

**Peters Township Sanitary Authority**  
**Summary Report**  
**of**  
**Tapping Fee Calculation and Connection Charges**

**June 10, 2005**  
**Update No. 1 – June 13, 2006**

## **Summary Report**

### **Tapping Fee Calculation and Connection Charges**

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## 1.0 Introduction

This Summary Report summarizes the calculations, and describes the methodology used in the calculation of the Peters Township Sanitary Authority's tapping fee and connection charges in accordance with Act 57 of 2003. The Summary Report in conjunction with its Appendix comprises the detailed itemization of the tapping fee calculation. The appendices contain a copy of Act 57 2006, the original engineering report, and other support data.

The Authority engaged KLH Engineers, Inc. to prepare the original engineering study identifying the allowable costs and to calculate the maximum amount allowable for each fee as required by Act 57 of 2006, which states recalculations of fees were to be performed by July 1, 2005. The Authority adopted by resolution the Tapping and Connection Fees on June 13, 2005 with an effective date July 1. The Authority will review and update the calculation annually for any additional facilities, the current ERN index and any revisions to the outstanding debt. Appendix C contains the tables containing the calculation for Update No. 1 – June 13, 2006.

## 2.0 Description of Organization

The Peters Township Sanitary Authority, a municipal corporation organized under the provision of the Municipal Authorities Act of 1945, as amended, was incorporated on March 20, 1964 and its corporate life is extended until August 1, 2024 for the purpose of providing and maintaining a sanitary sewer collection, conveyance, and treatment systems for the western portion of Peters Township.

The sewerage system is comprised of the Brush Run Water Pollution Control Plant (BRWPCP) with a design flow of 2.0 Million Gallons per Day (MGD), with approximately 84 miles of sewers, and the Donaldson's Crossroads Water Pollution Control Plant (DCWPCP) with a design flow of 1.2 MGD, and approximately 45 miles of sewer. The Marella Manor Service Area has approximately 1.5 miles of sewers and the wastewater receives treatment in the ALCOSAN system.

## 3.0 Description of Tapping Fee and Connection Charges

The Authority follows the requirements set forth in the Pennsylvania Municipality Authorities Act of 1945 which provides for an authority to charge enumerated fees to property owners who desire or are required to connect to the authority's sewer system. Act 57 of 2003, amended the Municipality Authorities Act as it pertains to tapping fee and connection charges. For simplicity, references to the law governing calculation of tapping fee will reference Act 57 of 2003.

Act 57 of 2003 provides for the following fees to be charged to customers desiring to or required to connect to the Authority's sewer system:

*Connection Fee* – a fee based on the actual cost of connection of the property from sewer main to the property line, or it may be based on the average cost of previously installed connections.

*Customer Facilities Fee* – a fee based on the actual cost of facilities from the property line to the building being served.

*Tapping Fee* – is comprised of the capacity part, the collection part, and may include a special purpose part and/or a reimbursement part.

An authority is not required to charge tapping fees and connection charges, but if it does so the fees shall be established in accordance with Act 57 of 2003. An authority may charge fees in an amount equal to the maximum amount allowable, or it may charge any amount less than the maximum amount.

The basic concept of charging tapping fees is to recover a portion of embedded fixed capital investment costs from new customers as they connect to the sewer system. When sewage treatment and disposal facilities are constructed by a public agency, such as treatment plants, interceptors, trunk sewers, and sewer mains, they are designed and constructed to not only provide service to the existing customer base, but also to serve the growth needs of the community. The existing customers, through years of the debt service payment portion of their sewer use charge, or by the use of surplus funds, pay for the cost of constructing facilities that will someday be utilized by future customers. The tapping fee provides a mechanism to recover from the new customer revenues that reimburse the existing customer base for the unencumbered fixed assets which provide sewage treatment and disposal, and which the existing customer base paid for.

#### 4.0 Summary of Adopted Tapping Fee and Connection Charges

The Peters Township Sanitary Authority adopted Resolution No. 04-06-06 on June 13, 2006, at its regular scheduled public meeting, establishing the following tapping fee and connection charges effective July 1, 2006. The Connection, Customer Facilities, and Tapping Fees are payable at the time the new customer makes application for a Sewer Connection Permit.

<b>Table 1A</b> Residential Tapping Fee and Connection Charges (Applies to Single Family and Multi-Family Dwellings)		
	Where Wye is Available	Where Tap/Saddle Installation by Authority
Connection Fee	\$ 61.00	\$ 280.00
Customer Facilities Fee	\$ 46.00	\$ 46.00
Discount	(\$29.00)	(\$29.00)
Tapping Fee		
Capacity Part	\$ 1,400.00	\$ 1,400.00
Collection Part	\$ 1,473.00	\$ 1,473.00
Total of all Fees	\$ 2,950.00	\$ 3,170.00

<b>Table 1B</b> Non-Residential Tapping Fee and Connection Charges		
	Where Wye is Available	Where Tap/Saddle Installation by Authority
Connection Fee	\$ 61.00	\$ 280.00
Customer Facilities Fee	\$ 46.00	\$ 46.00
Discount	(\$30.00)	(\$30.00)
Tapping Fee		
Capacity Part	\$5.43/gallon <sup>1</sup>	\$5.43/gallon
Collection Part	\$5.71/gallon	\$5.71/gallon
Total of all Fees	\$78.00 + \$11.13/gallon	\$297.00 + \$11.13/gallon

<sup>1</sup> The charge is per gallon of capacity needs of the non-residential customer, based upon the maximum monthly average day capacity requirement, with a minimum required capacity of 258 gpd.

## 5.0 Procedures Used in the Calculation of the Tapping Fee and Connection Charges

The following paragraphs describe the procedures and methods used in calculating the various cost components.

### 5.1 Connection Fee

The Connection Fee may be based on the actual cost of connection of the property being served from the sewer main to the property line, or it may be based on the average cost of previously installed connections. The Connection Fee would include costs associated with the customer's facilities installed from the sewer main to the property line or easement line. A typical installation includes a wye fitting with the sewer main, and all necessary fittings and piping to extend the service connection to the property line or easement line.

The Authority typically does not install the service connection extension for the majority of new customers that connect today, with these facilities installed by the customer acquiring service. Thereby, the Authority does not have a direct cost in the construction of the service connection extension for most new connections. The Authority does however require all new customers to make application for a Sewer Connection Permit which requires review and approval by the Authority, and clerical processing of the Sewer Connection Permit. The Authority also inspects portions of the service connection. Therefore these administrative and inspection costs are included in the Connection Fee, based on the average cost of previously installed sewer connections.

In rare instances where property subdivides along an existing sewer main there may not be a wye fitting available for the connection of a new property. This is determined during the application review process. When this circumstance arises, the Authority requires the sewer main to be tapped and a saddle installed, with the materials supplied and work performed by the Authority staff. In these cases the material cost and average labor costs are added to the base Connection Fee.

Table 2A and 2B set forth the basis for the Connection Fee based on average cost from previously installed facilities, for when a wye is available, and when a tap and saddle is required.

<b>Table 2A</b>				
Average Cost Basis, Wye Available				
	2006 Unit Price per Hour	Average Hours of Effort	Average Cost	Fee Charged
Inspection Time	\$30.94	0.75	\$23.20	
Administrative Time	\$38.52	1.0	<u>\$38.52</u>	
Total			<b>\$61.72</b>	<b>\$61.00</b>

## Connection Fee – Table 2B (Cont'd)

<b>Table 2B</b> Average Cost Basis, Installation of Tap and Saddle				
	2006 Unit Price per Hour	Average Hours of Effort	Average Cost	Fee Charged
Inspection Time	\$30.95	0.75	\$23.21	
Administrative Time	\$38.52	1.5	\$57.78	
Labor for installation	\$30.14	2.0	\$60.28	
Material for installation	\$139.11		\$139.11	
Total			<b>\$280.38</b>	<b>\$280.00</b>

### 5.2 Customer Facilities Fee

The Customer Facilities Fee is based on actual cost to install the sewer lateral from the property line of the proposed dwelling or building being served. The Authority requires the cost and construction of those facilities to be by the property owner who requested the connection. Throughout the construction process, the Authority performs a series of inspections consisting of a visual inspection at the pipe bedding stage, witnessing of water tightness tests after backfilling is completed, and a final inspection after all work is complete to verify compliance with the Authority's Rules and Regulations. The minimum amount of time to complete all three inspections is 1.5 hours. Table 3 sets forth the time and allowable cost of performing the inspection of the customer's sewer lateral.

<b>Table 3</b> Cost Basis for Inspecting Customer's Facilities				
	2006 Unit Price per Hour	Minimum Hours	Minimum Cost	Fee Charged
Inspection Time	\$30.95	1.5	<b>\$46.42</b>	<b>\$46.00</b>

### 5.3 Tapping Fee

#### 5.3.1 General

The Tapping Fee is designed to recover a portion of embedded fixed capital investment costs from new customers as they connect to the sewer system. It is based on the capital costs for sewer facilities and the capacity requirements of the customer.

The major elements involved in calculating the Tapping Fee are:

- The original total project costs for fixed capital assets providing sewerage service
- The in-service date of the fixed asset
- The details of any outstanding debt principle for those facilities
- The details of any grants received or assessments collected for those facilities
- The procedure and details regarding indexing capital costs to today's cost
- The system design capacity, and the design capacity of individual facilities
- The customer's design capacity required

### 5.3.2 Method of Calculating the Tapping Fee

Act 57 of 2003 provides for several alternative methods for calculating the tapping fee. The Authority has elected to use the historical cost trended to current cost with published cost indexes method. The historical cost is its acquired value (value at acquisition). This data was obtained from the Authority's financial records including Independent Auditor Reports, Fixed Asset Inventory, Act 339 Applications, Construction Requisitions and Project Summaries, Grant Documents, Assessment Records, Trust Indenture Documents, and other records. The in-service date is the date of substantial completion, when the Authority began to receive beneficial use of the asset. The cost index used is the Engineering News Record (ENR) Index Values.

### 5.3.3. Design Capacity

Act 57 of 2003 defines System Design Capacity as the design capacity of the system for which the tapping fee is being calculated which represents the total design capacity of the treatment facility. The Authority owns and operates two treatment plants, with a combined design and permitted capacity of 3.2 Million Gallons/Day (MGD). This value is the value contained in the Part II Construction Permit for each treatment facility. Therefore, the System Design Capacity is 3.2 MGD. This value is used as the design capacity for both the Capacity Part and the Collection Part of the Tapping Fee.

### 5.3.4 Customer's Design Capacity Required

Act 57 of 2003 provides several different methods for establishing the Customer's Design Capacity Required. For residential customers connecting to the sewer system the Authority has elected to use the prescribed 90 gallons/day (gpd) per capita per day times the average number of persons per household as established by the most recent census data provided by the United States Census Bureau.

The 2000 Census reports the Peters Township average persons per household is 2.87 persons/household. Therefore the residential Customer's Design Capacity Required for sewage service is established at:

$$90 \text{ gpd} \times 2.87 \text{ persons/household} = 258 \text{ gpd/household.}$$

This capacity requirement value is used for both single-family and multi-family residential customers.

Act 57 of 2003 does not describe a specific method for determining the design capacity requirements of non-residential customers. Therefore, the Authority has established the method for determining non-residential Customer's Design Capacity Requirements. The capacity requirements will be based upon the customer's maximum month daily average water consumption, as determined by the Authority based on available data, with a minimum 258 gallons per day. This capacity requirement corresponds to the design capacity of the treatment plants, that being the design maximum month daily average flow.

## 6.0 Summary of Tapping Fee Calculation

The Tapping Fee is comprised of the capacity part, the collection part, and may include a special purpose part and/or a reimbursement part. The facilities included in the individual parts consist of:

*Capacity Part* – Included in the Capacity Part are the cost of capacity-related facilities consisting of the sewage treatment plants, treated effluent outfalls, sludge treatment and disposal facilities, plant inlet sewers, and interceptor sewers.

*Collection Part* – Included in the Collection Part are the cost of the network of public sewer mains that extend to the properties being served. Also included are two sewage pumping stations constructed by the Authority which serve a limited number of customers.

*Special Purpose Part* – Included in the Special Purpose Part would be the cost of special purpose facilities that serve a particular group of customers or a specific area. This part may include for example sewage pumping stations, sewer mains, or industrial treatment facilities.

*Reimbursement Part* – The Reimbursement Part is applicable to certain specific facilities constructed by a party, other than the Authority, where a written agreement between the party and the Authority establishes a fee to be collected from users of the specific facilities as they connect, and reimbursed to the party at whose expense the facilities were constructed. *(This part should not be confused with the mandatory requirement that the Collection Part shall be reimbursed to the party constructing the sewer main when a new user connects directly to the sewer main with a service lateral).*

The Resolution adopted by the Authority has established both a Capacity Part and a Collection Part. The Special Purpose Part and Reimbursement Part, if adopted for specific projects will be contained in separate resolution adopting such Tapping Fee Parts.

Table 4 provides a summary of the cost basis used in calculating the Capacity Part and Collection Part. The detailed itemization by project is contained in Appendix C.

<b>Table 4</b> Cost Basis per Gallon/Day (gpd)		
	Capacity Part	Collection Part
Trended Project Cost	\$20,955,191	\$17,824,298
Plus Available Surplus Funds	\$991,429	\$854,147
Minus O/S Debt	\$(4,575,000)	\$(412,439)
Allowable Project Cost Basis	\$17,371,620	\$18,266,006
Design Capacity (gpd)	3,200,000	3,200,000
Cost Basis per gpd	\$5.43	\$5.71

Grants and assessments collected toward the cost of the facilities were deducted from project cost prior to indexing, in the amounts of \$233,238 and \$2,877,748, for the Capacity and Collection Parts, respectively.

The maximum allowable residential tapping fee is the cost per gallon multiplied by the residential customer's design capacity requirements. As noted previously, this has been established as 258 gpd. Non-residential customer design capacity requirements will be based on the greater of the maximum month daily average water consumption or the minimum 258 gpd, as determined by the Authority based on available data.



In consideration thereof, the maximum allowable residential tapping fee for each part is shown below, along with the tapping fee part adopted.

Table 5 Maximum Allowable Tapping Fee and Fee Adopted				
	Capacity Part		Collection Part	
	Maximum Allowable	Fee Adopted	Maximum Allowable	Fee Adopted
Residential	\$1,401.00	\$ 1,401.00	\$1,473.00	\$ 1,473.00
Non-Residential	\$5.43/gallon	\$5.43/gallon	\$5.71/ gallon	\$5.71/ gallon

#### 6.1 Additional Discussion Regarding Special Purpose Part

The Special Purpose Part is applicable only to a particular group of customers or for serving a particular purpose or a specific area based upon the cost of the facilities, including, but not limited to, sewer mains, pumping stations and wastewater treatment facilities.

Where the Authority constructs the special purpose facilities at its own expense, the design capacity for the facility may be expressed in terms of the number of equivalent dwelling units to be served by the facilities. The costs may be trended forward, using a published cost index.

The provisions of Act 57 of 2003 regarding Special Purpose Part facilities and fees provide a cost effective alternative for recovering funds expended by the Authority. Prior to Act 57 the only alternatives were undertaking an assessment program or establishing a special rate district. A practical application of this provision would be to sewer existing dwellings with malfunctioning septic systems.

The Special Purpose Part is in addition to the Capacity and Collection fees. The Authority, when it adopts a Special Purpose Part, being project specific, will do so by separate resolution

#### 6.2 Special Requirement Regarding Reimbursement of the Collection Part

The provisions of Act 57 of 2003, as incorporated into Section 5607 (31) of the Municipality Authorities Act requires where a property owner constructs at their expense any extension of a sewer system, the authority shall provide reimbursement to the property owner when the owner of another property not in the development for which the extension was constructed connects a service line directly to the sewer extension within ten years of the date of the dedication of the extension to the authority in accordance with the following provisions:

- Reimbursement shall be equal to the *Collection Part* of each tapping fee collected as a result of subsequent connections.
- An amount equal to 5% for administrative expenses may be deducted from each reimbursement.
- An itemized list will be provided along with an agreement to the property owner whose benefit reimbursement will be provided.
- Total reimbursement which a property owner may receive may not exceed the total cost of the installation.
- The authority shall notify by certified mail to the last known address of the property owner that installed the sewer extension of the available reimbursement within 30 days of receipt of the Collection Part of the tapping fee. If property owner does not claim the reimbursement payment within 120 days after notification, the payment shall become sole property of the Authority.

## **Tapping Fee Calculation Summary Report**

### **APPENDIX**

A - Act 57 of 2003

B - Adopting Resolution

C – Update Table

D - Peters Township Sanitary Authority Tapping Fee Calculation, 2005, KLH Engineers, Inc

E - US Census Data

F - Connection Fee Tap and Saddle Material Costs

G - Brush Run Sewerage System Project Cost Data

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## APPENDIX A

Act 57 of 2003

GENERAL LOCAL GOVERNMENT CODE (53 PA.C.S.) - POWERS AND DUTIES OF AUTHORITIES  
Act of Dec. 30, 2003, No. 57 Cl. 53  
Session of 2003  
No. 2003-57

HB 51

AN ACT

Amending Title 53 (Municipalities Generally) of the Pennsylvania Consolidated Statutes, further providing for powers and duties of authorities.

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Section 1. Section 5607(d)(17), (24), (30), (32) and (33) of Title 53 of the Pennsylvania Consolidated Statutes are amended to read:

§ 5607. Purposes and powers.

\* \* \*

(d) Powers.--Every authority may exercise all powers necessary or convenient for the carrying out of the purposes set forth in this section, including, but without limiting the generality of the foregoing, the following rights and powers:.

(17) To do all acts and things necessary or convenient for the promotion of its business and the general welfare of the authority to carry out the powers granted to it by this chapter or other law, including, but not limited to, the adoption of reasonable rules and regulations that apply to water and sewer lines located on a property owned or leased by a customer and to refer for prosecution as a summary offense any violation dealing with rules and regulations relating to water and sewer lines located on a property owned or leased by a customer. Under this paragraph, an authority established by a county of the second class A which is not a home rule county shall have powers for the inspection and repair of sewer facilities comparable to the powers of health officials under section 3007 of the act of May 1, 1933 (P.L.103, No.69), known as The Second Class Township Code.

(24) To charge enumerated fees to property owners who desire to or are required to connect to the authority's sewer or water system. Fees shall be based upon the duly adopted fee schedule which is in effect at the time of payment and shall be payable at the time of application for connection or at a time to which the property owner and the authority agree. In the case of projects to serve existing development, fees shall be payable at a time to be determined by the authority. An authority may require that no capacity be guaranteed for a property owner until the tapping fees have been paid or secured by other financial security. The fees shall be in addition to any charges assessed against the property in the construction of a sewer or water main by the authority under paragraphs (21) and (22) as well as any other user charges imposed by the authority under paragraph (9), except that no reservation of capacity fee or other similar charge shall be imposed or collected from a property owner who has applied for service unless the charge is based on debt and fixed operating expenses. A reservation of capacity fee or other similar charge may not exceed 60% of the average

sanitary sewer bill for a residential customer in the same sewer service area for the same billing period. Any authority opting to collect a reservation of capacity fee or other similar charge may not collect the tapping fee until the time as the building permit fee is due. Tapping fees shall not include costs included in the calculation of any other fees, assessments, rates or other charges imposed under this act.

(i) The fees may include any of the following if they are separately set forth in a resolution adopted by the authority:

(A) Connection fee. A connection fee shall not exceed an amount based upon the actual cost of the connection of the property extending from the authority's main to the property line or curb stop of the property connected. The authority may also base the connection fee upon an average cost for previously installed connections of similar type and size. Such average cost may be trended to current cost using published cost indexes. In lieu of payment of the fee, an authority may require the construction of those facilities by the property owner who requested the connection.

(B) Customer facilities fee. A customer facilities fee shall not exceed an amount based upon the actual cost of facilities serving the connected property from the property line or curb stop to the proposed dwelling or building to be served. The fee shall be chargeable only if the authority installs the customer facilities. In lieu of payment of the customer facilities fee, an authority may require the construction of those facilities by the property owner who requests customer facilities. In the case of water service, the fee may include the cost of a water meter and installation if the authority provides or installs the water meter. If the property connected or to be connected with the sewer system of the authority is not equipped with a water meter, the authority may install a meter at its own cost and expense. If the property is supplied with water from the facilities of a public water supply agency, the authority shall not install a meter without the consent and approval of the public water supply agency.

(C) Tapping fee. A tapping fee shall not exceed an amount based upon some or all of the following parts which shall be separately set forth in the resolution adopted by the authority to establish these fees. In lieu of payment of this fee, an authority may require the construction and dedication of only such capacity, distribution-collection or special purpose facilities necessary to supply service to the property owner or owners.

(I) Capacity part. The capacity part shall not exceed an amount that is based upon the cost of capacity-related facilities, including, but not limited to, source of supply, treatment, pumping, transmission, trunk, interceptor and outfall mains, storage, sludge treatment or disposal, interconnection or other general system facilities. Except as specifically provided in this paragraph, such facilities may include only those that provide existing service. The cost of capacity-related facilities, excluding facilities

contributed to the authority by any person, government or agency, or portions of facilities paid for with contributions or grants other than tapping fees, shall be based upon their historical cost trended to current cost using published cost indexes or upon the historical cost plus interest and other financing fees paid on debt financing such facilities. To the extent that historical cost is not ascertainable, tapping fees may be based upon an engineer's reasonable written estimate of current replacement cost. Such written estimate shall be based upon and include an itemized listing of those components of the actual facilities for which historical cost is not ascertainable. Outstanding debt related to the facilities shall be subtracted from the cost except when calculating the initial tapping fee imposed for connection to facilities exclusively serving new customers. The outstanding debt shall be subtracted for all subsequent revisions of the initial tapping fee where the historical cost has been updated to reflect current cost except as specifically provided in this section. For tapping fees or components related to facilities initially serving exclusively new customers, an authority may, no more frequently than annually and without updating the historical cost of or subtracting the outstanding debt related to such facilities, increase such tapping fee by an amount calculated by multiplying the tapping fee by the weighted average interest rate on the debt related to such facilities applicable for the period since the fee was initially established or the last increase of the tapping fee for such facilities. The capacity part of the tapping fee per unit of design capacity of said facilities required by the new customer shall not exceed the total cost of the facilities as described herein divided by the system design capacity of all such facilities. Where the cost of facilities to be constructed or acquired in the future are included in the calculation of the capacity part as permitted herein, the total cost of the facilities shall be divided by the system design capacity plus the additional capacity to be provided by the facilities to be constructed or acquired in the future. An authority may allocate its capacity-related facilities to different sections or districts of its system and may impose additional capacity-related tapping fees on specific groups of existing customers such as commercial and industrial customers in conjunction with additional capacity requirements of those customers. The cost of facilities to be constructed or acquired in the future that will increase the system design capacity may be included in the calculation of the capacity part, subject to the provisions of clause (VI). The cost of such facilities shall not exceed their reasonable estimated cost set forth in a duly adopted annual budget or a five-year capital improvement plan. The authority shall have taken

at least two of the following actions toward construction of the facilities:

(a) obtained financing for the facilities;

(b) entered into a contract obligating the authority to construct or pay for the cost of construction of the facilities or its portion thereof in the event that multiple parties are constructing the facilities;

(c) obtained a permit for the facilities;

(d) obtained title to or condemned additional real estate upon which the facilities will be constructed;

(e) entered into a contract obligating the authority to purchase or acquire facilities owned by another;

(f) prepared an engineering feasibility study specifically related to the facilities, which study recommends the construction of the facilities within a five-year period;

(g) entered into a contract for the design or construction of the facilities or adopted a budget which includes the use of in-house resources for the design or construction of the facilities.

(II) Distribution or collection part. The distribution or collection part may not exceed an amount based upon the cost of distribution or collection facilities required to provide service, such as mains, hydrants and pumping stations. Facilities may only include those that provide existing service. The cost of distribution or collections facilities, excluding facilities contributed to the authority by any person, government or agency, or portions of facilities paid for with contributions or grants other than tapping fees, shall be based upon historical cost trended to current cost using published cost indexes or upon the historical cost plus interest and other financing fees paid on debt financing such facilities. To the extent that historical cost is not ascertainable, tapping fees may be based upon an engineer's reasonable written estimate of replacement cost. Such written estimate shall be based upon and include an itemized listing of those components of the actual facilities for which historical cost is not ascertainable. Outstanding debt related to the facilities shall be subtracted from the cost except when calculating the initial tapping fee imposed for connection to facilities exclusively serving new customers. The outstanding debt shall be subtracted for all subsequent revisions of the initial tapping fee where the historical cost has been updated to reflect current cost except as specifically provided in this section. For tapping fees or components related to facilities initially serving exclusively new customers, an authority may, no more frequently than annually and without updating the historical cost of or subtracting the outstanding debt related to such facilities,

increase such tapping fee by an amount calculated by multiplying the tapping fee by the weighted average interest rate on the debt related to such facilities applicable for the period since the fee was initially established or the last increase of the tapping fee for such facilities. The distribution or collection part of the tapping fee per unit of design capacity of said facilities required by the new customer shall not exceed the cost of the facilities divided by the design capacity. An authority may allocate its distribution-related or collection-related facilities to different sections or districts of its system and may impose additional distribution-related or collection-related tapping fees on specific groups of existing customers such as commercial and industrial customers in conjunction with additional capacity requirements of those customers.

(III) Special purpose part. A part for special purpose facilities shall be applicable only to a particular group of customers or for serving a particular purpose or a specific area based upon the cost of the facilities, including, but not limited to, booster pump stations, fire service facilities, water or sewer mains, pumping stations and industrial wastewater treatment facilities. Such facilities may include only those that provide existing service. The cost of special purpose facilities, excluding facilities contributed to the authority by any person, government or agency, or portions of facilities paid for with contributions or grants other than tapping fees, shall be based upon historical cost trended to current cost using published cost indexes or upon the historical cost plus interest and other financing fees paid on debt financing such facilities. To the extent that historical cost is not ascertainable, tapping fees may be based upon an engineer's reasonable written estimate of current replacement cost. Such written estimate shall be based upon and include an itemized listing of those components of the actual facilities for which historical cost is not ascertainable. Outstanding debt related to the facilities shall be subtracted from the cost except when calculating the initial tapping fee imposed for connection to facilities exclusively serving new customers. The outstanding debt shall be subtracted for all subsequent revisions of the initial tapping fee where the historical cost has been updated to reflect current cost except as specifically provided in this section. For tapping fees or components related to facilities initially serving exclusively new customers, an authority may, no more frequently than annually and without updating the historical cost of or subtracting the outstanding debt related to such facilities, increase such tapping fee by an amount calculated by multiplying the tapping fee by the weighted average interest rate on the debt related to such facilities applicable for the period since the fee was initially established or



the last increase of the tapping fee for such facilities. The special purpose part of the tapping fee per unit of design capacity of such special purpose facilities required by the new customer shall not exceed the cost of the facilities as described herein divided by the design capacity of the facilities. Where an authority constructs special purpose facilities at its own expense, the design capacity for the facilities may be expressed in terms of the number of equivalent dwelling units to be served by the facilities. In no event shall an authority continue to collect any tapping fee which includes a special purpose part after special purpose part fees have been imposed on the total number of design capacity units used in the original calculation of the special purpose part. An authority may allocate its special purpose facilities to different sections or districts of its system and may impose additional special purpose tapping fees on specific groups of existing customers such as commercial and industrial customers in conjunction with additional capacity requirements of those customers.

(IV) Reimbursement part. The reimbursement part shall only be applicable to the users of certain specific facilities when a fee required to be collected from such users will be reimbursed to the person at whose expense the facilities were constructed as set forth in a written agreement between the authority and such person at whose expense such facilities were constructed.

(V) Calculation of tapping fee.

(a) In arriving at the cost to be included in the tapping fee, the same cost shall not be included in more than one part of the tapping fee.

(b) No tapping fee may be based upon or include the cost of expanding, replacing, updating or upgrading facilities serving only existing customers in order to meet stricter efficiency, environmental, regulatory or safety standards or to provide better service to or meet the needs of existing customers.

(c) The cost used in calculating tapping fees shall not include maintenance and operation expenses.

(d) As used in this subclause, "maintenance and operation expenses" are those expenditures made during the useful life of a sewer or water system for labor, materials, utilities, equipment accessories, appurtenances and other items which are necessary to manage and maintain the system capacity and performance and to provide the service for which the system was constructed. Costs or expenses to reduce or eliminate groundwater infiltration or inflow may not be included in the cost of facilities used to calculate tapping fees unless these costs or expenses result in an increase in system

design capacity.

(e) Except as otherwise provided for the calculation of a special purpose part, the design capacity required by a new residential customer used in calculating sewer or water tapping fees shall not exceed an amount established by multiplying 65 gallons per capita per day for water capacity, 90 gallons per capita per day for sewer capacity times the average number of persons per household as established by the most recent census data provided by the United States Census Bureau. If an authority service area is entirely within a municipal boundary for which there is corresponding census data specifying the average number of persons per household, issued by the United States Census Bureau, the average shall be used. If an authority service area is not entirely within a municipal boundary but is entirely within a county or other geographic area within Pennsylvania for which the United States Census Bureau has provided the average number of persons per household, then that average for the county or geographic area shall be used. If an authority service area is not entirely within a municipal, county or other geographic area within Pennsylvania for which the United States Census Bureau has calculated an average number of persons per household, then the Pennsylvania average number of persons per household shall be used as published by the United States Census Bureau. Alternatively, the design capacity required for a new residential customer shall be determined by a study but shall not exceed:

(i) for water capacity, the average residential water consumption per residential customer, or, for sewage capacity, the average residential water consumption per residential customer plus ten percent. The average residential water consumption shall be determined by dividing the total water consumption for all metered residential customers in the authority's service area over at least a 12-consecutive-month period within the most recent five years by the average number of customers during the period; or

(ii) for sewer capacity, the average sewage flow per residential customer determined by a measured sewage flow study. Such study shall be completed in accordance with sound engineering practices within the most recent five years for the lesser of three or all residential subdivisions of more than ten lots which have collection systems in good repair and which connected to the authority's facilities within the most recent five years. The study shall calculate the average sewage flow per

residential customer in such developments by measuring actual sewage flows over at least 12 consecutive months at the points where such developments connected to the authority's sewer main.

(iii) All data and other information considered or obtained by an authority in connection with determining capacity under this subsection shall be made available to the public upon request.

(iv) If any person required to pay a tapping fee submits to the authority an opinion from a professional engineer that challenges the validity of the results of the calculation of design capacity required to serve new residential customers prepared under subparagraph (i) or (ii), the authority shall within 30 days obtain a written certification from another professional engineer, who is not an employee of the authority, verifying that the results and the calculations, methodology and measurement were performed in accordance with this title and generally accepted engineering practices. If an authority does not obtain a certification required under this subsection within 30 days of receiving such challenge, the authority may not impose or collect tapping fees based on any such challenged calculations or study until such engineering certification is obtained.

(f) An authority may use lower design capacity requirements and impose lower tapping fees for multifamily residential dwellings than imposed on other types of residential customers.

(VI) Separate accounting for future facility costs. Any portion of tapping fees collected which, based on facilities to be constructed or acquired in the future in accordance with this section, shall be separately accounted for and shall be expended only for that particular facility or a substitute facility accomplishing the same purpose which is commenced within the same period. Such accounting shall include, but not be limited to, the total fees collected as a result of including facilities to be constructed in the future, the source of the fees collected and the amount of fees expended on specific facilities. The proportionate share of tapping fees based upon facilities to be constructed or acquired in the future under this section shall be refunded to the payor of such fees within 90 days of the occurrence of the following:

(a) the authority abandons its plan or a part thereof to construct or acquire a facility or facilities which are the basis for such fee; or

(b) the facilities have not been placed into service within seven years, or, for an authority which provides service to five or

more municipalities, the facilities have not been placed into service within 15 years, after adoption of a resolution which imposes tapping fees which are based upon facilities to be constructed or acquired in the future. Any refund of fees held for 15 years shall include interest for the period the money was held.

(VII) Definitions. As used in this clause, the following words and phrases shall have the meanings given to them in this subclause:

"BOD5." The five-day biochemical-oxygen demand.

"Design capacity." For residential customers, the permitted or rated capacity of facilities expressed in million gallons per day. For nonresidential customers, design capacity may also be expressed in pounds of BOD5 per day, pounds of suspended solids per day or any other capacity-defining parameter that is separately and specifically set forth in the permit governing the operation of the system and based upon its original design as modified by those regulatory agencies having jurisdiction over these facilities. Additionally, for separate fire service customers, the permitted or rated capacity of fire service facilities may be expressed in peak flows. The units of measurement used to express design capacity shall be the same units of measurement used to express the system design capacity. Except as otherwise provided for special purpose facilities, design capacity may not be expressed in terms of equivalent dwelling units.

"Outstanding debt." The principal amount outstanding of any bonds, notes, loans or other form of indebtedness used to finance or refinance facilities included in the tapping fee.

"Service line." A water or sewer line that directly connects a single building or structure to a distribution or collection facility.

"System design capacity." The design capacity of the system for which the tapping fee is being calculated which represents the total design capacity of the treatment facility or water sources.

(ii) Every authority charging a tapping, customer facilities or connection fee shall do so only pursuant to a resolution adopted at a public meeting of the authority. The authority shall have available for public inspection a detailed itemization of all calculations, clearly showing the maximum fees allowable for each part of the tapping fee and the manner in which the fees were determined, which shall be made a part of any resolution imposing such fees. A tapping, customer facilities or connection fee may be revised and imposed upon those who subsequently connect to the system, subject to the provisions and limitations of the act.

(iii) No authority shall have the power to impose a connection fee, customer facilities fee, tapping fee or similar fee except as provided specifically under this section.

(iv) A municipality or municipal authority with

available excess sewage capacity, wishing to sell a portion of that capacity to another municipality or municipal authority, may not charge a higher cost for the capacity portion of the tapping fee as the selling entity charges to its customers for the capacity portion of the tapping fee. In turn, the municipality or municipal authority buying this excess capacity may not charge a higher cost for the capacity portion of the tapping fee to its residential customers than that charged to them by the selling entity.

(v) As used in this paragraph, the term "residential customer" shall also include those developing property for residential dwellings that require multiple tapping fee permits. This paragraph shall not be applicable to intermunicipal or interauthority agreements relative to the purchase of excess capacity by an authority or municipality in effect prior to February 20, 2001.

(30) Where a sewer or water system of an authority is to be extended at the expense of the owner of properties or where the authority otherwise would construct customer facilities referred to in paragraph (24), other than water meter installation, a property owner shall have the right to construct the extension or install the customer facilities himself or through a subcontractor approved by the authority, which approval shall not be unreasonably withheld. The authority shall have the right, at its option, to perform the construction itself only if the authority provides the extension or customer facilities at a lower cost and within the same timetable specified or proposed by the property owner or his approved subcontractor. Construction by the property owner shall be in accordance with an agreement for the extension of the authority's system and plans and specifications approved by the authority and shall be undertaken only pursuant to the existing regulations, requirements, rules and standards of the authority applicable to such construction. Construction shall be subject to inspection by an inspector authorized to approve similar construction and employed by the authority during construction. When a main is to be extended at the expense of the owner of properties, the property owner may be required to deposit with the authority, in advance of construction, the authority's estimated reasonable and necessary cost of reviewing plans, construction inspections, administrative, legal and engineering services. The authority may require that construction shall not commence until the property owner has posted appropriate financial security in accordance with paragraph (23). The authority may require the property owner to reimburse it for reasonable and necessary expenses it incurred as a result of the extension. If an independent firm is employed for engineering review of the plans and the inspection of improvements, reimbursement for its services shall be reasonable and in accordance with the ordinary and customary fees charged by the independent firm for work performed for similar services in the community. The fees shall not exceed the rate or cost charged by the independent firm to the authority when fees are not reimbursed or otherwise imposed on applicants. Upon completion of construction, the property owner shall dedicate and the authority shall accept the extension of the authority's system if dedication of facilities and the installation complies with the plans, specifications, regulations of the authority and the agreement. An authority may provide in its

regulations those facilities which, having been constructed at the expense of the owner of properties, the authority will require to be dedicated and which facility or facilities the authority will accept as a part of its system.

(i) In the event the property owner disputes the amount of any billing in connection with the review of plans, construction inspections, administrative, legal and engineering services, the property owner shall, within 20 working days of the date of billing, notify the authority that the billing is disputed as excessive, unreasonable or unnecessary, in which case the authority shall not delay or disapprove any application or any approval or permit related to the extension or facilities due to the property owner's dispute over the disputed billings unless the property owner has failed to make payment in accordance with the decision rendered under clause (iii) within 30 days after the mailing date of such decision.

(ii) If, within 30 days from the date of billing, the authority and the property owner cannot agree on the amount of billings which are reasonable and necessary, the property owner and authority shall, by mutual agreement, appoint a professional of the same profession or discipline licensed in Pennsylvania to review the billings and make a determination as to the amount of billings which is reasonable and necessary.

(iii) The professional appointed under clause (ii) shall hear evidence and review the documentation as the professional in his or her sole opinion deems necessary and shall render a decision within 60 days of the billing date. The property owner shall be required to pay the entire amount determined in the decision immediately.

(iv) In the event that the authority and property owner cannot agree upon the professional to be appointed within 30 days of the billing date, the president judge of the court of common pleas of the judicial district in which the municipality is located, or if at the time there is no president judge, the senior active judge then sitting upon application of either party shall appoint a professional, who shall be neither the authority engineer nor any professional who has been retained by or performed services for the authority or the property owner within the preceding five years.

(v) The fee of the appointed professional for determining the reasonable and necessary expenses shall be paid by the applicant if the amount of payment required in the decision is equal to or greater than the original bill. If the amount of payment required in the decision is less than the original bill by \$2,500 or more, the authority shall pay the fee of the professional. If the amount of the payment required in the decision is less than the original bill by \$2,499 or less, the authority and the property owner shall each pay one-half of the fee of the appointed professional.

(31) Where a property owner constructs or causes to be constructed at his expense any extension of a sewer or water system of an authority, the authority shall provide for the reimbursement to the property owner when the owner of another property not in the development for which the extension was constructed connects a service line directly to the extension within ten years of the date of the dedication of the extension to the authority in accordance with the following provisions:



(i) Reimbursement shall be equal to the distribution or collection part of each tapping fee collected as a result of subsequent connections. An authority may deduct from each reimbursement payment an amount equal to 5% of it for administrative expenses and services rendered in calculating, collecting, monitoring and disbursing the reimbursement payments to the property owner.

(ii) Reimbursement shall be limited to those lines which have not previously been paid for by the authority.

(iii) The authority shall, in preparing necessary reimbursement agreements with a property owner for whose benefit reimbursement will be provided, attach as an exhibit an itemized listing of all sewer and water facilities for which reimbursement shall be provided.

(iv) The total reimbursement which a property owner may receive may not exceed the cost of labor and material, engineering design charges, the cost of performance and maintenance bonds, authority review and inspection charges as well as flushing and televising charges and any and all charges involved in the acceptance and dedication of such facilities by the authority, less the amount which would be chargeable to the property owner based upon the authority's collection and distribution tapping fees which would be applicable to all lands of the property owner directly or indirectly served through extensions if the property owner did not fund the extension.

(v) An authority shall notify by certified mail, to the last known address, the property owner for whose benefit a reimbursement shall apply. This shall be done within 30 days of the authority's receipt of the reimbursement payment. If a property owner does not claim a reimbursement payment within 120 days after the mailing of the notice, the payment shall become the sole property of the authority with no further obligation on the part of the authority to refund the payment to the property owner.

(32) (Deleted by amendment).

(33) Provisions of paragraphs (30) and (31) shall apply to residential customers in a municipality where the sewer service is being purchased by the municipality or sewer authority from another municipality or sewer authority having excess sewage capacity.

Section 2. Notwithstanding section 5(1) of this act, this act shall apply immediately to any connection, customer facilities, tapping or similar fees which are increased or initially imposed subsequent to the effective date of this section.

Section 3. Notwithstanding section 5(1) of this act, the mandatory refund provisions of 53 Pa.C.S. § 5607(d)(24)(i)(C)(VI) applicable to tapping fees based upon facilities to be constructed or acquired in the future shall apply to tapping fees collected subsequent to the effective date of this section regardless of when the resolution adopting such tapping fees was adopted.

Section 4. The following shall apply:

(1) The provisions of 53 Pa.C.S. § 5607(d)(24)(i)(C)(I) and (V)(e) shall not apply for a period of 15 years after the effective date of this section to sewer tapping fees imposed by a joint authority having six or more municipal members which is prohibited from implementing any increase in sewer user fees pursuant to the terms of a contract executed prior

to January 1, 2003.

(2) The provisions of 53 Pa.C.S. § 5607(d)(24)(i)(C)(V)(e) shall not apply for a period of five years after the date of closing of original financing when an authority, in order to support the construction of new facilities, used original financing which closed on or before July 1, 2003, which has a term of at least 15 years and in which tapping fees were relied upon to support the debt service on the financing.

Section 5. This act shall take effect as follows:

(1) The amendment of 53 Pa.C.S. § 5607(d)(24), (30), (32) and (33) shall take effect in 18 months.

(2) The remainder of this act shall take effect immediately.

APPROVED--The 30th day of December, A. D. 2003.



## **APPENDIX B**

Adopting Resolution – New 2006

**PETERS TOWNSHIP  
SANITARY AUTHORITY**

3244 WASHINGTON ROAD  
McMURRAY, PA 15317-3153  
PHONE: 724-941-6709  
FAX: 724-941-2283  
Web Site: ptsaonline.org



James J. Miskis, Manager  
Mark A. Chucuddy, Asst. Manager  
Patricia L. Foote, Financial Controller  
Cindy L. Coe-Verschage, Admin. Asst.

**RESOLUTION 04-06-06**

**TAPPING FEE AND CONNECTION CHARGES - UPDATE NO. 1**

A RESOLUTION OF THE PETERS TOWNSHIP SANITARY AUTHORITY ESTABLISHING THE TAPPING FEE AND CONNECTION CHARGES PURSUANT TO THE MUNICIPALITY AUTHORITIES ACT, 53 PS 5601, ET SEQ., AS AMENDED.

WHEREAS, the Peters Township Sanitary Authority, a municipal corporation organized and existing by virtue of the "Municipality Authorities Act of 1945", 53 PS 5601 et. seq., as amended, for the purpose of providing a sanitary sewer collection, conveyance, and treatment facilities, and for providing the staffing and financing to operate said facilities; and

WHEREAS, under the terms of its financing arrangements, the Peters Township Sanitary Authority has agreed that it will charge enumerated fees to property owners who desire to or are required to connect to the authority's sewer system; and

WHEREAS, Act 57 of 2003 amended the Municipality Authorities Act (supra), and established the methodology to be used in determining the maximum tapping and connection fee that a municipal authority may charge; and

WHEREAS, the Authority has deemed it necessary and proper to engage KLH Engineers, Inc. to compile the information required to calculate and recommend the maximum fee; which was adopted on June 10, 2005.

WHEREAS, the Authority has compiled a Summary Report Update No. 1 of the original report dated June 10, 2005, which summarizes the calculations and describes the methodology used in the calculation of the fees set forth herein,

NOW THEREFORE, be it resolved and enacted by the Peters Township Sanitary Authority as follows:

The Peters Township Sanitary Authority Summary Report of Tapping Fee Calculation and Connection Charges Update No. 1, including its appendices establish the basis for the Tapping Fee is hereby approved; and pursuant to same, the Tapping Fee for residential single family and multi family dwellings where a "wye" is available shall be \$2,950 and where a "tap and saddle" is installed by the Authority the fee shall be \$3,170. The Tapping Fee for Non-Residential connections where a "wye" is available shall be \$ 78.00 plus \$11.13 per gallon of capacity needed and where a "tap and saddle" is installed by the Authority the fee shall be \$ 279.00 plus \$ 11.13 per gallon of capacity needed. The gallons are based upon an estimation of the maximum monthly average day water consumption of the proposed applicant; with a minimum of 253 per gallons for each separate plumbed building, said estimation shall be calculated in accordance with Schedule A, Section E.5.

The Tapping Fee as adopted shall include the following components; connection fee, customer facilities fee, and tapping fee, including capacity and collection part. The value for each respective component is identified in the Summary Report.

The effective date of the fees hereby resolved shall be July 1, 2006

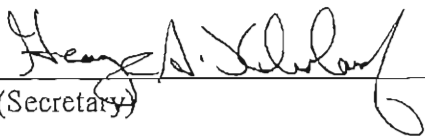
The Peters Township Sanitary Authority Tapping Fee Calculation Summary Report is attached to and made part of this resolution.

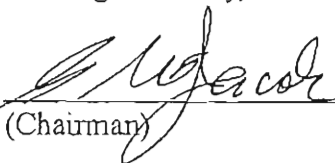
All other resolutions and parts thereof which are in conflict with this resolution are hereby repealed to the extent of such conflict.

Enacted into resolution this 13<sup>th</sup> day of June, 2006

ATTEST:  
(Seal)

Peters Township Sanitary Authority  
Washington County, PA

  
(Secretary)

  
(Chairman)

## **APPENDIX C**

2006 Update Spreadsheet

Tapping Fee Calculation  
Summary  
Table A-1

Description	Summary of Treatment Plants	Summary of Interceptors	Summary of Collector Component
Flows			
Design Capacity MGD	3.2 MGD	N/A	N/A
Final Trended Project Costs*			
Treatment	\$16,964,705	\$0	\$0
Interceptor		\$3,979,857	\$0
Collector	\$0	\$0	\$17,824,298
Total Trended Project Costs	\$16,964,705	\$3,979,857	\$17,824,298
Available Surplus (+)	\$806,025	\$185,405	\$854,147
Total Outstanding Debt (-)	\$4,575,000	\$0	\$412,439
Allowable Project Cost Basis	\$13,195,729	\$4,165,262	\$18,266,006
Facility Fee Calculation			
Allowable Project Cost Basis	\$13,195,729	\$4,165,262	\$18,266,006
Current Design Capacity (GPD)	3,200,000	3,200,000	3,200,000
Cost Basis per GPD	\$4.12	\$1.30	\$5.71
Current Customer Contribution (GPD)	258	258	258
Total Maximum Allowable Tap Fee	\$1,063.91	\$335.82	\$1,472.70
Total Tapping Fee Allowable	\$2,872.43		

Tapping Fee Calculation  
Treatment Plant Facilities  
Table A-11

Description	In-Service Date	Total Construction Costs	Total Engineering / Legal / etc Costs	Total Project Costs	Less Assessments	Less Grants	Less Contributions	Total Net Project Costs	In-Service Date ENR Index	June 2006 ENR Index	Ratio ENR Index	Total Trended Project Cost
DC Original Plant	Jan-63	31,087	-	31,087	-	-	-	31,087	901	7,700	8.55	265,658
BR/DC Series A Expansion	Mar-66	113,849	85,445	199,295	-	-	-	199,295	1,019	7,700	7.56	1,505,875
BR/DC Series B Expansion	Jan-71	271,144	104,941	376,085	-	233,243	-	142,841	1,581	7,700	4.87	695,647
DC Plant Expansion	Jan-82	510,224	51,569	561,793	-	-	-	561,793	3,825	7,700	2.01	1,130,870
BR Press Installation	Jan-84	762,276	-	762,276	-	-	-	762,276	4,146	7,700	1.86	1,415,633
BR Site Improvement	Jan-85	6,144	-	6,144	-	-	-	-	4,195	7,700	1.84	11,277
DC Bar Screen Installation	Jan-86	8,810	3,575	12,385	-	-	-	12,385	4,295	7,700	1.79	22,203
DC Plant Sludge Hauling Tanker	Jan-91	70,029	-	70,029	-	-	-	70,029	4,777	7,700	1.61	112,873
DC Site Improvement	Jul-91	1,530	-	1,530	-	-	-	1,530	4,818	7,700	1.60	2,445
DR Expansion	Dec-94	2,541,123	1,249,082	3,790,205	-	-	-	3,790,205	5,439	7,700	1.42	5,365,513
BR Expansion	Sep-95	3,273,443	157,045	3,430,488	-	-	-	3,430,488	5,491	7,700	1.40	4,810,299
BR Expansion	Dec-96	145,251	12,359	157,610	-	-	-	157,610	5,744	7,700	1.34	211,270
BR Expansion	Dec-97	5,000	-	5,000	-	-	-	5,000	5,856	7,700	1.31	6,572
BR Dechlorination Installation	Jul-99	8,149	3,000	11,149	-	-	-	11,149	6,076	7,700	1.27	14,128
DC Phase 1 Expansion	Sep-99	646,245	-	646,245	-	-	-	646,245	6,128	7,700	1.26	811,981
BR Site Improvement	Mar-00	111,425	-	111,425	-	-	-	111,425	6,202	7,700	1.24	138,330
DC Plant Property for Expansion	1-Jan	135,000	-	135,000	-	-	-	135,000	6,281	7,700	1.23	165,490
BR Screen Wash Installation	Jul-01	60,923	11,859	72,782	-	-	-	72,782	6,404	7,700	1.20	87,506
DC Mini - Scada	Jan-02	1,800	-	1,800	-	-	-	1,800	6,462	7,700	1.19	2,145
DC Dechlorination Installation / Outfall In	Nov-03	91,428	-	91,428	-	-	-	91,428	6,794	7,700	1.13	103,615
BR BR Vactor Receiving Station	Nov-05	58,975	25,627	84,602	-	-	-	84,602	7,630	7,700	1.01	85,373
<b>TOTAL</b>		\$ 8,853,856	\$ 1,704,502	\$ 10,558,358	\$ -	\$ 233,243	\$ -	\$ 10,325,115				\$ 16,964,705

Tapping Fee Calculation  
Collector Facility  
Table A-III

Description	In-Service Date	Total Construction Costs	Total Engineering / Legal / etc Costs	Total Project Costs	Less Grants	Less Contributions	Total Net Project Costs	In-service Date ENR Index	June 2006	Ration ENR Index	Total Trended Project Cost
BR Interceptor Original	Dec-62	58,759	-	58,759	-	-	58,759	872	7,700	8.83	518,833
DC Interceptor Original	Jan-63	38,419	-	38,419	-	-	38,419	901	7,700	8.55	328,318
DC Interceptor Series B Expansion	Jan-71	208,834	80,825	289,659	222,027	-	67,632	1,581	7,700	4.87	329,374
BR Rt 19 Bridge Relocation Augmentation	May-90	70,187	-	70,187	-	-	70,187	4,691	7,700	1.64	115,202
DC Waterdam Augmentation	Feb-91	93,625	-	93,625	-	-	93,625	4,773	7,700	1.61	151,032
DC Waterdam Augmentation	Jun-92	3,250	-	3,250	-	-	3,250	4,973	7,700	1.55	5,032
BR Relief Interceptor Expansion	Oct-94	619,540	107,285	726,825	-	-	726,825	5,437	7,700	1.42	1,029,291
BR Inlet Expansion	Sep-95	58,700	-	58,700	-	-	58,700	5,491	7,700	1.40	82,310
DC Jones Road	Sep-93	26,306	34,198	60,504	-	-	60,504	5,255	7,700	1.47	88,650
Waterdam Plaza Augmentation	Jul-94	18,000	-	18,000	-	-	18,000	5,409	7,700	1.42	25,623
BR McMurray / VB Interceptor	May-97	65,373	-	65,373	-	-	65,373	5,837	7,700	1.32	86,233
BR Interceptor Augmentation	Jan-98	67,334	-	67,334	-	-	67,334	5,852	7,700	1.32	88,593
DC Waterdam Pipe Augmentation	Aug-01	159,282	-	159,282	-	-	159,282	6,389	7,700	1.21	191,956
DC Oakwood Augmentation	Jun-01	182,230	-	182,230	-	-	182,230	6,318	7,700	1.22	222,079
BR VB Augmentation	Dec-02	374,188	-	374,188	-	-	374,188	6,538	7,700	1.18	440,669
BR Inlet Sewer Augmentation	Apr-04	17,134	-	17,134	-	-	17,134	7,017	7,700	1.10	18,901
BR Old Washington Aerial Crossing	Aug-05	6,166	-	6,166	-	-	6,166	7,479	7,700	1.03	6,347
BR BR Stream Stabilization	Aug-05	31,012	-	31,012	-	-	31,012	7,479	7,700	1.03	31,927
BR Valley Brook Int Project	Jan-05	66,798	11,788	78,585	-	-	78,585	7,297	7,700	1.06	82,921
BR VB Barker/Pennodol Project	Oct-05	128,176	6,065	134,241	-	-	134,241	7,563	7,700	1.02	136,665
TOTAL		\$ 2,293,313	\$ 240,161	\$ 2,533,474	\$ 222,027	\$ -	\$ 2,311,447				\$ 3,979,857

Tapping Fee Calculation  
Collector Facility  
Table A-IV

Description	In-Service Date	Total Construction Costs	Total Engineering Costs	Total Project Costs	Less Assessments	Less Grants	Less Contributions	Total Net Project Costs	In-Service Date ENR Index	June 2006	Ration ENR Index	Total Trended Project Cost
BR/DC Sewer Series A Sewer Ext	Mar-66	576,399	439,221	1,015,620	636,431	-	-	379,189	1,019	7,700	7.56	2,865,161
MM Marcella Manor Ext	Jan-64	26,514	-	26,514	26,514	-	-	-	936	7,700	8.23	-
BR Brookdale Farms Sewer Ext.	Jan-68	37,950	-	37,950	37,950	-	-	-	1,155	7,700	6.67	-
BR County Club Sewer Ext.	Jan-69	27,150	-	27,150	27,150	-	-	-	1,269	7,700	6.07	-
BR/DC Sewer Series B Sewer Ext.	Jan-71	2,704,677	1,046,793	3,751,472	1,348,854	-	-	2,402,617	1,581	7,700	4.87	11,700,929
BR Brookwood Dr. Sewer Ext.	Jan-89	425,328	-	425,328	258,725	-	-	166,603	4,615	7,700	1.67	277,958
BR Maplewood Dr. Sewer Ext.	Jan-76	17,640	-	17,640	17,640	-	-	-	2,401	7,700	3.21	-
DC Overlook Dr. Sewer Ext.	Jan-80	5,343	-	5,343	5,343	-	-	-	3,237	7,700	2.38	-
DC E. McMurray Sewer Ext.	Jan-83	19,466	-	19,466	19,466	-	-	-	3,237	7,700	2.38	-
DC Pleasant Ave. Sewer Ext.	Jan-86	24,793	8,469	33,261	33,261	-	-	-	4,295	7,700	1.79	-
BR Greenfield Dr. Sewer Ext.	Jan-88	24,285	-	24,285	24,285	-	-	-	4,519	7,700	1.67	277,958
BR Brookwood Dr. Sewer Ext.	Jan-89	425,328	-	425,328	258,725	-	-	166,603	4,615	7,700	1.67	97,488
BR Beacon Manor Sewer Ext.	Jan-91	223,748	-	223,748	163,264	-	-	60,484	4,777	7,700	1.61	166,555
DC Crestview Sewer Relocation	Jan-96	119,471	-	119,471	-	-	-	119,471	5,523	7,700	1.39	152,443
BR Stonebrook Augmentation	Jan-96	109,349	-	109,349	-	-	-	109,349	5,523	7,700	1.39	36,314
BR Dairy Bar	Jan-98	27,600	-	27,600	-	-	-	27,600	5,852	7,700	1.32	565,505
DC East High	Feb-05	480,654	-	480,654	-	-	-	480,654	6,272	7,700	1.23	36,245
BR Gateshead Dr	Jan-98	27,548	-	27,548	-	-	-	27,548	5,852	7,700	1.32	13,327
BR Nancy Court Pipe	Dec-99	10,488	-	10,488	-	-	-	10,488	6,059	7,700	1.27	8,052
BR Stanwood Ex.	Jun-05	7,000	-	7,000	-	-	-	7,000	6,694	7,700	1.15	607,762
BR Ivy Lane Extension	Oct-03	509,132	190,220	699,353	164,898	-	-	534,455	6,771	7,700	1.14	51,252
DC Aerial Sewer Augmentation	Dec-03	45,144	-	45,144	-	-	-	45,144	6,782	7,700	1.14	11,203
BR Marble Drive	Mar-04	10,280	-	10,280	-	-	-	10,280	7,065	7,700	1.09	306,256
BR/DC Improvements Pump Station Wet Well	Jul-04	246,735	36,705	283,441	-	-	-	283,441	7,126	7,700	1.08	314,022
BR Crossgates	Oct-05	222,285	86,167	308,452	-	-	-	308,452	7,563	7,700	1.02	287,879
BR Friar Lane Project	Jun-05	252,118	25,120	277,238	-	-	-	277,238	7,415	7,700	1.04	34,830
BR Sugar Camp Project	Jun-05	22,880	10,663	33,543	-	-	-	33,543	7,415	7,700	1.04	13,159
BR Spring Meadows Severance Ext	May-05	10,747	1,897	12,644	-	-	-	12,644	7,398	7,700	1.04	-
TOTAL		\$ 6,620,051	\$ 1,845,258	\$ 8,465,309	\$ 3,022,487	\$ -	\$ -	\$ 5,442,812				\$ 17,824,298



## **APPENDIX D**

Peters Township Sanitary Authority Tapping Fee Calculation, 2005  
KLH Engineers, Inc.

# **PETERS TOWNSHIP SANITARY AUTHORITY**

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**TAPPING FEE CALCULATION  
ADOPTED JUNE 2005**

**KLH**   
**ENGINEERS, INC.**  
5173 CAMPBELLS RUN ROAD  
PITTSBURGH, PA 15205-9733

# PETERS TOWNSHIP SANITARY AUTHORITY

## Tapping Fee Calculation

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#### Tapping Fee Calculation

# PETERS TOWNSHIP SANITARY AUTHORITY TAPPING FEE CALCULATION

## EXECUTIVE SUMMARY

The Municipal Authorities Act of 1945 allows the Peters Township Sanitary Authority (PTSA) to charge a fee to new customers connecting into the sewer system. The Municipal Authorities Act was amended on December 24, 2004 by Act 57 of 2003. A calculation of the tap fee was made to conform with the most recent amendments of the Act. This fee, known as a tapping fee, cannot be more than the total project costs divided by the design capacity of the facilities. This report calculated the tapping fee based upon the capacity related facilities constructed by the Authority.

The calculated tap fee is the sum of the Connection, Customer Facilities, Capacity and Collector Components. The Capacity Components consist of projects related to the Brush Run and the Donaldson Crossroads Wastewater Treatment Plants and all interceptor sewers within the PTSA sewer system. The Collector Component consists of all pump stations and collector sewers owned by the Authority.

The maximum allowable total tapping fee is as follows:

Connection Component	\$ 61.06
Customer Facilities Component	\$ 45.52
Treatment Component	\$ 952.27
Interceptor Component	\$ 312.18
Collection Component	<u>\$ 1,334.14</u>
<b>Total Allowable Tapping Fee</b>	<b>\$ 2,705.17</b>

It is recommended that the Authority adopt tapping fees as calculated within this document to recover allowable costs that have been spent on capital expenditures. The Authority may adopt any fee up to and including the amounts calculated. These fees are subject to change and should be reviewed on an annual or biannual basis.

The Authority is not required to adopt any of these components or methods outlined above. The fees represent the maximum fees chargeable, and what KLH Engineers, Inc. believes to be the most appropriate application of the Act to insure the fairest equity collection.

# **PETERS TOWNSHIP SANITARY AUTHORITY TAPPING FEE CALCULATION**

## **1.0 INTRODUCTION**

The Municipal Authorities Act of 1945 allows the Peters Township Sanitary Authority to charge a fee to new customers to connect into the sewer system. This report calculates the tapping fee based upon the provisions of the Amendment Act 57 of 2003.

## **2.0 TAP FEE COMPONENTS AND GUIDELINES**

The Municipal Authorities Act was amended on December 24, 2004 by Act 57 of 2003. A tapping fee shall be comprised of a number of different components, each to be described separately in a resolution by the Authority. The fee for each component cannot be more than the calculated fee. The Act states that a tapping fee cannot be more than the total project costs divided by the design capacity of the facilities. The fee must be adopted or revised at a public meeting and be accompanied by detailed calculations indicating how the fee was determined.

The following is a summary of the component fees the Authority is allowed to charge and the guidelines for the cost basis of the tap fees.

### **2.1 Connection Fee Component**

The Connection Fee Component is cost of the connection from the sewer main to the property line. The fee is based upon the actual cost of the connection or an average cost of similar previously installed connections. In lieu of payment of the connection fee, the Authority shall require the property owner to construct the facilities.

### **2.2 Customer Facilities Fee Component**

The Customer Facilities Fee Component is cost of the facilities from the property line to the building served and is based upon the actual cost of the facility. The fee can only be charged if the Authority installs the facilities. In lieu of payment, the Authority shall require the construction of those facilities by the property owner who requests customer facilities.

## 2.3 Tapping Fee Calculation Component

The Tapping Fee Calculation Component consists of the following four parts:

### 2.3.1 Capacity Part

The capacity part includes the cost of the capacity related facilities, such as treatment, pumping, transmission, trunk, interceptor and outfall mains, sludge treatment or disposal and interconnection or other general system facilities. In all cases, any grant or capital contributions must be subtracted from the cost of the facility before trending original costs to present day values. The resulting cost must be divided by the design capacity, to produce a cost per unit capacity.

The Authority shall apply the capacity charges related to specific facilities to certain geographical areas. For example, the cost of a pump station is only applied to the area served by the pump station. Likewise, the Authority shall charge different fees to different customer types, i.e. residential, commercial, or industrial.

The cost of capacity shall be determined by the following methods:

#### 2.3.1.1 Existing Facilities

The cost of existing facilities shall be based upon historical costs trended to current value using published cost indices, or upon historical cost plus interest and other financing fees paid on debt financing such facilities. Outstanding debt must be subtracted from the cost, as long as the debt is not from facilities that only serve new customers. If historical costs are not ascertainable, facility costs must be based on an engineer's reasonable written estimate of current replacement cost. The estimate must be based upon and include an itemized list of the components of the actual facilities for which historical costs are not ascertainable.

A facility contributed to the Authority or portions of facilities paid for with contributions or grants other than tapping fees cannot be included in the cost basis.

For tapping fees or components initially serving exclusively new customers, the Authority shall increase the tapping fee by multiplying the tapping fee by the weighted average interest rate on the debt related to such facility. This increase shall not be performed more frequently than annually, and not without updating the historical cost of, nor subtracting the outstanding debt related to such facilities.

### 2.3.1.2 Facilities to be Constructed

The cost of facilities to be constructed must not exceed a reasonable estimated construction cost, and must be part of an adopted annual budget or a five-year capital improvement plan. To apply, the Authority must have taken at least two of the following actions towards construction of the facilities:

1. Obtained financing.
2. Entered into a contract for construction.
3. Obtained a permit for the facilities.
4. Obtained title to or condemned additional real estate upon which the facilities will be constructed.
5. Entered into a contract to purchase or acquire facilities owned by others.
6. Prepared an engineering feasibility study, which recommends construction within five years.
7. Entered into a design or construction contract or adopted a budget which includes the use of in-house resources for the design or construction of the facilities.
8. If included in the calculation, must be constructed within seven years.

If costs for future facilities are incorporated, separate accounting for future facility costs must be utilized. The Authority must keep detailed records for the total fees collected, the source of the fees and the amount expended on specific facilities. Any tapping fees collected shall be separately accounted and shall be expended only for that particular facility, or for a substitute facility accomplishing the same purpose and commenced within the same period.

The proportionate share of tapping fees, based upon facilities to be constructed or acquired in the future, shall be refunded within 90 days of the occurrence any of the following:

- a. The Authority abandons its plan or a part thereof to construct or acquire a facility or facilities which are the basis for such fee, or;
- b. The facilities have not been placed into service within seven (7) years, or;
- c. For an Authority that provides service to five (5) or more municipalities, the facilities have not been placed into service within fifteen (15) years, after adoption of a resolution. Any refund of fees held for fifteen (15) years shall include interest for the period the money was held.

### 2.3.2 Collection Part

The Collection Part costs are calculated the same as identified in the Capacity Part section. These costs include facilities that collect flows, or pumping stations. Cost for future facilities cannot be included in the distribution or collection part.

### 2.3.3 Special Purpose Part

The Special Purpose Part applies to a facility constructed specifically to serve only a certain group of customers. Such facilities include booster pumping stations, fire service facilities, sewer mains, pumping stations and industrial wastewater treatment facilities. This fee is calculated separately for each group of customers in the same method as the aforementioned parts. The special purpose fee is in addition to the capacity and collection fees.

### 2.3.4 Reimbursement Part

The Reimbursement fee is included to recapture the allowable portion of the cost of facilities to reimburse a party that construct facilities at their own cost. The reimbursement is only applicable to a party of specific facilities when a fee is collected to connect and where a written agreement between the Authority and such party at whose expense the facilities were constructed.

#### 2.3.4.1 Requirements for Reimbursement of Collection Part

The Authority shall provide reimbursement to the property owner, when the owner of another property in the development for which the extension was constructed, connects to the service line directly to the sewer extension within ten years of the date of the dedication of the extension to the Authority in accordance with the following:

1. Reimbursement shall equal to the collection part of each tapping collected. The Authority shall deduct 5% for administrative expenses and services for each reimbursement.
2. The Authority shall provide an itemized listing of all sewer facilities along with an agreement to the property owner for which all reimbursement shall be provided.
3. The total reimbursement shall not exceed the total cost of the installation.
4. The Authority shall notify by certified mail to the last known address of the property owner within 30 days of the Authority's receipt of reimbursement payment. If the property owner does not claim the reimbursement payment within 120 days after mailing of notice, the payment shall become the sole property of the Authority with not further obligation of the Authority.



## 2.4 Limitations

When calculating a tapping fee the following limitations apply:

1. Cost can only be included in one part of the tapping fee.
2. No cost can be added to the fee for the following:
  - a. Expanding, replacing, updating or upgrading facilities that serve existing customers to meet stricter efficiency, environmental, regulatory, safety standards, or to provide better service to, or meet the needs of, existing customers.
  - b. Maintenance and operation expenses.
  - c. For reducing or eliminating groundwater infiltration or inflow, unless these costs or expenses result in an increase in system design capacity.
3. The design capacity required by a new residential customer used in calculating the tapping fee shall not exceed an amount established by multiplying 90 gallons per capita per day times the average number of persons per household as established by the most recent census data provided by the U.S. Census Bureau.
  - a. If the Authority's service area is entirely within a municipal boundary for which there is corresponding census data, the average number of persons per household within the Municipality shall be used, as established by the most recent census data provided by the United States Census Bureau.
  - b. If the Authority's service area is not entirely within a municipal boundary, but is entirely within a county or other geographical area within Pennsylvania for which the Census Bureau has provided the average number of persons per household, then that average within the County shall be used, as established by the most recent census data provided by the United States Census Bureau.
  - c. If the Authority's service area is not entirely within a municipal, county or other geographic area, then the Pennsylvania average number of persons per household shall be used, as established by the most recent census data provided by the United States Census Bureau.
4. Alternatively, the design capacity required for a new residential customer shall be determined by a study, but shall not exceed:
  - a. The average residential water consumption per residential customer plus ten percent. The average residential water consumption shall be determined by dividing the total water consumption for all metered residential customers over at least a twelve-consecutive-month period, within the most recent five years, by the average number of customers during the period.
  - b. The average sewage flow per residential customer determined by a measured sewage flow study. The study shall be completed within the most recent five years for the lesser of three or all subdivisions of more than ten lots, which have collection systems in good repair and connected to the system for at least five years. The study shall calculate the average sewage flow per residential

customer by measuring actual flows over at least twelve consecutive months at the points where the developments connect to the sewer mains.

### **3.0 CALCULATION OF THE TAPPING FEE**

The tapping fee was calculated with data obtained from the following applicable information sources for basing the tap fee on historical costs:

- History of the treatment plants and the sewer system from Authority records
- Design Capacities of the Facilities
- Act 339 Applications
- Construction Requisitions
- The Independent Auditor's Report as of February 13, 2004, by Hosack, Specht, Muetzel & Wood LLP
- Engineering News Record (ENR) Index Values

The sewerage system is comprised of the Brush Run Water Pollution Control Plant (BRWPCP) with a design flow of 2.0 Million Gallons per Day (MGD), with approximately 84 miles of sewers, and the Donaldson's Crossroads Water Pollution Control Plant (DCWPCP) with a design flow of 1.2 MGD, and approximately 45 miles of sewer. The Marella Manor Service Area has approximately 1.5 miles of sewers and the wastewater receives treatment in the ALCOSAN system.

The costs from applicable projects constructing the Authority's facilities were identified in the above information sources and trended forward from initial in-service date costs to present day worth using the applicable ENR indices.

### **3.1 Residential Tapping Fee**

#### **3.1.1 Single Family Residential Units**

The single-family residential tapping fee was calculated using the following components:

##### **3.1.1.1 Connection Fee**

The connection fee includes the actual cost of the labor and material required for the installation of a service line from the sewer main to the property line or to the easement, or it shall be based on the average cost of previously installed connections. The Authority requires the property owner to construct the service line. Therefore, the only costs incurred by the Authority are for inspection and administrative processing. The average cost per connection is shown in Table I below. The cost of inspection unit price per hour used in the table is equal to the average union hourly rate plus benefits based on the Authority's records. The administrative unit price per hour is equal to average hourly rate plus benefits based on Authority's records.

**Connection Component  
Table I**

Item	Unit Price Per Hour	Total Hours	Cost
Cost of Inspection	\$ 30.35	.75	\$ 22.76
Administrative Cost	\$ 38.30	1	\$ 38.30
<b>Total Allowable Connection Fee</b>			<b>\$61.06</b>

### 3.1.1.2 Customer Facilities Fee

The customer facilities fee includes the actual cost to install the sewer lateral from the property line to the building being served. The Authority requires the cost of labor and materials required to be those of the property owner. Therefore, the only costs incurred by the Authority are for inspections. The average cost per connection is shown in Table II below.

**Customer Facilities Component  
Table II**

Item	Unit Price Per Hour	Total Hours	Cost
Cost of Inspection	\$ 30.35	1.5	\$ 45.52
<b>Total Allowable Customer Facilities Fee</b>			<b>\$45.52</b>

### 3.1.1.3 Capacity/ Collector Facility Components Fees

Table III illustrates a calculation summary of the capacity and collector components of the tapping fee. All project costs exclude assessment fees collected and all EPA and State Grants received by the Authority. An Explanation of Tapping Fee Calculation Tables is attached in Appendix A.

**Tapping Fee Calculation Summary  
Table III**

Description	Summary of Treatment Plants <sup>1</sup>	Summary of Interceptors <sup>2</sup>	Summary of Collector Component <sup>3</sup>
Flows			
Design Capacity MGD	3.2 MGD	N/A	N/A
Final Trended Project Costs*			
Treatment	\$16,180,906.39	\$0.00	\$0.00
Interceptor	\$0.00	\$3,686,311.81	\$0.00
Collector	\$0.00	\$0.00	\$16,256,092.78
Total Trended Project Costs	\$16,180,906.39	\$3,686,311.81	\$16,256,092.78
Available Surplus (+)	\$795,182.70	\$185,741.71	\$739,316.00
Total Outstanding Debt (-)	\$5,165,000.00	\$0.00	\$447,948.75
Allowable Project Cost Basis	\$11,811,089.09	\$3,872,053.52	\$16,547,462.03
Facility Fee Calculation			
Allowable Project Cost Basis	\$11,811,089.09	\$3,872,053.52	\$16,547,462.03
Current Design Capacity (GPD)	3,200,000	3,200,000	3,200,000
Cost Basis per GPD	\$3.69	\$1.21	\$5.17
Current Customer Contribution (GPD)	258	258	258
Total Maximum Allowable Tap Fee	\$952.27	\$312.18	\$1,334.14

<sup>1</sup> See Appendix A – Tapping Fee Calculation Treatment Plant Facilities – A-I

<sup>2</sup> See Appendix A – Tapping Fee Calculation Interceptor Facility – A-II

<sup>3</sup> See Appendix A – Tapping Fee Calculation Collector Facility – A-III

### 3.1.2 Multi-Family Tapping Fee

The tap fee for multi-family is calculated the same as a single family. The Authority shall elect to impose a lower tap fee for multi-family residential dwellings than other residential customers.

### **3.2 Non-Residential Tap Fee**

There is no specific method for determining the design capacity requirements for non-residential customers. The Authority's method for charging a non-residential tap fee is based upon customer's maximum month daily average water consumption, as determined by the Authority's available data. In addition, the connection fee and customer facilities fee will be charged.

## **4.0 RECOMMENDATIONS AND APPLICATION OF ALL FEES**

KLH Engineers, Inc. has calculated the maximum allowable total tapping fee components using the most appropriate application of the Act to insure the fairest equity collection. The various components and total maximum allowable single-family Tapping Fee is as follows:

Connection Component	\$ 61.06
Customer Facilities Component	\$ 45.52
Treatment Component	\$ 952.27
Interceptor Component	\$ 312.18
Collection Component	<u>\$ 1,334.14</u>
<b>Total Allowable Tapping Fee</b>	<b>\$ 2,705.17</b>

It is recommended that the Authority adopt tapping fees as calculated within this document to recover allowable costs that have been spent on capital expenditures. The Authority is not required to adopt any of these components or methods outlined above and shall adopt any fee up to and including the maximum amounts calculated herein. The fees are subject to change and should be reviewed on an annual or biannual basis in accordance with *The Pennsylvania Municipal Authorities Act 57 of 2003*.

## Appendix A

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### Tapping Fee Calculation

Tapping Fee Calculation  
Treatment Plant Facilities  
Table A-1

Description	In-Service Date	Total Construction Costs	Total Engineering & Legal (etc) Costs	Total Project Costs	Less Grants	Less Contributions	Total Net Project Costs	In-Service Date ENR Index	June 2005	Ratio ENR Index	Total Trended Project Cost
DC-001 Original Plant	Jan-63	\$31,087.14	\$0.00	\$31,087.14	\$0.00	\$0.00	\$31,087.14	901	7381	8.19	\$ 254,666.13
BR/DCL Series A Expansion	Mar-66	\$113,849.41	\$85,445.14	\$199,294.55	\$0.00	\$0.00	\$199,294.55	1019	7381	7.24	\$ 1,443,565.33
BR/DCL Series B Expansion	Jan-71	\$271,143.52	\$104,941.05	\$376,084.57	\$233,243.43	\$0.00	\$142,841.14	1581	7381	4.67	\$ 666,863.03
DC-002 Plant Expansion	Jan-82	\$510,223.65	\$51,569.40	\$561,793.25	\$0.00	\$0.00	\$561,793.25	3925	7381	1.93	\$ 1,084,077.38
BR-003 Press Installation	Jan-84	\$762,276.44	\$0.00	\$762,276.44	\$0.00	\$0.00	\$762,276.44	4146	7381	1.78	\$ 1,357,057.98
BR-004 Site Improvement	Jan-85	\$6,144.28	\$0.00	\$6,144.28	\$0.00	\$0.00	\$6,144.28	4195	7381	1.76	\$ 10,810.71
DC-005 Bar Screen Installation	Jan-88	\$8,810.00	\$3,575.17	\$12,385.17	\$0.00	\$0.00	\$12,385.17	4295	7381	1.72	\$ 21,284.04
DC-006 Plant Sludge Hauling Tanker	Jan-91	\$70,028.89	\$0.00	\$70,028.89	\$0.00	\$0.00	\$70,028.89	4777	7381	1.55	\$ 108,202.48
DC-007 Site Improvement	Jul-91	\$1,530.00	\$0.00	\$1,530.00	\$0.00	\$0.00	\$1,530.00	4818	7381	1.53	\$ 2,343.90
DR-008 Expansion	Dec-94	\$2,541,123.30	\$1,249,081.60	\$3,790,204.90	\$0.00	\$0.00	\$3,790,204.90	5439	7381	1.36	\$ 5,143,501.08
BR-009 Expansion	Sep-95	\$3,273,443.40	\$157,044.96	\$3,430,488.36	\$0.00	\$0.00	\$3,430,488.36	5491	7381	1.34	\$ 4,611,261.08
BR-010 Expansion	Dec-96	\$145,250.87	\$12,359.26	\$157,610.13	\$0.00	\$0.00	\$157,610.13	5744	7381	1.28	\$ 202,527.92
BR-011 Expansion	Dec-97	\$5,000.00	\$0.00	\$5,000.00	\$0.00	\$0.00	\$5,000.00	5858	7381	1.26	\$ 6,299.93
BR-012 Dechlorination Installation	Jul-99	\$8,148.98	\$3,000.00	\$11,148.98	\$0.00	\$0.00	\$11,148.98	6076	7381	1.21	\$ 13,543.55
DC-009 Phase 1 Expansion	Sep-99	\$646,244.90	\$0.00	\$646,244.90	\$0.00	\$0.00	\$646,244.90	6128	7381	1.20	\$ 778,383.42
BR-013 Site Improvement	Mar-00	\$111,424.85	\$0.00	\$111,424.85	\$0.00	\$0.00	\$111,424.85	6202	7381	1.19	\$ 132,606.71
DC-010 Plant Property for Expansion	1-Jan	\$135,000.00	\$0.00	\$135,000.00	\$0.00	\$0.00	\$135,000.00	6281	7381	1.18	\$ 158,642.73
BR-014 Screen Wash Installation	Jul-01	\$60,923.00	\$11,858.70	\$72,781.70	\$0.00	\$0.00	\$72,781.70	6404	7381	1.15	\$ 83,885.34
DC-011 Mini-Scada Installation	Jan-02	\$1,800.00	\$0.00	\$1,800.00	\$0.00	\$0.00	\$1,800.00	6462	7381	1.14	\$ 2,055.99
DC-012 Dechlorination Installation	Nov-03	\$91,428.27	\$0.00	\$91,428.27	\$0.00	\$0.00	\$91,428.27	6794	7381	1.09	\$ 99,327.65
<b>TOTAL</b>		<b>\$8,794,881.10</b>	<b>\$1,678,875.28</b>	<b>\$10,473,756.38</b>	<b>\$233,243.43</b>	<b>\$0.00</b>	<b>\$10,240,512.95</b>				<b>\$ 16,180,906.39</b>



Tapping Fee Calculation  
Collector Facility  
Table A-11

Description	In-Service Date	Total Construction Costs	Total Engineering / Legal / etc Costs	Total Project Costs	Less Grants	Less Contributions	Total Net Project Costs	In-Service Date ENR Index	June 2005 ENR Index	Rallon ENR Index	Total Trended Project Cost
BR-0001 Interceptor Original	Dec-62	\$67,613.61	\$0.00	\$67,613.61	\$0.00	\$0.00	\$67,613.61	872	7381	8.46	\$572,311.99
DC-0001 Interceptor Original	Jan-63	\$43,583.50	\$0.00	\$43,583.50	\$0.00	\$0.00	\$43,583.50	901	7381	8.19	\$357,036.42
DC-0002 Interceptor Series B Expansion	Jan-71	\$208,833.66	\$80,825.18	\$289,658.84	\$222,026.56	\$0.00	\$67,632.28	1581	7381	4.67	\$315,745.64
BR-0003 RT19 Bridge Relocation Augmentation	May-90	\$70,187.00	\$0.00	\$70,187.00	\$0.00	\$0.00	\$70,187.00	4691	7381	1.57	\$110,434.93
DC-0004 Waterdam Augmentation	Feb-91	\$93,625.00	\$0.00	\$93,625.00	\$0.00	\$0.00	\$93,625.00	4773	7381	1.55	\$144,782.34
DC-0005 Waterdam Augmentation	Jun-92	\$3,250.00	\$0.00	\$3,250.00	\$0.00	\$0.00	\$3,250.00	4973	7381	1.48	\$4,823.70
BR-0006 Relief Interceptor Expansion	Oct-94	\$620,329.93	\$107,285.03	\$727,614.96	\$0.00	\$0.00	\$727,614.96	5437	7381	1.36	\$967,773.78
BR-0007 Inlet Expansion	Sep-95	\$58,700.00	\$0.00	\$58,700.00	\$0.00	\$0.00	\$58,700.00	5491	7381	1.34	\$78,904.52
DC-0008 Jones Road	Sep-93	\$20,306.12	\$34,187.96	\$54,494.08	\$0.00	\$0.00	\$54,494.08	5255	7381	1.40	\$84,982.04
BR-0009 Waterdam Plaza Augmentation	Jul-84	\$18,000.00	\$0.00	\$18,000.00	\$0.00	\$0.00	\$18,000.00	5409	7381	1.36	\$24,562.40
BR-0010 McMurray/VB Interceptor	May-97	\$65,372.95	\$0.00	\$65,372.95	\$0.00	\$0.00	\$65,372.95	5837	7381	1.26	\$82,665.37
BR-0011 Interceptor Augmentation	Jan-98	\$67,334.00	\$0.00	\$67,334.00	\$0.00	\$0.00	\$67,334.00	5852	7381	1.26	\$84,926.91
DC-0012 Waterdam Pipe Augmentation	Aug-01	\$159,281.76	\$0.00	\$159,281.76	\$0.00	\$0.00	\$159,281.76	6389	7381	1.16	\$184,012.94
DC-0013 Oakwood Augmentation	Jun-01	\$182,230.25	\$0.00	\$182,230.25	\$0.00	\$0.00	\$182,230.25	6318	7381	1.17	\$212,890.39
BR-0014 VB Augmentation	Dec-02	\$374,188.20	\$0.00	\$374,188.20	\$0.00	\$0.00	\$374,188.20	6538	7381	1.13	\$422,435.47
DC-0015 Inlet Sewer Augmentation	Apr-04	\$17,134.17	\$0.00	\$17,134.17	\$0.00	\$0.00	\$17,134.17	7017	7381	1.05	\$18,022.99
<b>TOTAL</b>		<b>\$2,075,970.15</b>	<b>\$222,308.17</b>	<b>\$2,298,278.32</b>	<b>\$222,026.56</b>	<b>\$0.00</b>	<b>\$2,076,251.76</b>				<b>\$3,686,311.81</b>



Tapping Fee Calculation  
Collector Facility  
Table A-III

Description	In-Service Date	Total Construction Costs	Total Engineering Costs	Total Project Costs	Assessments	Less Grants	Less Contributions	Total Net Project Costs	In-Service Date ENR Index	June 2005 ENR Index	Ration ENR Index	Total Trended Project Cost
BRDC Sewer Series A Sewer Extension	Mar-86	\$ 585,228.83	\$ 439,220.98	\$ 1,024,450.91	\$ 636,431.00	\$ 0.00	\$ 0.00	\$ 388,019.91	1019	7381	7.24	\$ 2,810,574.05
MMHick Marcella Manor Ext. Sewer	Jan-84	\$ 26,514.40	\$ 0.00	\$ 26,514.40	\$ 26,514.40	\$ 0.00	\$ 0.00	\$ 0.00	936	7381	7.89	\$ 0.00
BRDC Brookdale Farm & Sewer Ext.	Jan-88	\$ 37,950.00	\$ 0.00	\$ 37,950.00	\$ 37,950.00	\$ 0.00	\$ 0.00	\$ 0.00	1155	7381	8.39	\$ 0.00
BRDC County Club Sewer Extension	Jan-89	\$ 27,150.00	\$ 0.00	\$ 27,150.00	\$ 27,150.00	\$ 0.00	\$ 0.00	\$ 0.00	1269	7381	5.82	\$ 0.00
BRDC Sewer Series B Sewer Ext.	Jan-71	\$ 2,704,626.50	\$ 1,045,794.85	\$ 3,750,421.35	\$ 1,348,854.36	\$ 0.00	\$ 0.00	\$ 2,401,566.99	1581	7381	4.67	\$ 11,216,773.53
BRDC Brookwood Dr. Sewer Ext.	Jan-89	\$ 425,328.00	\$ 0.00	\$ 425,328.00	\$ 258,725.00	\$ 0.00	\$ 0.00	\$ 166,603.00	4615	7381	1.60	\$ 266,456.50
BRDC Maplewood Dr. Sewer Ext.	Jan-78	\$ 17,640.00	\$ 0.00	\$ 17,640.00	\$ 17,640.00	\$ 0.00	\$ 0.00	\$ 0.00	2401	7381	3.07	\$ 0.00
DCDC Overlook Dr. Sewer Ext.	Jan-80	\$ 5,342.60	\$ 0.00	\$ 5,342.60	\$ 5,342.60	\$ 0.00	\$ 0.00	\$ 0.00	3237	7381	2.28	\$ 0.00
DCDC E. McMurray Sewer Ext.	Jan-83	\$ 19,466.00	\$ 0.00	\$ 19,466.00	\$ 19,466.00	\$ 0.00	\$ 0.00	\$ 0.00	3237	7381	2.28	\$ 0.00
BRDC Pleasant Ave. Sewer Ext.	Jan-86	\$ 24,792.65	\$ 8,468.50	\$ 33,261.15	\$ 33,261.15	\$ 0.00	\$ 0.00	\$ 0.00	4295	7381	1.72	\$ 0.00
BRDC Greenfield Dr. Sewer Ext.	Jan-88	\$ 24,286.10	\$ 0.00	\$ 24,286.10	\$ 24,286.10	\$ 0.00	\$ 0.00	\$ 0.00	4519	7381	1.63	\$ 0.00
BRDC Brookwood Dr. Sewer Ext.	Jan-89	\$ 425,328.00	\$ 0.00	\$ 425,328.00	\$ 258,725.00	\$ 0.00	\$ 0.00	\$ 166,603.00	4615	7381	1.60	\$ 266,456.50
BRDC Beacon Manor Sewer Ext.	Jan-89	\$ 223,747.59	\$ 0.00	\$ 223,747.59	\$ 163,264.00	\$ 0.00	\$ 0.00	\$ 60,483.59	4777	7381	1.55	\$ 93,454.07
DCDC Crestview Sewer Relocation	Jan-96	\$ 119,471.37	\$ 0.00	\$ 119,471.37	\$ 0.00	\$ 0.00	\$ 0.00	\$ 119,471.37	5523	7381	1.34	\$ 159,682.90
BRDC Stonbrook Augmentation	Jan-86	\$ 109,349.15	\$ 0.00	\$ 109,349.15	\$ 0.00	\$ 0.00	\$ 0.00	\$ 109,349.15	5523	7381	1.34	\$ 146,135.45
BRDC Dairy Bar	Jan-98	\$ 27,600.00	\$ 0.00	\$ 27,600.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 27,600.00	5852	7381	1.26	\$ 34,811.28
DCDC East High	1-Feb	\$ 460,653.91	\$ 0.00	\$ 460,653.91	\$ 0.00	\$ 0.00	\$ 0.00	\$ 460,653.91	6272	7381	1.18	\$ 542,105.63
BRDC Gateshead Dr.	Jan-98	\$ 27,548.00	\$ 0.00	\$ 27,548.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 27,548.00	5852	7381	1.26	\$ 34,745.69
BRDC Nancy Court Pipe	Dec-99	\$ 10,487.50	\$ 0.00	\$ 10,487.50	\$ 0.00	\$ 0.00	\$ 0.00	\$ 10,487.50	6059	7381	1.22	\$ 12,775.74
BRDC Slarwood Ext.	2003	\$ 7,000.00	\$ 0.00	\$ 7,000.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 7,000.00	6694	7381	1.10	\$ 7,716.40
BRDC Ivy Lane Extension	Oct-03	\$ 342,755.56	\$ 190,220.39	\$ 532,975.95	\$ 164,888.24	\$ 0.00	\$ 0.00	\$ 368,087.71	6771	7381	1.09	\$ 401,248.76
DCDC Aerial Sewer Augmentation	Dec-03	\$ 45,144.21	\$ 0.00	\$ 45,144.21	\$ 0.00	\$ 0.00	\$ 0.00	\$ 45,144.21	6782	7381	1.09	\$ 49,131.44
BRDC Marble Drive	Mar-04	\$ 10,279.94	\$ 0.00	\$ 10,279.94	\$ 0.00	\$ 0.00	\$ 0.00	\$ 10,279.94	7065	7381	1.04	\$ 10,739.74
BRDC Improvements Full Station												
BRDC Well Expansion	Jul-04	\$ 159,573.00	\$ 36,706.34	\$ 196,279.34	\$ 0.00	\$ 0.00	\$ 0.00	\$ 196,279.34	7126	7381	1.04	\$ 203,303.09
TOTAL		\$ 5,867,313.91	\$ 1,721,411.06	\$ 7,588,724.97	\$ 3,022,496.85	\$ 0.00	\$ 0.00	\$ 4,566,228.12				\$ 16,256,092.78

## **The Peters Township Sanitary Authority Explanation of Tapping Fee Calculation**

### **1 Design Capacity**

The design capacity is established by the Pennsylvania Water Quality Management Permit.

### **2 Final Construction Costs Net of all Abandoned Property and Equipment**

Determined from the financial records of the Authority, including Annual Reports, Auditor's Reports, past Act 339 Applications, and final construction requisitions.

Projects not included in the tap fee resulting from removal from service include:

<b>Date</b>	<b>Project</b>	<b>Amount</b>
12/1/1962	BR Original System	\$ 82,544.08
03/01/1966	BR Plant Series A	\$203,252.11
01/01/1971	BR Plant Series B	\$439,599.24

### **3 Total Construction Costs**

The total of the construction costs include construction contract amounts and the change orders, less the cost of the non-utilized equipment.

### **4 Project Costs (Engineering, Legal, etc.)**

Actual project costs were determined from Authority records and included in the total construction costs or itemized where available.

### **5 Total Net Project Costs**

Equal to the total construction and project costs, minus the expansion and upgrade/replace/betterment costs allocated to existing customers.

### **6 Project Grants / Assessments**

The amount of grant funding received by the Authority was taken from past Authority Annual Reports, Act 339 Applications and previous tap fee calculations. The disbursements for grants received by the Authority in 1971-82 from the State and EPA were subtracted out of the cost of the Brush Run/Donaldson Crossroads Series B construction in Capacity Component A and Donaldson Crossroads Interceptor Series B in Capacity Component B are as follows:

<u>Year</u>	<u>Grant</u>	<u>Brush Run</u>	<u>Donaldson Crossroads</u>	<u>Sewer</u>	<u>Total Amount</u>
01/17/1972	EPA	\$ 60,198.81	\$ 46,280.01	\$ 59,221.18	\$ 165,700.00
01/17/1972	EPA	\$ 55,003.62	\$ 42,286.02	\$ 54,110.36	\$ 151,400.00
02/02/1972	State	\$ 41,016.57	\$ 31,532.97	\$ 40,350.46	\$ 112,900.00
04/05/1972	State	\$ 37,565.22	\$ 28,879.62	\$ 36,955.16	\$ 103,400.00
01/01/1974	EPA	\$ 28,809.69	\$ 22,148.49	\$ 28,341.82	\$ 79,300.00
09/25/1975	EPA	\$ 210,753.68	\$ 8,267.28	\$ 10,579.04	\$ 29,600.00
01/01/1977	EPA	\$ 17,249.48	\$ 13,261.16	\$ 16,969.35	\$ 47,480.00
01/01/1977	State	\$ 8,719.20	\$ 6,703.20	\$ 8,577.60	\$ 24,000.00
01/01/1981		\$ 44,068.29	\$ 33,879.09	\$ 43,352.62	\$ 121,300.00
<b>Grant Total</b>		<b>\$ 303,384.56</b>	<b>\$233,237.84</b>	<b>\$298,457.59</b>	<b>\$ 835,080.00</b>
Facilities Removed from Service		\$ 303,384.56		\$ 76,431.03	\$ 379,815.59
<b>TOTAL</b>		<b>\$ 0</b>	<b>\$ 233,237.84</b>	<b>\$222,026.56</b>	<b>\$ 455,264.41</b>

The Grants for the Brush Run WPCP were not included in the tap fee calculation due to facilities / equipment being removed from service.

The assessments collected were reported by the Authority as \$2,527,702.86; they were subtracted from the Collector Component as follows:

<u>Project</u>	<u>Year</u>	<u>Assessments Collected</u>
Marella Manor	1964	\$ 26,514.40 ✓
Brookdale Farms	1968	\$ 37,950.00 ✓
Series A	1968	\$ 560,000.00 ✓
Country Club	1969	\$ 27,150.00 ✓
Series B	1972	\$ 1,348,854.61 ✓
Maplewood Extension	1976	\$ 17,640.00 ✓
Overlook Drive	1980	\$ 5,342.60 ✓
E. McMurray Road	1983	\$ 19,466.00 ✓
Pleasant Avenue	1986	\$ 33,261.15 ✓
Greenfield Drive	1988	\$ 24,285.10 ✓
Brookwood Road	1989	\$ 258,725.00 ✓
Beacon Manor	1991	\$ 163,264.00 ✓
Ivy Lane	2004	\$ 5,250.00
<b>TOTAL</b>		<b>\$ 2,527,702.86</b>

## **7 Capital Contributions**

There were no Capital contributions received from sources outside of the Authority.

## **8 Total Net Project Costs**

Equal to the total project costs minus the sum of the project grants and the capital contributions.

## **9 ENR Index @ In Service Date & ENR Index @ June 2005**

Construction cost index factors for the in service date are from Engineering News Record (ENR) Magazine, the number was found on the Internet and averaged forwarded to June 2005.

## **10 Ratio ENR Index**

Equal to the ENR Index @ Service Date divided by the averaged ENR Index @ June 2005.

## **11 Total Trended Project Costs**

Equal to the total net project costs times the ratio ENR index

## **12 Cumulative Net Trended Project Cost**

Equal to the sum of the total net trended project costs of all of the previous projects.

## **13 Available Surplus**

The total available surplus was based on an estimate as of June 2005 per Authority's 2005 Annual Budget as presented in the Consulting Engineers Annual Report 2004. The surplus was divided between the three components based upon a percentage of the Cumulative Net Trended Project Costs.

## **14 Total Outstanding Debt**

The Authority's outstanding debt is the amount remaining on the Authority's PENNVEST Loan, and the Series of 2003 Bond Issue. The 2003 bond issue was applied to the Brush Run Upgrade and therefore the outstanding balance was applied to the Capacity Component A. The PENNVEST Loans were used for the collector sewer projects; their outstanding was applied to the Collector Facility Component.

## **15 Allowable Project Cost Basis**

Equal to the sum of the cumulative net trended project cost and the available surplus minus the total outstanding debt.

## **16 Current Design Capacity**

The current Design Capacity is equal to the Average Daily Flow capacity rating of the treatment plants and is the limiting factor within the system on this flow parameter basis.

## **17 Cost Basis per GPD**

Equal to the allowable project cost basis divided by the current design capacity.

## **18 Current Customer Contribution (GPD)**

Based on new law current customer contribution is calculated by the number of people per household (2.87) in Peters Township by 90 Gallons per person per day.  
(3.2 mgd / 258 gallons = 12,403 edu's)

The Municipality census was utilized to calculate the Current Customer Contribution based on the fact the Authority charges a tap fee only in the Municipality of Peters Township, Washington County.

## **19 Capacity Component**

Equal to the cost basis per GPD times the current customer contribution.



## APPENDIX E

### US Census Data

## FACT SHEET

## Peters township, Washington County, Pennsylvania

View a Fact Sheet for a race, ethnic, or ancestry group

## Census 2000 Demographic Profile Highlights:

## General Characteristics - show more &gt;&gt;

	Number	Percent	U.S.		
Total population	17,566			map	brief
Male	8,525	48.5	49.1%	map	brief
Female	9,041	51.5	50.9%	map	brief
Median age (years)	40.6	(X)	35.3	map	brief
Under 5 years	1,170	6.7	6.8%	map	
18 years and over	12,407	70.6	74.3%		
65 years and over	2,279	13.0	12.4%	map	brief
One race	17,501	99.6	97.6%		
White	17,181	97.8	75.1%	map	brief
Black or African American	84	0.5	12.3%	map	brief
American Indian and Alaska Native	5	0.0	0.9%	map	brief
Asian	191	1.1	3.6%	map	brief
Native Hawaiian and Other Pacific Islander	5	0.0	0.1%	map	brief
Some other race	35	0.2	5.5%	map	
Two or more races	65	0.4	2.4%	map	brief
Hispanic or Latino (of any race)	127	0.7	12.5%	map	brief
Household population	17,277	98.4	97.2%	map	brief
Group quarters population	289	1.6	2.8%	map	
Average household size	2.87	(X)	2.59	map	brief
Average family size	3.17	(X)	3.14	map	
Total housing units	6,221			map	
Occupied housing units	6,026	96.9	91.0%		brief
Owner-occupied housing units	5,681	94.3	66.2%	map	
Renter-occupied housing units	345	5.7	33.8%	map	brief
Vacant housing units	195	3.1	9.0%	map	

## Social Characteristics - show more &gt;&gt;

	Number	Percent	U.S.		
Population 25 years and over	11,628				
High school graduate or higher	11,032	94.9	80.4%	map	brief
Bachelor's degree or higher	5,820	50.1	24.4%	map	
Civilian veterans (civilian population 18 years and over)	1,605	12.9	12.7%	map	brief
Disability status (population 5 years and over)	1,428	8.9	19.3%	map	brief
Foreign born	439	2.5	11.1%	map	brief
Male, Now married, except separated (population 15 years and over)	4,757	75.0	56.7%		brief
Female, Now married, except separated (population 15 years and over)	4,907	70.7	52.1%		brief
Speak a language other than English at home (population 5 years and over)	704	4.3	17.9%	map	brief

## Economic Characteristics - show more &gt;&gt;

	Number	Percent	U.S.		
In labor force (population 16 years and over)	8,231	63.2	63.9%		brief
Mean travel time to work in minutes (workers 16 years and over)	28.7	(X)	25.5	map	brief
Median household income in 1999 (dollars)	77,442	(X)	41,994	map	
Median family income in 1999 (dollars)	86,661	(X)	50,046	map	
Per capita income in 1999 (dollars)	36,159	(X)	21,587	map	
Families below poverty level	58	1.1	9.2%	map	brief
Individuals below poverty level	299	1.7	12.4%	map	

## Housing Characteristics - show more &gt;&gt;

	Number	Percent	U.S.		
Single-family owner-occupied homes	5,462				brief
Median value (dollars)	189,100	(X)	119,600	map	brief
Median of selected monthly owner costs	(X)	(X)			brief
With a mortgage (dollars)	1,515	(X)	1,088	map	
Not mortgaged (dollars)	402	(X)	295		

(X) Not applicable.

## FACT SHEET

## Washington County, Pennsylvania

View a Fact Sheet for a race, ethnic, or ancestry group

## Census 2000 Demographic Profile Highlights:

## General Characteristics - show more &gt;&gt;

	Number	Percent	U.S.		
Total population	202,897			map	brief
Male	97,446	48.0	49.1%	map	brief
Female	105,451	52.0	50.9%	map	brief
Median age (years)	40.8	(X)	35.3	map	brief
Under 5 years	11,235	5.5	6.8%	map	
18 years and over	157,900	77.8	74.3%		
65 years and over	36,323	17.9	12.4%	map	brief
One race	201,228	99.2	97.6%		
White	193,297	95.3	75.1%	map	brief
Black or African American	6,606	3.3	12.3%	map	brief
American Indian and Alaska Native	175	0.1	0.9%	map	brief
Asian	725	0.4	3.6%	map	brief
Native Hawaiian and Other Pacific Islander	44	0.0	0.1%	map	brief
Some other race	381	0.2	5.5%	map	
Two or more races	1,669	0.8	2.4%	map	brief
Hispanic or Latino (of any race)	1,170	0.6	12.5%	map	brief
Household population	197,556	97.4	97.2%	map	brief
Group quarters population	5,341	2.6	2.8%	map	
Average household size	2.44	(X)	2.59	map	brief
Average family size	2.96	(X)	3.14	map	
Total housing units	87,267			map	
Occupied housing units	81,130	93.0	91.0%		brief
Owner-occupied housing units	62,561	77.1	66.2%	map	
Renter-occupied housing units	18,569	22.9	33.8%	map	brief
Vacant housing units	6,137	7.0	9.0%	map	

## Social Characteristics - show more &gt;&gt;

	Number	Percent	U.S.		
Population 25 years and over	142,118				
High school graduate or higher	117,457	82.6	80.4%	map	brief
Bachelor's degree or higher	26,726	18.8	24.4%	map	
Civilian veterans (civilian population 18 years and over)	23,986	15.2	12.7%	map	brief
Disability status (population 5 years and over)	37,438	19.8	19.3%	map	brief
Foreign born	2,404	1.2	11.1%	map	brief
Male, Now married, except separated (population 15 years and over)	48,161	61.5	56.7%		brief
Female, Now married, except separated (population 15 years and over)	48,320	55.4	52.1%		brief
Speak a language other than English at home (population 5 years and over)	6,912	3.6	17.9%	map	brief

## Economic Characteristics - show more &gt;&gt;

	Number	Percent	U.S.		
In labor force (population 16 years and over)	96,043	58.9	63.9%		brief
Mean travel time to work in minutes (workers 16 years and over)	25.6	(X)	25.5	map	brief
Median household income in 1999 (dollars)	37,607	(X)	41,994	map	
Median family income in 1999 (dollars)	47,287	(X)	50,046	map	
Per capita income in 1999 (dollars)	19,935	(X)	21,587	map	
Families below poverty level	3,873	6.9	9.2%	map	brief
Individuals below poverty level	19,513	9.8	12.4%	map	

## Housing Characteristics - show more &gt;&gt;

	Number	Percent	U.S.		
Single-family owner-occupied homes	51,774				brief
Median value (dollars)	87,500	(X)	119,600	map	brief
Median of selected monthly owner costs	(X)	(X)			brief
With a mortgage (dollars)	890	(X)	1,088	map	
Not mortgaged (dollars)	274	(X)	295		

(X) Not applicable.





ROMAC  
INDUSTRIES,  
INC.

1-800-426-9341



## Style "CB"™ Sewer Saddle

**A ROMAC ORIGINAL**  
- 1981 -



Patent #4494780

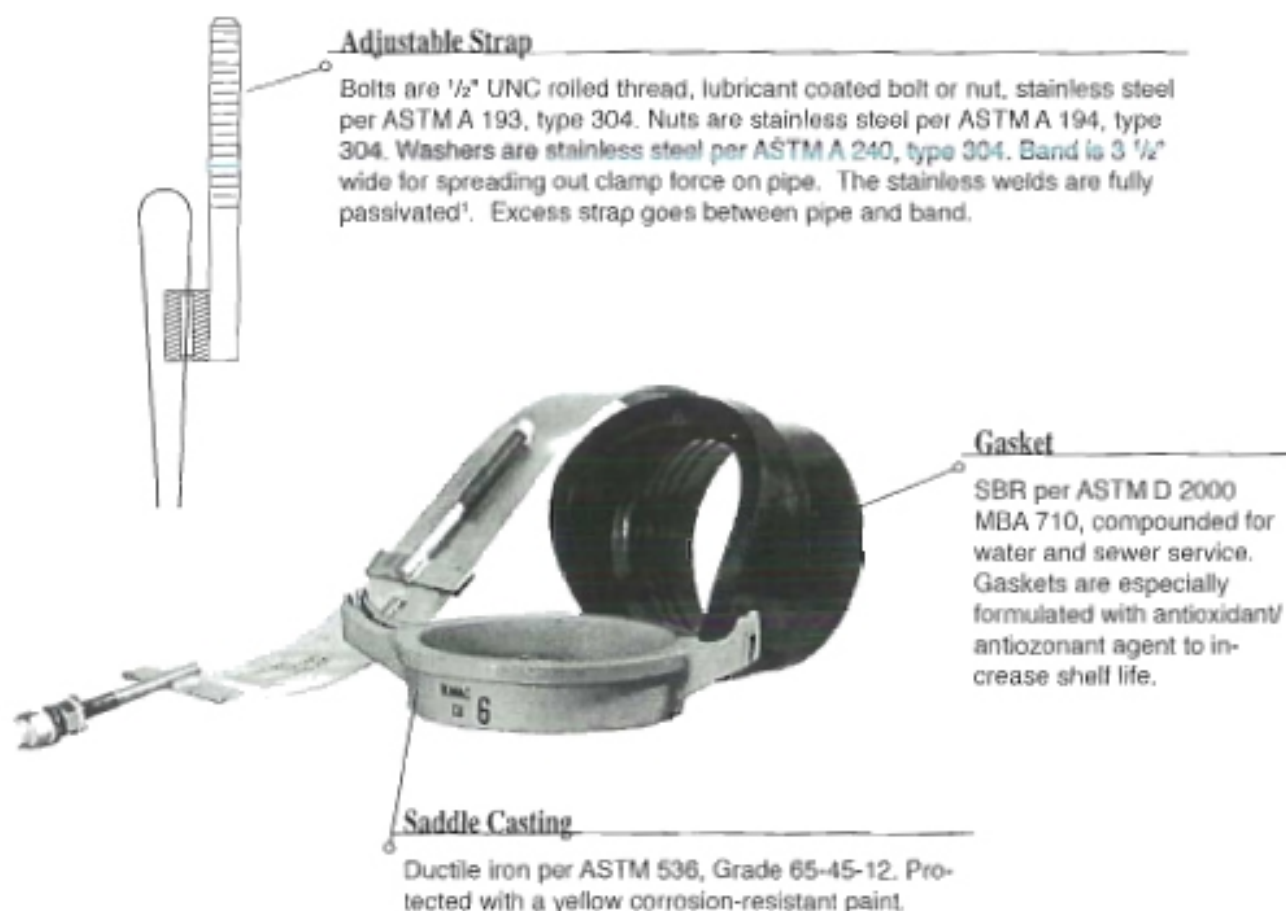
### Design Advantages:

- **Inventory Reduction:** Unique gaskets fit wide range of diameters.
- **Ease of Installation:** Saddle can be installed by unskilled labor, using a socket or open end wrench. Built-in stop prevents blockages due to inadvertent insertion of branch into main.
- **Superior Strap:** Strong 304 stainless steel band GMAW & GTAW welded to roll threaded 304 stainless bolts adjusts over a wide range. Clamping force is well distributed by 3 1/2" width.
- **Flexibility:** Gasket allows considerable deflection due to earth movement, while large sealing surface and wide band strongly resist displacement.
- **Reliability:** Continuous rubber connection between rim and branch eliminates potential leak spots. Saddles have been tested to pressures well in excess of typical service test requirements.

Note: A pipe stop capable of withstanding 1000 pounds of thrust is molded into the CB saddle gasket. Care must be taken during system design and installation to assure that this thrust limit is not exceeded.

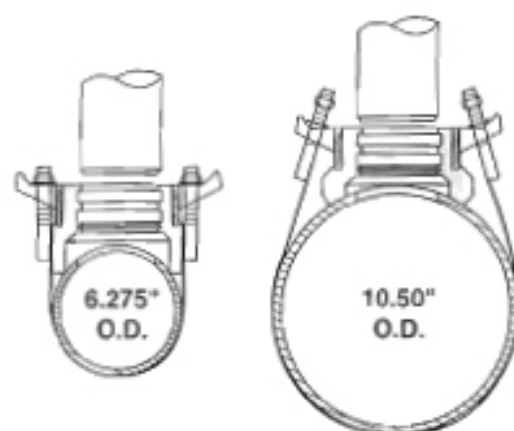


## Detail Specifications for Romac "CB"™ Sewer Saddles

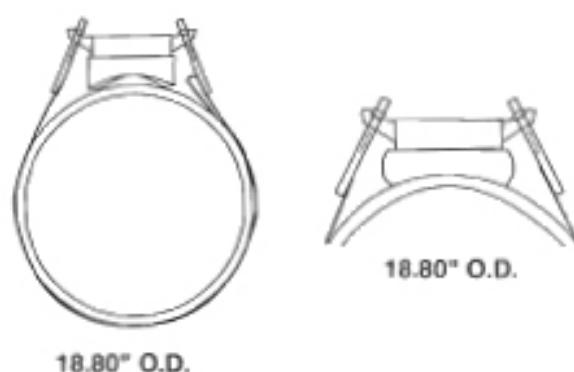


<sup>1</sup> Passivated: chemically treated after welding to produce a highly corrosion resistant coating.

Same saddle conforming to different outside diameters.



Saddle conforming to pipe.



## APPENDIX G

### Brush Run Sewerage System Project Cost Data

## APPENDIX H

Brush Run Plant Act 339 Applications

## **APPENDIX I**

### **DC Sewerage System Project Cost Data**

## **APPENDIX J**

### **DC Plant Act 339 Applications**