



GILMORE & ASSOCIATES, INC.  
ENGINEERING & CONSULTING SERVICES

User Fee Structure Analysis  
Presentation of Findings and Recommendations

For the

Township of Cheltenham  
Montgomery County, PA

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BUILDING ON A FOUNDATION OF EXCELLENCE

# GOALS OF THE STUDY

- Insure that the Township's sewer system generates sufficient annual revenues to cover all operating costs and debt service associated with the system.
- Address inequities in the current structure of the existing sewer rates.
- Develop alternative rate structures that will meet the annual revenue requirement of the sewer system while promoting fairness between the users of the system.

# KEY FACTORS IN COMPLETION OF THE SEWER RATE STUDY

- Required capital projects within the sewer system.
- New agreement with the City of Philadelphia and requirements of new agreement.
- Impact of inflation on the operations of the sewer system.
- Method of financing capital projects and the repayment of that debt.
- Stable customer base consisting of primarily Residential and Commercial customers.

# CAPITAL PLAN THROUGH 2018

- Capital plan was developed based upon engineering study.
- Portion of capital plan costs are shared with Abington, Jenkintown and Philadelphia.
- Capital costs will be financed through long term financing and the issuance of General Obligation Bonds issued by the Township.
- Financing projections are based upon 20 year borrowings at current market rates.

Cheltenham Township - Capital Plan

| Operation / Project Item                                         | 2012               | 2013               | 2014               | 2015               | 2016                | 2017             | 2018             |
|------------------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|---------------------|------------------|------------------|
| Rice's Mill Road sanitary sewer relocation                       | \$119,085          |                    |                    |                    |                     |                  |                  |
| JC Melrose Country Club Interceptor D Pipe Bridge and Sewer      | 1,285,359          | \$18,117           |                    |                    |                     |                  |                  |
| CAP Phase 2 sanitary sewer lining                                | 2,040,690          | 189,743            |                    |                    |                     |                  |                  |
| Interceptor A lining Phases 1A and 1B                            | 13,475             | 2,147,348          |                    |                    |                     |                  |                  |
| Grinder pump installation at 7859 Mill Road                      | 92,810             | 50,978             |                    |                    |                     |                  |                  |
| Completion of Act 537 Plan                                       | 6,013              | 1,000              | \$1,000            | \$1,000            |                     |                  |                  |
| Pre- and Post-rehabilitation flow metering                       |                    | 3,000              | 3,000              | 3,000              |                     | \$1,000          |                  |
| Interim Bypass Pumping System operation/maintenance              |                    | 219,800            | 54,200             | 40,000             |                     |                  |                  |
| Design of Interceptor A Replacement Phases 2A, 2B, 3             |                    |                    |                    |                    |                     |                  |                  |
| Interceptor A replacement Phase 2A                               |                    |                    | 1,010,000          | 1,010,000          |                     |                  |                  |
| Interceptor A replacement Phase 2B                               |                    |                    |                    | 3,343,000          |                     |                  |                  |
| Interceptor A replacement Phase 3                                |                    |                    |                    | 1,264,000          |                     |                  |                  |
| Interim Bypass Pumping System removal                            |                    |                    |                    |                    | 450,000             |                  |                  |
| Design of Interceptor A Replacement Phase 4                      |                    |                    | 130,000            | 130,000            | 40,000              |                  |                  |
| Interceptor A replacement Phase 4                                |                    |                    |                    |                    | 5,808,000           |                  |                  |
| Private sewer lateral rehabilitation                             |                    |                    |                    |                    |                     |                  |                  |
| Area A (500 laterals at approx. \$4,000/lateral+design)          |                    |                    |                    |                    | 2,140,000           |                  |                  |
| Area B (500 laterals at approx. \$4,000/lateral+design)          |                    |                    |                    |                    | 2,140,000           |                  |                  |
| Manhole rehabilitation per Manhole Inspection Program            |                    |                    |                    |                    | 1,444,300           |                  |                  |
| Tookany/Tacony-Frankford Partnership contribution                | 40,000             | 40,000             | 40,000             | 40,000             | 40,000              |                  |                  |
| Intermunicipal flow meter installations at PWD interconnection   |                    |                    |                    |                    | 87,500              |                  |                  |
| Design of PWD interceptor upgrade (needed for 29 cfs flow limit) |                    |                    | 300,000            | 250,000            |                     | 200,000          |                  |
| Capital to be allocated at a later date (1)                      |                    |                    |                    |                    |                     |                  |                  |
| <b>Total Capital Projects</b>                                    | <b>\$3,597,431</b> | <b>\$2,669,986</b> | <b>\$1,538,200</b> | <b>\$6,081,000</b> | <b>\$12,350,800</b> | <b>3,000,000</b> | <b>3,000,000</b> |
| Abington Township cost share                                     | \$33,597           | \$876,448          | \$580,954          | \$2,329,932        | \$2,061,925         |                  |                  |
| Jenkintown Borough cost share                                    | 11,082             | 289,082            | 132,035            | 529,530            | 468,619             |                  |                  |
| City of Philadelphia cost share                                  | -                  | -                  | 28,223             | 28,223             | 1,269,601           |                  |                  |
| Less: Amount Funded by Future Cheltenham Township Financing      | 3,552,752          | 1,504,456          | 796,988            | 3,193,315          | 8,550,655           | 3,000,000        | 3,000,000        |
| <b>Total Capital Projects - Funded by Rates</b>                  | <b>\$0</b>         | <b>\$0</b>         | <b>\$0</b>         | <b>\$0</b>         | <b>\$0</b>          | <b>\$0</b>       | <b>\$0</b>       |

(1) Capital to be allocated at a later date includes on going collection system work as well as capital anticipated as result of long term agreement with Philadelphia.

# PROJECTED CASH FLOW UNDER PRESENT RATES

- Operating expenses are projected to increase at 3.5 percent per year.
- Philadelphia Treatment Costs include Long Term Capital Plan.
- Current and Future Debt Service reflect 100 percent of sewer portion of the Township Debt.
- Projected operating deficits in 2016, 2017 and 2018 based on current rates.

Cash Flow Summary  
Current Rates

|                                         | <u>2014</u>        | <u>2015</u>        | <u>2016</u>        | <u>2017</u>        | <u>2018</u>        |
|-----------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>EXPENSES</b>                         |                    |                    |                    |                    |                    |
| Salaries Sewer                          | \$622,742          | \$644,541          | \$667,107          | \$690,448          | \$714,617          |
| Treatment (Philadelphia 4 quarters) (1) | 3,650,000          | 3,777,750          | 3,909,970          | 4,046,820          | 4,188,460          |
| Operating Expenses                      | 870,710            | 901,180            | 932,730            | 965,380            | 999,170            |
| Materials & Supplies                    | -                  | -                  | -                  | -                  | -                  |
| Maint Plant & Vehicle                   | 633,355            | 655,524            | 678,452            | 702,192            | 726,774            |
| Other Expenses                          | 14,950             | 15,470             | 16,010             | 16,570             | 17,150             |
| Major Expenses                          | -                  | -                  | -                  | -                  | -                  |
| Debt - Current                          | 1,877,336          | 1,893,531          | 1,898,529          | 1,962,868          | 1,522,955          |
| Debt - Future                           | <u>57,353</u>      | <u>287,151</u>     | <u>902,474</u>     | <u>1,118,360</u>   | <u>1,334,246</u>   |
| Total Expenses                          | \$7,726,445        | \$8,175,146        | \$9,005,272        | \$9,502,638        | \$9,503,372        |
| <b>Non-Rate Revenue</b>                 |                    |                    |                    |                    |                    |
| Sewer Treatment Abington                | \$1,208,311        | \$1,250,602        | \$1,294,373        | \$1,339,676        | \$1,386,564        |
| Sewer Treatment Jenkintown              | <u>379,986</u>     | <u>393,285</u>     | <u>407,050</u>     | <u>421,297</u>     | <u>436,042</u>     |
| Total Non-Rate Revenues                 | <u>\$1,588,297</u> | <u>\$1,643,887</u> | <u>\$1,701,423</u> | <u>\$1,760,973</u> | <u>\$1,822,607</u> |
| Required Revenues From Rates            | \$6,138,149        | \$6,531,259        | \$7,303,849        | \$7,741,665        | \$7,680,765        |
| Budgeted Revenues                       | <u>\$7,298,864</u> | <u>\$7,298,864</u> | <u>\$7,298,864</u> | <u>\$7,298,864</u> | <u>\$7,298,864</u> |
| Surplus                                 | <u>\$1,160,715</u> | <u>\$767,605</u>   | <u>(\$4,985)</u>   | <u>(\$442,801)</u> | <u>(\$381,901)</u> |
| Annual Increase of Expenses             | 18.7%              | 6.4%               | 11.8%              | 6.0%               | -0.8%              |
| Required Cumulative Increase            | -15.9%             | -10.5%             | 0.1%               | 6.1%               | 5.2%               |

(1) Reflects treatment costs payable to PWD and Townships share of Long Term Capital Plan (LTCP) Charges.

# RATE STRUCTURE – CHALLENGES AND OPPORTUNITIES

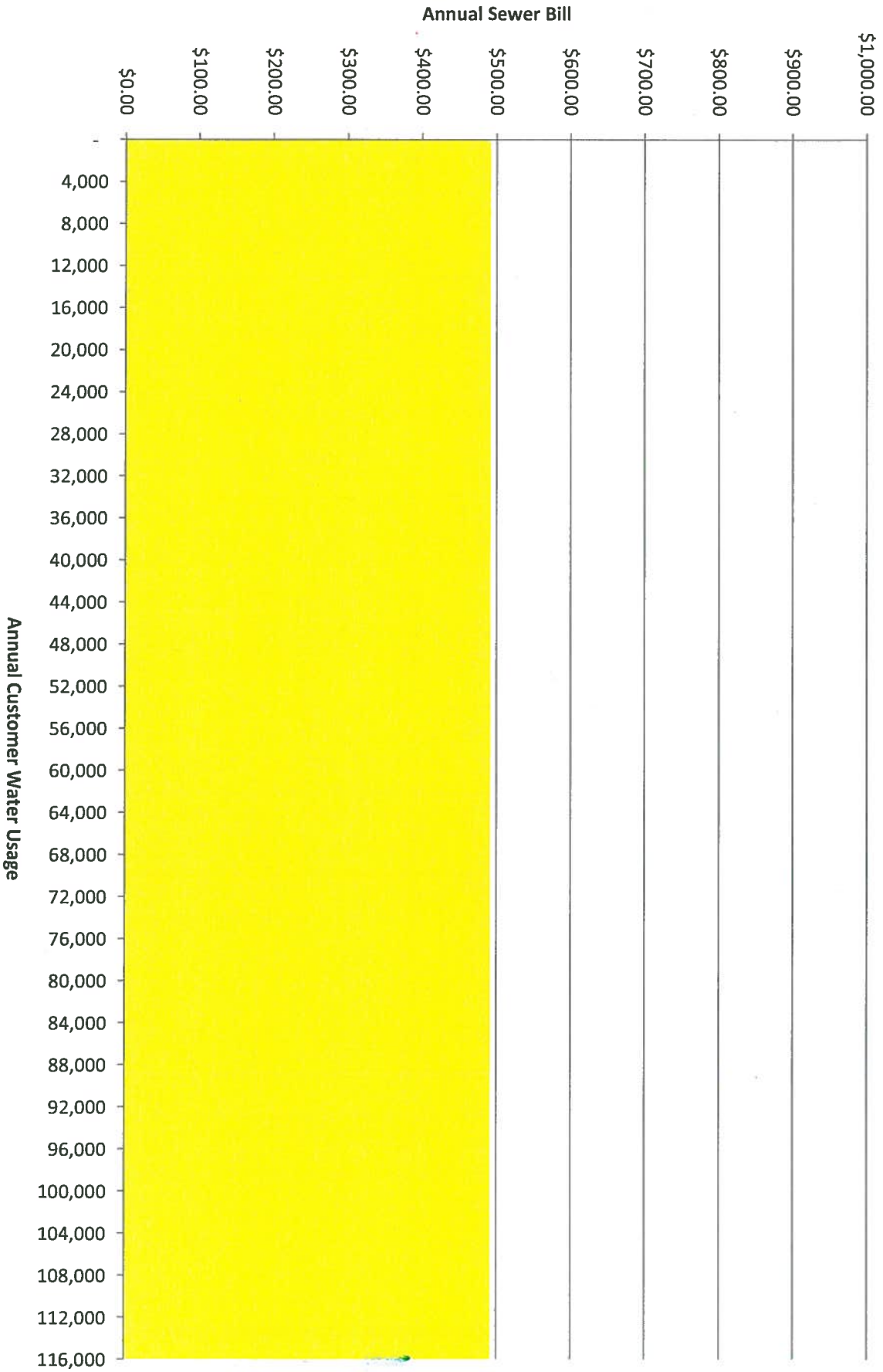
- Current “Fixture Count” rate structure has been in place for decades.
- Current structure is inherently unfair because customers bills are plumbing fixtures rather than amount of cost incurred to provide service to the customer.
- Continued difficulty in maintaining the current system.



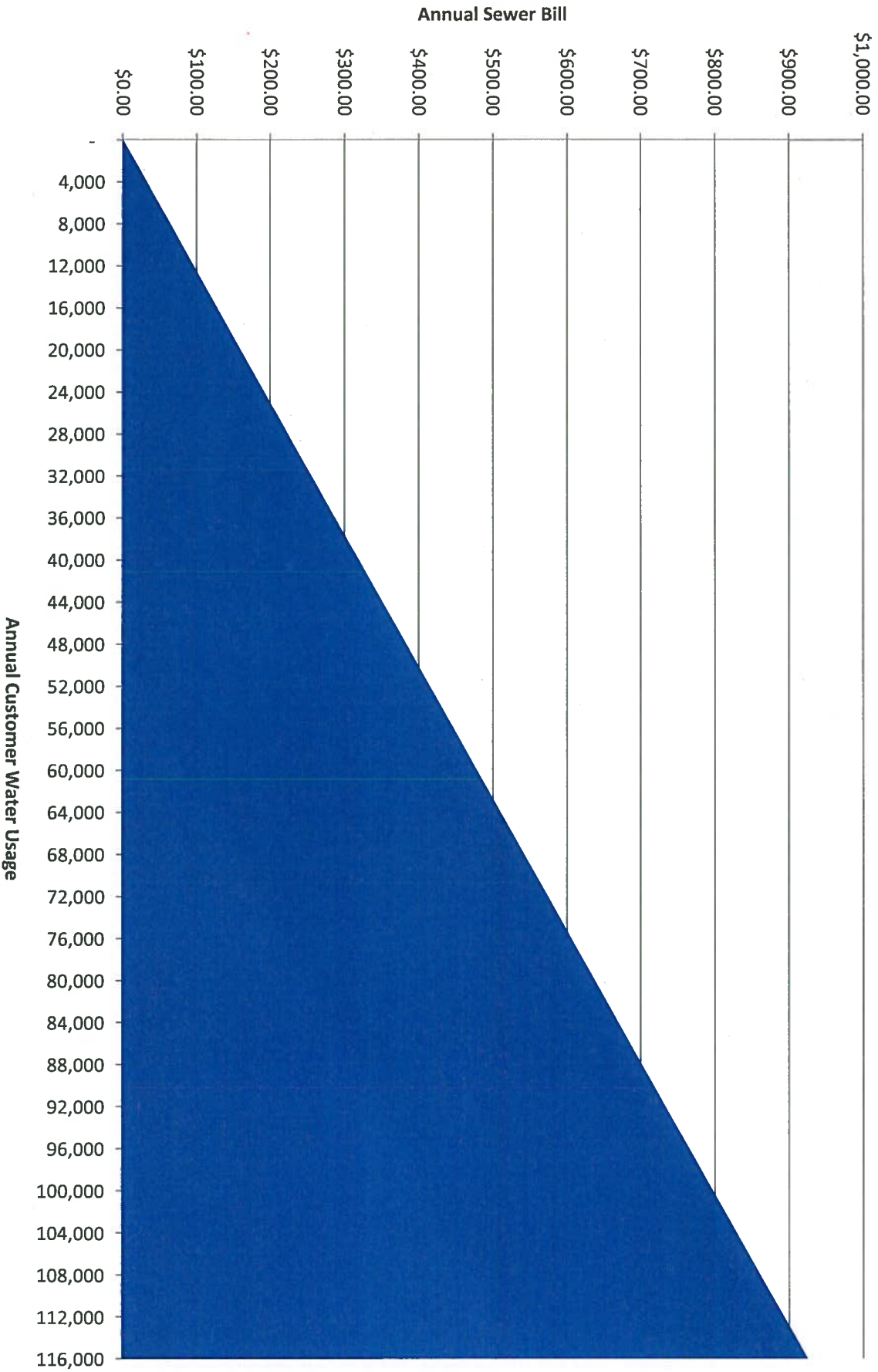
# RATE STRUCTURES CONSIDERED

- A comprehensive billing analyses based upon metered water usage records obtained from Aqua PA was prepared for all customers.
- Multiple alternative structures were considered with focus on a Fixed and Variable Rate Structure.
- All rate structures considered met the goal of generating the required annual revenue requirement.
- Advantages of different rate structures.

# Annual Sewer Bill Completely Fixed Rate Scenario



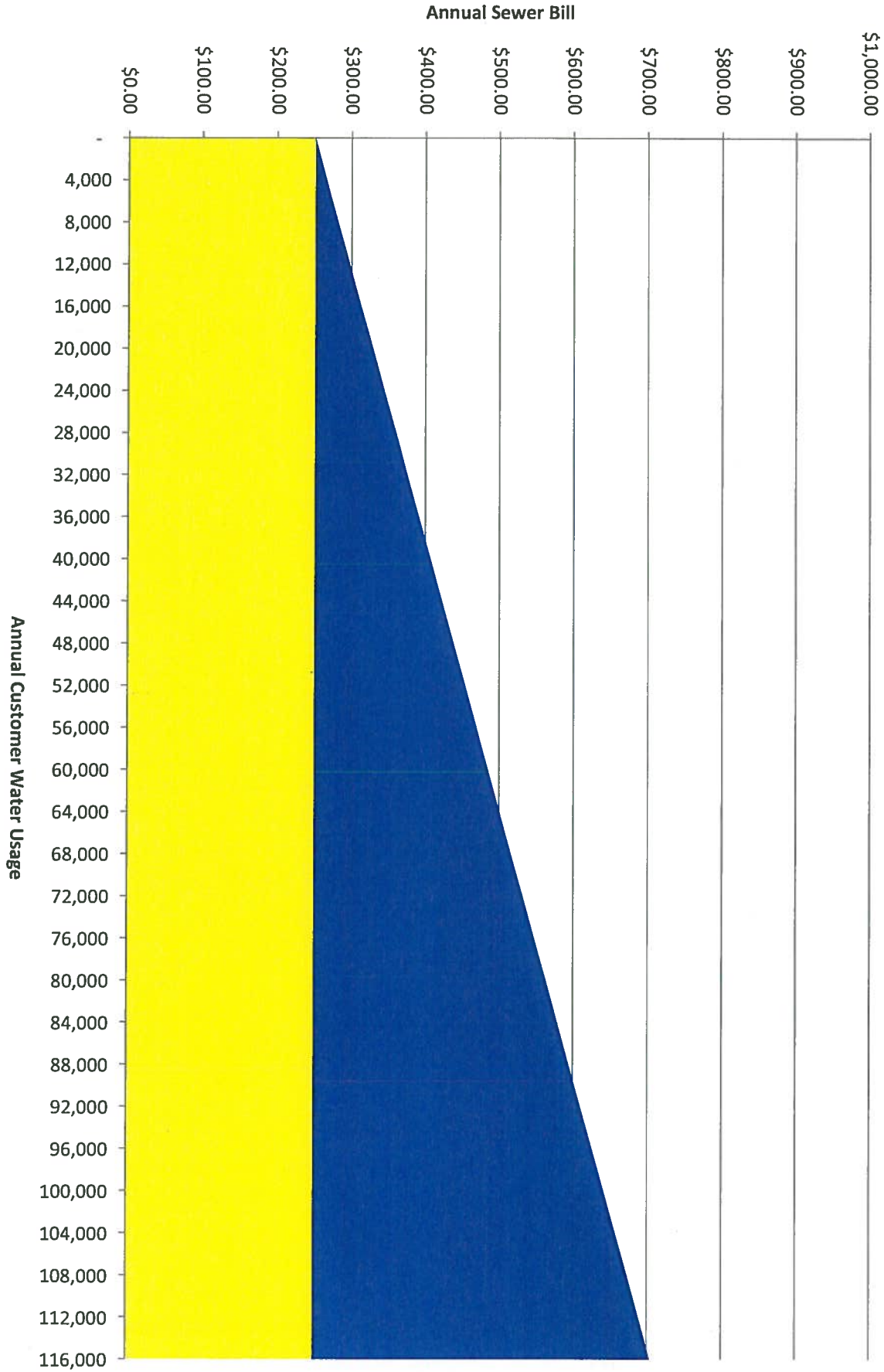
# Annual Sewer Bill Completely Variable Rate Scenario



Calculation of Required Rates

|                                             | 2014     | 2015       | 2016     | 2017     | 2018     |
|---------------------------------------------|----------|------------|----------|----------|----------|
| <b>Rate Scenario No. 1 - Annual Billing</b> |          |            |          |          |          |
| Annual Service Charge Per EDU               | \$275.72 | \$281.64   | \$297.48 | \$320.20 | \$309.04 |
| Usage Charge Per 1,000 gallons              | \$3.50   | \$3.41     | \$3.16   | \$3.27   | \$3.38   |
| Average Residential Bill                    |          |            |          |          |          |
| Based on Usage of 60,000 gallons / year     | \$485.72 | \$486.24   | \$487.08 | \$516.40 | \$511.84 |
| <b>Rate Scenario No. 2 - Annual Billing</b> |          |            |          |          |          |
| Annual Service Charge Per EDU               | \$245.12 | \$250.68 ✓ | \$266.44 | \$289.16 | \$278.28 |
| Usage Charge Per 1,000 gallons              | \$4.00   | \$3.91 ✓   | \$3.66   | \$3.77   | \$3.88   |
| Average Residential Bill                    |          |            |          |          |          |
| Based on Usage of 60,000 gallons / year     | \$485.12 | \$485.28   | \$486.04 | \$515.36 | \$511.08 |
| <b>Rate Scenario No. 3 - Annual Billing</b> |          |            |          |          |          |
| Annual Service Charge Per EDU               | \$214.28 | \$219.84   | \$235.60 | \$258.32 | \$247.44 |
| Usage Charge Per 1,000 gallons              | \$4.50   | \$4.41     | \$4.16   | \$4.27   | \$4.38   |
| Average Residential Bill                    |          |            |          |          |          |
| Based on Usage of 60,000 gallons / year     | \$484.28 | \$484.44   | \$485.20 | \$514.52 | \$510.24 |
| <b>Rate Scenario No. 4 - Annual Billing</b> |          |            |          |          |          |
| Annual Service Charge Per EDU               | \$183.44 | \$189.00   | \$204.76 | \$227.48 | \$216.60 |
| Usage Charge Per 1,000 gallons              | \$5.00   | \$4.91     | \$4.66   | \$4.77   | \$4.88   |
| Average Residential Bill                    |          |            |          |          |          |
| Based on Usage of 60,000 gallons / year     | \$483.44 | \$483.60   | \$484.36 | \$513.68 | \$509.40 |

# Annual Sewer Bill Rate Scenario No. 2



**Proposed Rates - Rate Scenario No. 2**  
**Cash Flow Summary**

|                                      | 2014               | 2015               | 2016               | 2017               | 2018               |
|--------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>EXPENSES</b>                      |                    |                    |                    |                    |                    |
| Salaries Sewer                       | \$622,742          | \$644,541          | \$667,107          | \$690,448          | \$714,617          |
| Treatment (Philadelphia 4 quarters)  | 3,650,000          | 3,777,750          | 3,909,970          | 4,046,820          | 4,188,460          |
| Operating Expenses                   | 870,710            | 901,180            | 932,730            | 965,380            | 999,170            |
| Materials & Supplies                 | -                  | -                  | -                  | -                  | -                  |
| Maint Plant & Vehicle                | 633,355            | 655,524            | 678,452            | 702,192            | 726,774            |
| Other Expenses                       | 14,950             | 15,470             | 16,010             | 16,570             | 17,150             |
| Major Expenses                       | -                  | -                  | -                  | -                  | -                  |
| Debt - Current                       | 1,877,336          | 1,893,531          | 1,898,529          | 1,962,868          | 1,522,955          |
| Debt - Future                        | 57,353             | 287,151            | 902,474            | 1,118,360          | 1,334,246          |
| <b>Total Expenses</b>                | <b>\$7,726,445</b> | <b>\$8,175,146</b> | <b>\$9,005,272</b> | <b>\$9,502,638</b> | <b>\$9,503,372</b> |
| <b>Non-Rate Revenue</b>              |                    |                    |                    |                    |                    |
| Sewer Treatment Abington             | \$1,208,311        | \$1,250,602        | \$1,294,373        | \$1,339,676        | \$1,386,564        |
| Sewer Treatment Jenkintown           | 379,986            | 393,285            | 407,050            | 421,297            | 436,042            |
| <b>Total Non-Rate Revenues</b>       | <b>\$1,588,297</b> | <b>\$1,643,887</b> | <b>\$1,701,423</b> | <b>\$1,760,973</b> | <b>\$1,822,607</b> |
| Required Revenues From Rates         | \$6,138,149        | \$6,531,259        | \$7,303,849        | \$7,741,665        | \$7,680,765        |
| Projected Revenues at Proposed Rates | \$7,298,784        | \$7,298,784        | \$7,298,784        | \$7,298,784        | \$7,298,784        |
| <b>Surplus</b>                       | <b>\$1,160,636</b> | <b>\$767,525</b>   | <b>(\$5,065)</b>   | <b>(\$442,881)</b> | <b>(\$381,981)</b> |
| Annual Increase of Expenses          | 18.7%              | 6.4%               | 11.8%              | 6.0%               | -0.8%              |
| Required Cumulative Increase         | -15.9%             | -10.5%             | 0.1%               | 6.1%               | 5.2%               |

Comparison of Current Vs. Projected Charges for Random Residential Customers  
Rate Scenario 2

| Parcel Number | House Number | Street Name | Annual Usage | Sewer Rent | Sewer Excess | Total Charged | Units | 2015           |              | Total Charged | Difference | %    |
|---------------|--------------|-------------|--------------|------------|--------------|---------------|-------|----------------|--------------|---------------|------------|------|
|               |              |             |              |            |              |               |       | Service Charge | Usage Charge |               |            |      |
| 205007        | 1100         | ANSLEY AVE  | 28,600       | 389.00     |              | 389.00        | 1     | \$250.68       | \$3.91       | 362.51        | -26.49     | -7%  |
| 190004        | 1103         | ANSLEY AVE  | 52,900       | 288.00     | 43.00        | 331.00        | 1     | 250.68         | 206.84       | 457.52        | 126.52     | 38%  |
| 187007        | 1105         | ANSLEY AVE  | 7,100        | 187.00     |              | 187.00        | 1     | 250.68         | 27.76        | 278.44        | 91.44      | 49%  |
| 202001        | 1106         | ANSLEY AVE  | 27,000       | 576.00     |              | 576.00        | 1     | 250.68         | 105.57       | 356.25        | -219.75    | -38% |
| 184001        | 1107         | ANSLEY AVE  | 93,500       | 443.00     | 157.00       | 600.00        | 1     | 250.68         | 365.59       | 616.27        | 16.27      | 3%   |
| 181004        | 1109         | ANSLEY AVE  | 68,900       | 443.00     |              | 443.00        | 1     | 250.68         | 269.40       | 520.08        | 77.08      | 17%  |
| 178007        | 1111         | ANSLEY AVE  | 52,800       | 421.00     |              | 421.00        | 1     | 250.68         | 206.45       | 457.13        | 36.13      | 9%   |
| 199004        | 1112         | ANSLEY AVE  | 58,300       | 299.00     | 68.00        | 367.00        | 1     | 250.68         | 227.95       | 478.63        | 111.63     | 30%  |
| 175001        | 1115         | ANSLEY AVE  | 19,900       | 523.00     |              | 523.00        | 1     | 250.68         | 77.81        | 328.49        | -194.51    | -37% |
| 196007        | 1116         | ANSLEY AVE  | 72,900       | 464.00     |              | 464.00        | 1     | 250.68         | 285.04       | 535.72        | 71.72      | 15%  |
| 193001        | 1200         | ANSLEY AVE  | 89,200       | 469.00     | 96.00        | 565.00        | 1     | 250.68         | 348.77       | 599.45        | 34.45      | 6%   |
| 169007        | 1201         | ANSLEY AVE  | 37,200       | 582.00     |              | 582.00        | 1     | 250.68         | 145.45       | 396.13        | -185.87    | -32% |
| 166001        | 1211         | ANSLEY AVE  | 60,700       | 453.00     |              | 453.00        | 1     | 250.68         | 237.34       | 488.02        | 35.02      | 8%   |
| 1090004       | 7606         | GARDEN RD   | 67,700       | 192.00     | 268.00       | 460.00        | 1     | 250.68         | 264.71       | 515.39        | 55.39      | 12%  |
| 10903001      | 7608         | GARDEN RD   | 14,200       | 320.00     |              | 320.00        | 1     | 250.68         | 55.52        | 306.20        | -13.80     | -4%  |
| 10906007      | 7610         | GARDEN RD   | 60,800       | 261.00     | 137.00       | 398.00        | 1     | 250.68         | 237.73       | 488.41        | 90.41      | 23%  |
| 10909004      | 7612         | GARDEN RD   | 61,200       | 192.00     | 220.00       | 412.00        | 1     | 250.68         | 239.29       | 489.97        | 77.97      | 19%  |
| 10912001      | 7614         | GARDEN RD   | 37,100       | 197.00     | 37.00        | 234.00        | 1     | 250.68         | 145.06       | 395.74        | 161.74     | 69%  |
| 10897007      | 7615         | GARDEN RD   | 46,400       | 325.00     |              | 325.00        | 1     | 250.68         | 181.42       | 432.10        | 107.10     | 33%  |
| 17032001      | 7627         | LEVIS RD    | 63,400       | 389.00     | 3.00         | 392.00        | 1     | 250.68         | 247.89       | 498.57        | 106.57     | 27%  |
| 17062007      | 7628         | LEVIS RD    | 20,200       | 176.00     |              | 176.00        | 1     | 250.68         | 78.98        | 329.66        | 153.66     | 87%  |
| 17035007      | 7629         | LEVIS RD    | 54,400       | 304.00     | 39.00        | 343.00        | 1     | 250.68         | 212.70       | 463.38        | 120.38     | 35%  |
| 17065004      | 7630         | LEVIS RD    | 29,200       | 176.00     | 1.00         | 177.00        | 1     | 250.68         | 114.17       | 364.85        | 187.85     | 106% |
| 17038004      | 7631         | LEVIS RD    | 20,300       | 176.00     |              | 176.00        | 1     | 250.68         | 79.37        | 330.05        | 154.05     | 88%  |
| 17068001      | 7632         | LEVIS RD    | 65,400       | 320.00     | 98.00        | 418.00        | 1     | 250.68         | 255.71       | 506.39        | 88.39      | 21%  |
| 17041001      | 7633         | LEVIS RD    | 17,100       | 261.00     |              | 261.00        | 1     | 250.68         | 66.86        | 317.54        | 56.54      | 22%  |
| 17071007      | 7634         | LEVIS RD    | 35,600       | 208.00     | 12.00        | 220.00        | 1     | 250.68         | 139.20       | 389.88        | 169.88     | 77%  |
| 17044007      | 7635         | LEVIS RD    | 50,500       | 261.00     | 62.00        | 323.00        | 1     | 250.68         | 197.46       | 448.14        | 125.14     | 39%  |
| 17074004      | 7636         | LEVIS RD    | 71,500       | 208.00     | 274.00       | 482.00        | 1     | 250.68         | 279.57       | 530.25        | 48.25      | 10%  |
| 17047004      | 7637         | LEVIS RD    | 74,200       | 261.00     | 235.00       | 496.00        | 1     | 250.68         | 290.12       | 540.80        | 44.80      | 9%   |
| 17077001      | 7638         | LEVIS RD    | 37,600       | 213.00     | 19.00        | 232.00        | 1     | 250.68         | 147.02       | 397.70        | 165.70     | 71%  |
| 17050001      | 7639         | LEVIS RD    | 32,700       | 176.00     | 27.00        | 203.00        | 1     | 250.68         | 127.86       | 378.54        | 175.54     | 86%  |
| 17080007      | 7640         | LEVIS RD    | 32,000       | 176.00     | 22.00        | 198.00        | 1     | 250.68         | 125.12       | 375.80        | 177.80     | 90%  |
| 17053007      | 7641         | LEVIS RD    | 24,100       | 192.00     |              | 192.00        | 1     | 250.68         | 94.23        | 344.91        | 152.91     | 80%  |
| 17083004      | 7642         | LEVIS RD    | 59,800       | 176.00     | 225.00       | 401.00        | 1     | 250.68         | 233.82       | 484.50        | 83.50      | 21%  |
| 17056004      | 7643         | LEVIS RD    | 15,500       | 261.00     |              | 261.00        | 1     | 250.68         | 60.61        | 311.29        | 50.29      | 19%  |
| 17086001      | 7644         | LEVIS RD    | 43,500       | 416.00     |              | 416.00        | 1     | 250.68         | 170.09       | 420.77        | 4.76       | 1%   |
| 17059001      | 7645         | LEVIS RD    | 39,500       | 400.00     |              | 400.00        | 1     | 250.68         | 154.45       | 405.13        | 5.13       | 1%   |

**Comparison of Current Vs. Projected Charges for Random Residential Customers  
Rate Scenario 2**

| Parcel   | House Number | Street Name   | Annual Usage | Sewer Rent | Sewer Excess | Total Charged | Units | 2015           |              | Total Charged | Difference | %    |
|----------|--------------|---------------|--------------|------------|--------------|---------------|-------|----------------|--------------|---------------|------------|------|
|          |              |               |              |            |              |               |       | Service Charge | Usage Charge |               |            |      |
| 22891019 | 403          | RICES MILL RD | 53,500       | 640.00     |              | 640.00        | 1     | 250.68         | 209.19       | 459.87        | -180.14    | -28% |
| 23044001 | 436          | RICES MILL RD | 163,500      | 459.00     | 646.00       | 1,105.00      | 1     | 250.68         | 639.29       | 889.97        | -215.04    | -19% |
| 23059004 | 1222         | RICES MILL RD | 2,400        | 331.00     |              | 331.00        | 1     | 250.68         | 9.38         | 260.06        | -70.94     | -21% |
| 22945001 | 102          | RICES MILL RD | 77,800       | 139.00     | 400.00       | 539.00        | 1     | 250.68         | 304.20       | 554.88        | 15.88      | 3%   |
| 22948007 | 104          | RICES MILL RD | 48,100       | 213.00     | 96.00        | 309.00        | 1     | 250.68         | 188.07       | 438.75        | 129.75     | 42%  |
| 22954001 | 110          | RICES MILL RD | 91,600       | 389.00     | 209.00       | 598.00        | 1     | 250.68         | 358.16       | 608.84        | 10.84      | 2%   |
| 22840007 | 111          | RICES MILL RD | 86,600       | 309.00     | 267.00       | 576.00        | 1     | 250.68         | 338.61       | 589.29        | 13.29      | 2%   |
| 22957007 | 112          | RICES MILL RD | 29,200       | 261.00     |              | 261.00        | 1     | 250.68         | 114.17       | 364.85        | 103.85     | 40%  |
| 22960004 | 116          | RICES MILL RD | 32,600       | 299.00     |              | 299.00        | 1     | 250.68         | 127.47       | 378.15        | 79.15      | 26%  |
| 22843004 | 117          | RICES MILL RD | 44,500       | 261.00     | 18.00        | 279.00        | 1     | 250.68         | 174.00       | 424.68        | 145.68     | 52%  |
| 22846001 | 119          | RICES MILL RD | 28,000       | 229.00     |              | 229.00        | 1     | 250.68         | 109.48       | 360.16        | 131.16     | 57%  |
| 22966007 | 120          | RICES MILL RD | 57,800       | 299.00     | 64.00        | 363.00        | 1     | 250.68         | 226.00       | 476.68        | 113.68     | 31%  |
| 22849007 | 123          | RICES MILL RD | 60,000       | 267.00     | 124.00       | 391.00        | 1     | 250.68         | 234.60       | 485.28        | 94.28      | 24%  |
| 22855001 | 127          | RICES MILL RD | 23,900       | 139.00     | 7.00         | 146.00        | 1     | 250.68         | 93.45        | 344.13        | 198.13     | 136% |
| 22969004 | 134          | RICES MILL RD | 35,900       | 379.00     |              | 379.00        | 1     | 250.68         | 140.37       | 391.05        | 12.05      | 3%   |
| 22858007 | 201          | RICES MILL RD | 76,400       | 507.00     |              | 507.00        | 1     | 250.68         | 298.72       | 549.40        | 42.40      | 8%   |
| 22861004 | 213          | RICES MILL RD | 81,200       | 293.00     | 242.00       | 535.00        | 1     | 250.68         | 317.49       | 568.17        | 33.17      | 6%   |
| 22864001 | 219          | RICES MILL RD | 60,300       | 117.00     | 301.00       | 418.00        | 1     | 250.68         | 235.77       | 486.45        | 68.45      | 16%  |
| 23005004 | 220          | RICES MILL RD | 34,700       | 432.00     |              | 432.00        | 1     | 250.68         | 135.68       | 386.36        | -45.64     | -11% |
| 22867007 | 223          | RICES MILL RD | 27,600       | 128.00     | 48.00        | 176.00        | 1     | 250.68         | 107.92       | 358.60        | 182.60     | 104% |
| 22972001 | 228          | RICES MILL RD | 94,500       | 485.00     | 113.00       | 598.00        | 1     | 250.68         | 369.50       | 620.18        | 22.18      | 4%   |
| 22975007 | 236          | RICES MILL RD | 59,200       | 288.00     | 89.00        | 377.00        | 1     | 250.68         | 231.47       | 482.15        | 105.15     | 28%  |
| 22978004 | 240          | RICES MILL RD | 86,600       | 272.00     | 311.00       | 583.00        | 1     | 250.68         | 338.61       | 589.29        | 6.29       | 1%   |
| 22981001 | 300          | RICES MILL RD | 48,800       | 432.00     |              | 432.00        | 1     | 250.68         | 190.81       | 441.49        | 9.49       | 2%   |
| 22984007 | 304          | RICES MILL RD | 75,600       | 416.00     | 55.00        | 471.00        | 1     | 250.68         | 295.60       | 546.28        | 75.28      | 16%  |
| 22870202 | 311          | RICES MILL RD | 76,400       | 448.00     | 25.00        | 473.00        | 1     | 250.68         | 298.72       | 549.40        | 76.40      | 16%  |
| 22987004 | 312          | RICES MILL RD | 36,800       | 229.00     |              | 229.00        | 1     | 250.68         | 143.89       | 394.57        | 165.57     | 72%  |
| 22870301 | 313          | RICES MILL RD | 148,400      | 598.00     | 375.00       | 973.00        | 1     | 250.68         | 580.24       | 830.92        | -142.08    | -15% |
| 22990001 | 314          | RICES MILL RD | 95,300       | 405.00     | 214.00       | 619.00        | 1     | 250.68         | 372.62       | 623.30        | 4.30       | 1%   |
| 22871003 | 315          | RICES MILL RD | 45,700       | 293.00     |              | 293.00        | 1     | 250.68         | 178.69       | 429.37        | 136.37     | 47%  |
| 22993007 | 316          | RICES MILL RD | 67,700       | 288.00     | 151.00       | 439.00        | 1     | 250.68         | 264.71       | 515.39        | 76.39      | 17%  |
| 22996004 | 318          | RICES MILL RD | 101,100      | 256.00     | 431.00       | 687.00        | 1     | 250.68         | 395.30       | 645.98        | -41.02     | -6%  |
| 22873001 | 323          | RICES MILL RD | 68,300       | 315.00     | 126.00       | 441.00        | 1     | 250.68         | 267.05       | 517.73        | 76.73      | 17%  |
| 22999001 | 324          | RICES MILL RD | 28,600       | 507.00     |              | 507.00        | 1     | 250.68         | 111.83       | 362.51        | -144.49    | -28% |
| 22876007 | 325          | RICES MILL RD | 51,200       | 208.00     | 126.00       | 334.00        | 1     | 250.68         | 200.19       | 450.87        | 116.87     | 35%  |
| 22879004 | 327          | RICES MILL RD | 82,800       | 261.00     | 298.00       | 559.00        | 1     | 250.68         | 323.75       | 574.43        | 15.43      | 3%   |
| 22882001 | 329          | RICES MILL RD | 105,400      | 352.00     | 353.00       | 705.00        | 1     | 250.68         | 412.11       | 662.79        | -42.21     | -6%  |
| 22885007 | 331          | RICES MILL RD | 13,300       | 347.00     |              | 347.00        | 1     | 250.68         | 52.00        | 302.68        | -44.32     | -13% |
| 23002007 | 332          | RICES MILL RD | 77,200       | 592.00     |              | 592.00        | 1     | 250.68         | 301.85       | 552.53        | -39.47     | -7%  |
| 23008001 | 336          | RICES MILL RD | 24,700       | 261.00     |              | 261.00        | 1     | 250.68         | 96.58        | 347.26        | 86.26      | 33%  |



Comparison of Current Vs. Projected Charges for Random Residential Customers  
Rate Scenario 2

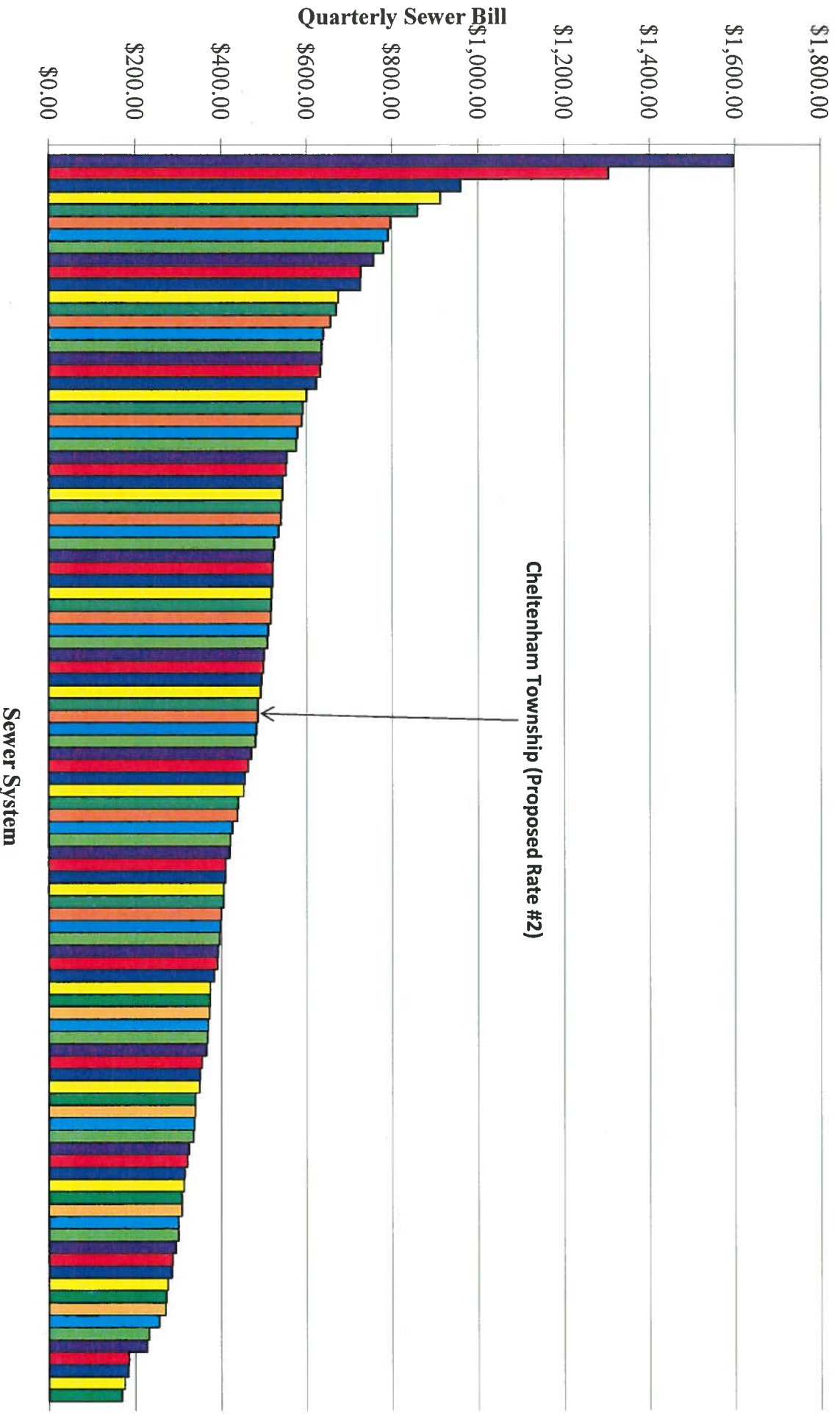
| Parcel   | House Number | Street Name  | Annual Usage | Sewer Rent | Sewer Excess | Total Charged | 2015  |                |              |               | Difference | %    |
|----------|--------------|--------------|--------------|------------|--------------|---------------|-------|----------------|--------------|---------------|------------|------|
|          |              |              |              |            |              |               | Units | Service Charge | Usage Charge | Total Charged |            |      |
| 23011007 | 340          | RICESMILL RD | 47,500       | 363.00     |              | 363.00        | 1     | 250.68         | 185.73       | 436.41        | 73.41      | 20%  |
| 23014004 | 344          | RICESMILL RD | 37,500       | 405.00     |              | 405.00        | 1     | 250.68         | 146.63       | 397.31        | -7.69      | -2%  |
| 23017001 | 348          | RICESMILL RD | 87,200       | 379.00     | 184.00       | 563.00        | 1     | 250.68         | 340.95       | 591.63        | 28.63      | 5%   |
| 23020007 | 352          | RICESMILL RD | 7,200        | 459.00     |              | 459.00        | 1     | 250.68         | 28.15        | 278.83        | -180.17    | -39% |
| 23023004 | 400          | RICESMILL RD | 13,000       | 416.00     |              | 416.00        | 1     | 250.68         | 50.83        | 301.51        | -114.49    | -28% |
| 23029007 | 404          | RICESMILL RD | 87,400       | 267.00     | 324.00       | 591.00        | 1     | 250.68         | 341.73       | 592.41        | 1.41       | 0%   |
| 22891001 | 405          | RICESMILL RD | 48,500       | 512.00     |              | 512.00        | 1     | 250.68         | 189.64       | 440.32        | -71.68     | -14% |
| 22894007 | 407          | RICESMILL RD | 65,600       | 411.00     |              | 411.00        | 1     | 250.68         | 256.50       | 507.18        | 96.18      | 23%  |
| 23026001 | 408          | RICESMILL RD | 5,900        | 443.00     |              | 443.00        | 1     | 250.68         | 23.07        | 273.75        | -169.25    | -38% |
| 22897004 | 411          | RICESMILL RD | 150,800      | 405.00     | 619.00       | 1,024.00      | 1     | 250.68         | 589.63       | 840.31        | -183.69    | -18% |
| 23032004 | 412          | RICESMILL RD | 115,400      | 405.00     | 361.00       | 766.00        | 1     | 250.68         | 451.21       | 701.89        | -64.11     | -8%  |
| 23035001 | 416          | RICESMILL RD | 55,500       | 379.00     |              | 379.00        | 1     | 250.68         | 217.01       | 467.69        | 88.69      | 23%  |
| 22903007 | 419          | RICESMILL RD | 42,700       | 165.00     | 115.00       | 280.00        | 1     | 250.68         | 166.96       | 417.64        | 137.64     | 49%  |
| 22906004 | 431          | RICESMILL RD | 64,200       | 432.00     |              | 432.00        | 1     | 250.68         | 251.02       | 501.70        | 69.70      | 16%  |
| 22912007 | 437          | RICESMILL RD | 50,200       | 518.00     |              | 518.00        | 1     | 250.68         | 196.28       | 446.96        | -71.04     | -14% |
| 22909001 | 443          | RICESMILL RD | 63,600       | 379.00     | 12.00        | 391.00        | 1     | 250.68         | 248.68       | 499.36        | 108.36     | 28%  |
| 22915004 | 445          | RICESMILL RD | 100,100      | 432.00     | 220.00       | 652.00        | 1     | 250.68         | 391.39       | 642.07        | -9.93      | -2%  |
| 22918001 | 451          | RICESMILL RD | 61,300       | 432.00     |              | 432.00        | 1     | 250.68         | 239.68       | 490.36        | 58.36      | 14%  |
| 22921007 | 457          | RICESMILL RD | 67,400       | 443.00     |              | 443.00        | 1     | 250.68         | 263.53       | 514.21        | 71.21      | 16%  |
| 22924004 | 463          | RICESMILL RD | 20,400       | 395.00     |              | 395.00        | 1     | 250.68         | 79.76        | 330.44        | -64.56     | -16% |
| 22927001 | 469          | RICESMILL RD | 17,300       | 443.00     |              | 443.00        | 1     | 250.68         | 67.64        | 318.32        | -124.68    | -28% |
| 22930007 | 475          | RICESMILL RD | 43,500       | 379.00     |              | 379.00        | 1     | 250.68         | 170.09       | 420.77        | 41.77      | 11%  |
| 22933004 | 1113         | RICESMILL RD | 27,000       | 176.00     |              | 176.00        | 1     | 250.68         | 105.57       | 356.25        | 180.25     | 102% |
| 22936001 | 1117         | RICESMILL RD | 13,300       | 192.00     |              | 192.00        | 1     | 250.68         | 52.00        | 302.68        | 110.68     | 58%  |
| 22939007 | 1121         | RICESMILL RD | 30,500       | 213.00     |              | 213.00        | 1     | 250.68         | 119.26       | 369.94        | 156.94     | 74%  |
| 23047007 | 1200         | RICESMILL RD | 46,700       | 464.00     |              | 464.00        | 1     | 250.68         | 182.60       | 433.28        | -30.72     | -7%  |
| 23050004 | 1204         | RICESMILL RD | 82,600       | 176.00     | 391.00       | 567.00        | 1     | 250.68         | 322.97       | 573.65        | 6.65       | 1%   |
| 23062001 | 1208         | RICESMILL RD | 66,300       | 341.00     | 82.00        | 423.00        | 1     | 250.68         | 259.23       | 509.91        | 86.91      | 21%  |
| 23056007 | 1218         | RICESMILL RD | 64,300       | 245.00     | 177.00       | 422.00        | 1     | 250.68         | 251.41       | 502.09        | 80.09      | 19%  |
| 23053001 | 1228         | RICESMILL RD | 87,600       | 315.00     | 267.00       | 582.00        | 1     | 250.68         | 342.52       | 593.20        | 11.20      | 2%   |

Comparison of Current Vs. Projected Charges for Random Commercial Customers

Rate Scenario 2

| Parcel   | Name                  | House Number | Street Name     | 2015         |            |              |               | Units | 2015           |              |               | Difference  | %    |
|----------|-----------------------|--------------|-----------------|--------------|------------|--------------|---------------|-------|----------------|--------------|---------------|-------------|------|
|          |                       |              |                 | Annual Usage | Sewer Rent | Sewer Excess | Total Charged |       | Service Charge | Usage Charge | Total Charged |             |      |
| 17347109 | East Cedarbrook Plaza | 3001         | CHELLENHAM AVE  | 1,840,500    | 9,203.00   | 2,515.00     | 11,718.00     | 22    | 5,514.96       | 7,196.36     | 12,711.32     | 993.32      | 8%   |
| 8701007  | Laundramat            | 269          | SEASTON RD      | 2,261,000    | 10,937.00  | 4,465.00     | 15,402.00     | 28    | 7,019.04       | 8,840.51     | 15,859.55     | 457.55      | 3%   |
| 5338004  | 101 Cheltenham        | 101          | WCHELTENHAM AVE | 97,000       | 6,402.00   |              | 6,402.00      | 1     | 250.68         | 379.27       | 629.95        | -5,772.05   | -90% |
| 78787878 | 1600 Church           | 1600         | CHURCH RD       | 5,485,800    | 47,784.00  |              | 47,784.00     | 167   | 41,863.56      | 21,449.48    | 63,313.04     | 15,529.04   | 32%  |
| 27589001 | Lynnewood Gardens     | 2047         | MATHER WAY A    | 294,900      | 320,484.00 | 252,495.00   | 572,979.00    | 1,798 | 450,722.64     | 1,153.06     | 451,875.70    | -121,103.30 | -21% |
| 27724001 | Wyncote House         | 25           | WASHINGTON LN   | 10,519,900   | 66,736.00  |              | 66,736.00     | 304   | 76,206.72      | 41,132.81    | 117,339.53    | 50,603.53   | 76%  |
| 30005681 | Elkins Park House     | 7900         | OLD YORK RD     | 11,306,600   | 51,701.00  |              | 51,701.00     | 264   | 66,179.52      | 44,208.81    | 110,388.33    | 58,687.33   | 114% |
| 3268004  | Hillbrook             | 651          | BROOKE RD C     | 879,000      | 16,677.00  |              | 16,677.00     | 25    | 6,267.00       | 3,436.89     | 9,703.89      | -6,973.11   | -42% |
| 8857004  | Oak Summit            | 310          | SEASTON RD      | 9,948,900    | 73,724.00  |              | 73,724.00     | 225   | 56,403.00      | 38,900.20    | 95,303.20     | 21,579.20   | 29%  |

# Comparison of Annual Sewer Bills of Residential Customers *(Using 60,000 Gallons Per Year)*



**Comparison of Annual Sewer Bills  
For Residential Customers  
60,000 Gallons Per Year**

| Rank &<br>Color | Sewer System                                                                | Annual<br>Sewer Bill |
|-----------------|-----------------------------------------------------------------------------|----------------------|
| 1               | Manheim Borough Authority (Rapho Township)                                  | \$1,596.24           |
| 2               | Manheim Borough Authority                                                   | \$1,304.28           |
| 3               | Yardley Borough Sewer Authority                                             | \$960.00             |
| 4               | Hilltown Township Water & Sewer Authority (District 5)                      | \$912.60             |
| 5               | Upper Pottsgrove Township                                                   | \$860.00             |
| 6               | Lehigh County Authority (Washington Township)                               | \$796.00             |
| 7               | Bedminster Municipal Authority 2012                                         | \$791.20             |
| 8               | Chadds Ford Township Sewer Authority                                        | \$780.00             |
| 9               | North Wales Borough                                                         | \$757.36             |
| 10              | Northampton Bucks County Municipal Authority (Sewer District 2)             | \$727.03             |
| 11              | East Cocalico Township Authority                                            | \$726.00             |
| 12              | Upper Hanover Authority                                                     | \$675.00             |
| 13              | Terre Hill Borough                                                          | \$670.00             |
| 14              | Lehigh County Authority (Heidelberg Heights/Sand Springs/Wynnewood Terrace) | \$655.80             |
| 15              | Slatington Borough Sewer Authority                                          | \$639.12             |
| 16              | Lehigh County Authority (Lynn Township)                                     | \$635.92             |
| 17              | Royersford, Borough of                                                      | \$635.23             |
| 18              | Northampton Bucks County Municipal Authority (Sewer Districts 1 and 3)      | \$632.20             |
| 19              | Perkasie Regional Authority                                                 | \$623.40             |
| 20              | Denver Borough                                                              | \$600.00             |
| 21              | Reading Area Water Authority                                                | \$591.00             |
| 22              | Palmerton Borough                                                           | \$588.00             |
| 23              | Pennel Borough                                                              | \$577.72             |
| 24              | Bucks County Water & Sewer Authority                                        | \$575.16             |
| 25              | City of Easton                                                              | \$553.40             |
| 26              | Schwenksville Borough Authority                                             | \$552.00             |
| 27              | Borough of Kennett Square                                                   | \$544.24             |
| 28              | Adamstown Borough                                                           | \$543.60             |
| 29              | Warrington Township - District III                                          | \$540.64             |
| 30              | Township of Abington                                                        | \$539.60             |
| 31              | Hilltown Township Water & Sewer Authority (District 4)                      | \$534.60             |
| 32              | Limerick Township Sewer Department                                          | \$523.97             |
| 33              | Montgomery Township Municipal Sewer Authority                               | \$520.76             |
| 34              | Lower Pottsgrove Township Authority                                         | \$520.00             |
| 35              | North Coventry Municipal Authority                                          | \$520.00             |
| 36              | Upper Montgomery Joint Authority                                            | \$517.52             |

Comparison of Annual Sewer Bills  
For Residential Customers  
60,000 Gallons Per Year

| Rank & Color | Sewer System                                            | Annual Sewer Bill |
|--------------|---------------------------------------------------------|-------------------|
| 37           | Lower Salford Township Authority                        | \$516.00          |
| 38           | Pottstown Borough Authority                             | \$515.93          |
| 39           | Buckingham Township                                     | \$509.60          |
| 40           | Warrington Township - District IV                       | \$507.80          |
| 41           | Berks-Montgomery Municipal Authority                    | \$500.00          |
| 42           | Horsham Water & Sewer Authority                         | \$498.08          |
| 43           | Borough of Jenkintown                                   | \$494.00          |
| 44           | Upper Makefield Township                                | \$492.00          |
| 45           | Borough of Lititz                                       | \$485.73          |
| 46           | <b>Cheltenham Township (Proposed Rate #2)</b>           | <b>\$485.28</b>   |
| 47           | Strasburg Borough                                       | \$482.12          |
| 48           | Upper Leacock Township                                  | \$480.00          |
| 49           | East Norriton Township                                  | \$470.36          |
| 50           | Township of Falls Authority                             | \$462.80          |
| 51           | Borough Of Sinking Spring                               | \$456.00          |
| 52           | Borough of Conshohocken Authority                       | \$452.20          |
| 53           | Upper Saucon Township                                   | \$440.00          |
| 54           | Warwick Township Water & Sewer Authority (Bucks County) | \$437.56          |
| 55           | West Norriton Township                                  | \$426.44          |
| 56           | Lower Makefield Township Sanitary Authority             | \$421.60          |
| 57           | Quarryville Borough                                     | \$420.00          |
| 58           | Mount Joy Borough                                       | \$410.64          |
| 59           | Borough of Catasauqua                                   | \$410.00          |
| 60           | Hilltown Township Water & Sewer Authority (District 1)  | \$405.80          |
| 61           | Hilltown Township Water & Sewer Authority (District 3)  | \$405.80          |
| 62           | Suburban Lancaster Sewer Authority                      | \$400.00          |
| 63           | Newtown Bucks County Joint Municipal Authority          | \$398.00          |
| 64           | Lower Southampton - Municipal Services Advisory Board   | \$396.00          |
| 65           | Telford Borough Authority                               | \$393.00          |
| 66           | Warminster Municipal Authority                          | \$391.40          |
| 67           | Bristol Township Water & Sewer Department               | \$384.52          |
| 68           | Chalfont-New Britain Township Joint Sewage Authority    | \$374.40          |
| 69           | Warrington Township - District V                        | \$374.40          |
| 70           | Upper Moreland-Hatboro Joint Authority                  | \$372.60          |
| 71           | New Holland Borough                                     | \$370.00          |
| 72           | Ephrata Borough (Outside Borough Limits)                | \$368.60          |

Comparison of Annual Sewer Bills  
For Residential Customers

60,000 Gallons Per Year

| Rank & Color | Sewer System                                                               | Annual Sewer Bill |
|--------------|----------------------------------------------------------------------------|-------------------|
| 73           | Warrington Township - District I & II                                      | \$366.00          |
| 74           | Lehigh County Authority (Upper Millford Twp/Weisenberg Twp)                | \$355.80          |
| 75           | Norristown Municipal Waste Authority                                       | \$350.70          |
| 76           | Bucks County Water & Sewer Authority - Upper Dublin Township               | \$349.56          |
| 77           | Whitpain Township                                                          | \$340.00          |
| 78           | Bucks County Water & Sewer Authority - Langhorne Borough                   | \$339.36          |
| 79           | Lancaster Area Sewer Authority                                             | \$337.80          |
| 80           | Wernersville Municipal Authority                                           | \$335.34          |
| 81           | Hatfield Township Municipal Authority (Towamencin Separate Sewer District) | \$325.00          |
| 82           | Collegeville-Trappe Municipal Authority                                    | \$321.00          |
| 83           | Upper Southampton Municipal Authority                                      | \$314.40          |
| 84           | Lower Bucks County Joint Municipal Authority                               | \$313.00          |
| 85           | Lower Providence Township Sewer Authority                                  | \$308.00          |
| 86           | Warwick Township Municipal Authority (Lancaster County)                    | \$308.00          |
| 87           | City of Lancaster (Inside City)                                            | \$300.00          |
| 88           | Valley Forge Sewer Authority                                               | \$300.00          |
| 89           | Ephrata Borough (Inside Borough Limits)                                    | \$294.04          |
| 90           | Philadelphia Water Department                                              | \$286.40          |
| 91           | Morrisville Municipal Authority                                            | \$285.00          |
| 92           | Whitemarsh Township (District #1)                                          | \$275.00          |
| 93           | Hatfield Township Municipal Authority                                      | \$272.00          |
| 94           | Springfield Township (Montgomery County)                                   | \$269.76          |
| 95           | Springfield Township (Delaware County)                                     | \$255.00          |
| 96           | Plymouth Township                                                          | \$232.88          |
| 97           | City of Bethlehem                                                          | \$227.48          |
| 98           | Hilltown Township Water & Sewer Authority (District 2)                     | \$185.40          |
| 99           | West Pottsgrove Township                                                   | \$184.00          |
| 100          | City of Lancaster (Outside City)                                           | \$175.50          |
| 101          | Lehigh County Authority (Allentown Division)                               | \$169.26          |
|              | Average                                                                    | \$484.20          |

# RECOMMENDATIONS

- Recommend that the Township adopted Rate Scenario No. 2 – Annual Service Charge of \$250.68 per EDU and a Usage Charge of \$3.91 per 1,000 gallon for all usage
- Implement new charges for 2015

# Conclusions

- A revised sewer rate structure would promote equity between customers
- Insure that the sewer system revenues cover all sewer costs of operations and capital