawing, B Drawing or C Drawing.

(2) Complete with one of the following, as applicable:
Confirmation Payment Draft or Confirmation Liquidity Draft.

(3) Select one paragraph 2, as applicable, and delete the other two.

ANNEX 2 To
Advice of Confirmation No. [Advice#]

To: Federal Home Loan Bank of Pittsburgh
601 Grant Street
Pittsburgh, PA 15219-4455
Attention: Credit Department -Letter of Credit Desk

CERTIFICATE FOR TERMINATING FEDERAL HOME LOAN BANK OF PITTSBURGH ("***FHLB***") ADVICE OF CONFIRMATION NO. [ADVICE#] (THE "***CONFIRMATION***") CONFIRMING IRREVOCABLE LETTER OF CREDIT NO. [LOC#] ISSUED BY [MEMBER] SUPPORTING THE PITTSBURGH WATER AND SEWER AUTHORITY WATER AND SEWER SYSTEM SUBORDINATE REVENUE REFUNDING BONDS, SERIES C-1[ABC] OF 2008 (TERM MODE) (THE "***2008C-1[ABC] BONDS***") ISSUED BY THE PITTSBURGH WATER AND SEWER AUTHORITY (THE "***ISSUER***")

The undersigned, a duly authorized officer of The Bank of New York Mellon Trust Company, N.A. (the "***Trustee***"), as trustee under the Subordinate Trust Indenture dated as of July 15, 1995 between the Issuer and you, as successor Trustee to PNC Bank, National Association (the "***Initial Subordinate Indenture***"), as supplemented by a First Supplemental Subordinate Indenture dated as of March 1, 1998 (the "***First Supplement***"), as further supplemented by a Second Supplemental Subordinate Indenture dated as of June 1, 2008 (the "***Second Supplement***"), and as amended by an Amending Supplement to the Initial Subordinate Indenture and Second Supplemental Subordinate Indenture dated as of November 1, 2009 (the "***Amendment***" and, together with the Initial Subordinate Indenture, the First Supplement, and the Second Supplement, the "***Indenture***"), under which the 2008C-1[ABC] Bonds have been issued, hereby certifies that (the capitalized terms used herein and not defined herein shall have the meanings ascribed to them in the Confirmation):

1. The Trustee is the Trustee under the Indenture for the holders of the 2008C-1[ABC] Bonds.

2. Pursuant to the Confirmation and [check one] Article II-V ____ or Section 2-3.03.1(D) ____ of the Second Supplement, as amended by the Amendment, the Confirmation shall be terminated on the date FHLB receives this Certificate, and the Trustee is herewith delivering the Confirmation for cancellation.

IN WITNESS WHEREOF, the Trustee has executed and delivered this Certificate this ____ day of _____, 20__.

The Bank of New York Mellon Trust Company, N.A.,
as Trustee

By:_____

Name:_____

Title:_____

(Date)

ANNEX 3 To
Advice of Confirmation No. [Advice#]

To: Federal Home Loan Bank of Pittsburgh
601 Grant Street
Pittsburgh, PA 15219-4455
Attention: Credit Department -Letter of Credit Desk

Re: Advice of Confirmation No. [Advice#]

Ladies and Gentlemen:

For value received, the undersigned beneficiary hereby irrevocably transfers to:

(Name of Transferee)

(Address)

all rights of the undersigned beneficiary to draw under the above-referenced Advice of Confirmation in its entirety. Said transferee has succeeded to the undersigned as Trustee under the Subordinate Trust Indenture dated as of July 15, 1995 between The Pittsburgh Water and Sewer Authority (the "***Issuer***") and you, as successor Trustee to PNC Bank, National Association (the "***Initial Subordinate Indenture***"), as supplemented by a First Supplemental Subordinate Indenture dated as of March 1, 1998 (the "***First Supplement***"), as further supplemented by a Second Supplemental Subordinate Indenture dated as of June 1, 2008 (the "***Second Supplement***"), and as amended by an Amending Supplement to the Initial Subordinate Indenture and Second Supplemental Subordinate Indenture dated as of November 1, 2009 (the "***Amendment***" and, together with the Initial Subordinate Indenture, the First Supplement, and the Second Supplement, the "***Indenture***").

By this transfer, all rights of the undersigned beneficiary in such Advice of Confirmation are transferred to the transferee and the transferee shall have the sole rights as beneficiary thereof, including sole rights relating to any amendments whether increases or extensions or other amendments and whether now existing or hereafter made. All amendments are to be advised direct to the transferee without necessity of any consent of or notice to the undersigned beneficiary.

The original of such Advice of Confirmation is returned herewith, and in accordance therewith we ask you to transfer the Advice of Confirmation to the transferee in the Confirmation Amount (as defined in the Advice of Confirmation), and forward it directly to the transferee with your customary notice of transfer.

Very truly yours,

SIGNATURE AUTHENTICATED

The Bank of New York Mellon Trust Company, N.A.,
as Trustee

_____ By:_____

_____ Title:_____
(Authorized Signature)

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APPENDIX K

FORM OF BOND COUNSEL OPINION

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Pepper Hamilton LLP
Attorneys at Law

50th Floor
500 Grant Street
Pittsburgh, PA 15219-2502
412.454.5000
Fax 412.281.0717

November 10, 2009

The Pittsburgh Water and Sewer Authority
Pittsburgh, Pennsylvania

Re: $25,000,000 The Pittsburgh Water and Sewer Authority Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1A of 2008, Series C-1B of 2008 and Series C-1C of 2008 (Term Mode) (the "Bonds")

You have requested our opinion as to the legality of the above designated series of Bonds, issued by The Pittsburgh Water and Sewer Authority (the "Authority") under the provisions of the Pennsylvania Municipality Authorities Act, 53 Pa. Cons. Stat. §§ 5601-5623, as amended (the "Act"), and pursuant to a Subordinate Trust Indenture by and between the Authority and The Bank of New York Mellon Trust Company, N.A., as successor trustee (the "Trustee"), dated as of July 15, 1995 (the "Initial Subordinate Indenture"), as supplemented by a First Supplemental Subordinate Indenture dated as of March 1, 1998 (the "First Supplemental Subordinate Indenture") and a Second Supplemental Subordinate Indenture dated as of June 1, 2008 (the "Second Supplemental Subordinate Indenture" and collectively with the Initial Subordinate Indenture and the First Supplemental Subordinate Indenture, the "Subordinate Indenture") and as further supplemented by an Amending Supplement to the Initial Subordinate Indenture and Second Supplemental Subordinate Indenture dated as of November 1, 2009 (the "Subordinate Amending Supplement").

The Bonds were issued under the Subordinate Indenture and are being converted from the Weekly Mode to the Term Mode and reissued in three subseries, Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1A of 2008 (Term Mode) (the "2008C-1A Bonds"), Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1B of 2008 (Term Mode) (the "2008C-1B Bonds"), and Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1C of 2008 (Term Mode) (the "2008C-1C Bonds").

In addition, payment of the principal of, and interest on, the Bonds are insured under a municipal bond insurance policy (the "Bond Insurance Policy") issued by Financial Security Assurance Inc.

As Bond Counsel for the Authority, we have examined such law and such certified proceedings and other documents as we have deemed necessary to express this opinion.

Philadelphia Boston Washington, D.C. Detroit New York Pittsburgh
Berwyn Harrisburg Orange County Princeton Wilmington
www.pepperlaw.com

In rendering this opinion we have examined and relied upon the opinions of counsel to the Authority with respect, *inter alia*, to the due organization, existence and good standing of the Authority; the authorization, execution and delivery of the documents to which the Authority is a party; the validity and binding effect thereof on the Authority; and the accuracy of the statements and representations and the performance of the covenants of the Authority set forth in the Subordinate Indenture, the Subordinate Amending Supplement and in the Authority's Tax Certificate, each as delivered on this date in connection with the issuance of the Bonds.

As to questions of fact material to our opinion, we have relied upon the representations of the Authority contained in the Subordinate Indenture and the Subordinate Amending Supplement and in the certified proceedings and other certifications of public officials and others furnished to us without undertaking to verify the same by independent investigation.

Based upon the foregoing, we are of the opinion that, under existing law:

1. The Authority has been duly and legally incorporated and validly exists under the Act and has corporate power and lawful authority to execute and deliver the Subordinate Amending Supplement and to convert and reissue the Bonds in a Term Mode.

2. The Subordinate Amending Supplement has been duly authorized, executed and delivered by the Authority and, assuming the due authorization, execution and delivery thereof by the other parties thereto, is a valid and binding obligation of the Authority, enforceable in accordance with its terms.

3. All conditions precedent provided for in the Initial Subordinate Indenture and the Second Supplemental Subordinate Indenture related to conversion of the Bonds have been complied with by the Authority.

4. The Bonds have been validly authorized, executed and delivered by the Authority and, when authenticated by the Trustee, constitute valid and binding limited obligations of the Authority entitled to the benefits and security of the Subordinate Indenture and the Subordinate Amending Supplement and are enforceable in accordance with their terms.

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

6. Interest on the Bonds is excluded from gross income of the owners of the Bonds for federal income tax purposes under existing law, as currently construed. Interest on the Bonds is not an item of tax preference under the Internal Revenue Code of 1986, as amended (the "Code"), for purposes of the federal alternative minimum tax imposed upon individuals and corporations, and is not included in the earnings and profits of a corporate holder for purposes of the alternative minimum tax. Interest on a Bond held by a foreign corporation may be subject to the branch profits tax imposed by the Code.

Ownership of the Bonds may give rise to collateral federal income tax consequences to certain 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. We express no opinion as to such collateral federal income tax consequences.

In providing this opinion, we advise you as follows:

a. It may be determined in the future that interest on the Bonds, retroactively to the date of issuance thereof or prospectively, will not be excluded from the gross income of the owners of the Bonds for federal income tax purposes if certain requirements of the Code are not met subsequent to the issuance of the Bonds. The Authority has covenanted in the Subordinate Indenture to comply with all such requirements.

b. The enforceability (but not the validity) of the documents mentioned herein may be limited by bankruptcy, insolvency, reorganization, moratorium or other laws now or hereafter enacted by any state or the federal government affecting the enforcement of creditors' rights generally, and "enforceable in accordance with its (their) terms" shall not mean that specific performance would necessarily be available as a remedy in every situation.

c. The obligations of the Authority under the Subordinate Indenture, the Subordinate Amending Supplement and the Bonds do not create an indebtedness or pledge the credit or taxing power of the United States of America, the Commonwealth of Pennsylvania or any political subdivision thereof, and the Bonds are limited obligations of the Authority payable solely from the moneys pledged therefor under the Subordinate Indenture, the Subordinate Amending Supplement and from payments under the Bond Insurance Policy.

We express no opinion herein as to the accuracy, adequacy or completeness of the Official Statement relating to the Bonds.

PEPPER HAMILTON LLP

Pepper Hamilton

[FORM OF BOND COUNSEL OPINION]

September __, 2010

The Pittsburgh Water and Sewer Authority
Pittsburgh, PA

The Bank of New York Mellon Trust Company, N.A.
Pittsburgh, PA

Northwest Savings Bank
Pittsburgh, PA

ESB Bank
Pittsburgh, PA

Washington Financial Bank
Washington, PA

Re: The Pittsburgh Water and Sewer Authority Water and Sewer System Subordinate Revenue Refunding Bonds, Series C-1A of 2008 (Term Mode), Series C-1B of 2008 (Term Mode) and Series C-1C of 2008 (Term Mode) – Reoffering

Ladies and Gentlemen:

We have acted as Bond Counsel in connection with the reoffering by The Pittsburgh Water and Sewer Authority (the "Authority") of its $25,000,000 aggregate principal amount of Water and Sewer System Subordinate Revenue Bonds, Series C-1A of 2008 (Term Mode), Series C-1B of 2008 (Term Mode) and Series C-1C of 2008 (Term Mode) (the "Bonds"). The Bonds are dated as of the date of the original issuance, June 12, 2008, and were originally issued pursuant to the Subordinate Trust Indenture by and between the Authority and The Bank of New York Mellon Trust Company, N.A., as successor trustee (the "Trustee"), dated as of July 15, 1995 (the "Initial Subordinate Indenture"), as supplemented by a First Supplemental Subordinate Indenture dated as of March 1, 1998 (the "First Supplemental Subordinate Indenture") and Second Supplemental Subordinate Indenture dated as of June 1, 2008 (the "Second Supplemental Subordinate Indenture") and as further supplemented by an Amending Supplement to the Initial Subordinate Indenture and Second Supplemental Subordinate Indenture dated as of November 1, 2009 (the "Subordinate Amending Supplement," together with the Initial Subordinate Indenture, the First Supplemental Indenture and the Second Supplemental Indenture, the "Subordinate Indenture"). Capitalized terms used but not defined herein shall have the same meanings ascribed to such terms in the Subordinate Indenture.

As authorized by the Remarketing Agreement by and between the Authority and Boenning & Scattergood, Inc. (the "Remarketing Agent") dated as of November 10, 2009, the Bonds will be reoffered in the Term Mode and are subject to mandatory tender on September 1, 2011 (the "Term Mode Date"). The Bonds will bear interest at the applicable Term Rates established by the Remarketing Agent, payable on March 1, 2011 and on each September 1 and March 1 thereafter.

For purposes of rendering the opinions expressed herein, we have examined such matters of law and such documents, instruments, records and proceedings as we have deemed necessary including, but not limited to, the Subordinate Indenture and the Remarketing Agreement.

Based on the foregoing, we are of the opinion that the reoffering of the Bonds is authorized under and complies with the terms of the Subordinate Indenture and that under existing law as currently enacted and construed, the reoffering of the Bonds will not in and of itself adversely affect the exclusion from gross income for federal income tax purposes of the interest on the Bonds.

We have made no investigation and express no opinion as to whether any events have occurred or any circumstances have existed since the date of issuance of the Bonds which may have affected the federal income tax status of interest on the Bonds. This opinion is not a confirmation or "bring down" of our opinion as bond counsel which was delivered in connection with the issuance of the Bonds.

This opinion is limited to the addressees hereof and no other person is entitled to rely hereon without our prior written consent. By your acceptance of this letter you agree that this letter does not establish, and shall not be deemed to establish, an attorney-client relationship or privity between this firm and you.

PEPPER HAMILTON LLP