

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

DIRECT TESTIMONY OF
JOHN J. SPANOS

ON BEHALF OF
CITY OF LANCASTER – SEWER FUND

DEPRECIATION

DOCKET NO. R-2019-_____

July 19, 2019

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

RE: CITY OF LANCASTER – SEWER FUND

DIRECT TESTIMONY OF JOHN J. SPANOS

1 **Q. Please state your name and address.**

2 A. My name is John J. Spanos. My business address is 207 Senate Avenue,
3 Camp Hill, Pennsylvania 17011.

4 **Q. With what firm are you associated?**

5 A. I am associated with the firm of Gannett Fleming Valuation and Rate
6 Consultants, LLC (“Gannett Fleming”).

7 **Q. How long have you been associated with Gannett Fleming?**

8 A. I have been associated with the firm since college graduation in June, 1986.

9 **Q. What is your position in the firm?**

10 A. I am President.

11 **Q. What is your educational background?**

12 A. I have Bachelor of Science degrees in Industrial Management and
13 Mathematics from Carnegie-Mellon University and a Master of Business
14 Administration from York College of Pennsylvania.

15 **Q. Are you a member of any professional societies?**

16 A. Yes. I am a member and past President of the Society of Depreciation
17 Professionals. I am also a member of the American Gas
18 Association/Edison Electric Institute Industry Accounting Committee.

19 **Q. Do you hold any special certification as a depreciation expert?**

20 A. Yes. The Society of Depreciation Professionals has established national
21 standards for depreciation professionals. The Society administers an

1 examination to become certified in this field. I passed the certification exam
2 in September 1997 and was recertified in August 2003, February 2008,
3 January 2013 and February 2018.

4 **Q. Please outline your experience in the field of depreciation.**

5 A. I have 33 years of depreciation experience which includes giving expert
6 testimony in over 300 cases before 40 regulatory commissions, including
7 this Commission. Please refer to Appendix A for my qualifications. In
8 addition to the cases that I have submitted testimony, I have supervised in
9 over 600 other depreciation or valuation assignments.

10 **Q. What is the purpose of your testimony?**

11 A. I was asked by the City of Lancaster – Sewer Fund to prepare depreciation
12 studies with regards to plant in service as of December 31, 2018 and, as
13 claimed by the Company, as of December 31, 2019 and December 31,
14 2020 for the wastewater assets.

15 **Q. Have you prepared exhibits presenting the results of your studies?**

16 A. Yes. Exhibit Nos. JJS-1, JJS-2 and JJS-3 present the results of each
17 depreciation study as of December 31, 2018, as of December 31, 2019 and
18 as of December 31, 2020.

19 **Q. Please describe Exhibit Nos. JJS-1 through JJS-3.**

20 A. Exhibit No. JJS-1, titled "2018 Depreciation Study - Calculated Annual
21 Depreciation Accruals Related to Wastewater Plant as of December 31,
22 2018," includes the results of the depreciation study related to the
23 wastewater assets as of December 31, 2018. The report also includes the
24 detailed depreciation calculations. Exhibit No. JJS-2, titled "2019
25 Depreciation Study - Calculated Annual Depreciation Accruals Related to

1 Wastewater Plant as of December 31, 2019," includes the results of the
2 depreciation study related to the estimated wastewater assets as of
3 December 31, 2019. The report also includes explanatory text, statistics
4 related to the estimation of service life, and the detailed depreciation
5 calculations. Exhibit No. JJS-3 titled "2020 Depreciation Study – Calculated
6 Annual Depreciation Accruals Related to Water Plant as of December 31,
7 2020", includes the results of the depreciation study related to the estimated
8 wastewater assets as of December 31, 2020.

9 **Q. What was the purpose of your depreciation studies?**

10 A. The purpose of the depreciation studies was to estimate the annual
11 depreciation accruals related to wastewater plant in service for ratemaking
12 purposes and, using Commission-approved procedures, to estimate the City
13 of Lancaster – Sewer Fund's book reserve as of December 31, 2019 and
14 December 31, 2020.

15 **Q. Is the City of Lancaster's claim for annual depreciation in the current
16 proceeding based on the same method of depreciation as was used in
17 its most recent rate proceeding in Docket No. R-2012-2310366?**

18 A. Yes, it is. For most plant accounts, the current claim for annual depreciation
19 is based on the straight line remaining life method of depreciation which is
20 consistent with past practices. For Accounts 390 and 393, the claim is
21 based on the straight line remaining life method of amortization. The annual
22 amortization is based on amortization accounting, which distributes the
23 unrecovered cost of fixed capital assets over the remaining amortization
24 period selected for each account.

1 **Q. What group procedure is being used in this proceeding for depreciable**
2 **accounts?**

3 A. The same group procedure as in the last approved rate proceeding is used
4 for each study. The average service life procedure is used in the current
5 proceeding for all depreciable accounts and installation years for
6 wastewater plant.

7 **Q. Is the City of Lancaster – Sewer Fund’s claim for annual and accrued**
8 **depreciation in this proceeding made on the same basis as the most**
9 **recent rate case?**

10 A. Yes. The claim for annual and accrued depreciation is based on the book
11 reserve brought forward from the book reserve approved by the
12 Commission at Docket No. R-2012-2310366.

13 **Q. How was the ratemaking book reserve used in the calculation of**
14 **annual depreciation?**

15 A. The ratemaking book reserve by account was allocated to vintages to
16 determine original cost less accrued depreciation by vintage. The total
17 annual accrual is the sum of the results of dividing the original costs less
18 accrued depreciation by the vintage composite remaining lives.

19 **Q. How was the book reserve as of December 31, 2019 and December 31,**
20 **2020 estimated?**

21 A. The book reserve as of December 31, 2019 and December 31, 2020, by
22 account, was projected by adding estimated accruals, and subtracting
23 estimated retirements from the book reserve as of December 31, 2018.
24 Annual accruals were calculated based on an average yearly or monthly
25 plant balance. The projected ratemaking book reserve by account was

1 allocated to vintages for the purpose of the annual accrual calculation based
2 on calculated accrued depreciation as of December 31, 2019 and
3 December 31, 2020.

4 **Q. Has a service life study of the City of Lancaster – Sewer Fund’s**
5 **wastewater property been performed?**

6 A. Yes. A service life study was performed as of year-end 2018 for the
7 wastewater assets. The service life study was the basis for the service lives
8 I used to calculate annual accruals.

9 **Q. Briefly outline the procedure used in performing the service life study.**

10 A. The service life study consisted of assembling and compiling historical data
11 from the records related to the wastewater plant of the City of Lancaster –
12 Sewer Fund; statistically analyzing such data to obtain historical trends of
13 survivor characteristics; obtaining supplementary information from
14 management and operating personnel concerning Company practices and
15 plans as they relate to plant operations; and interpreting the above data to
16 form judgments of service life characteristics. Iowa type survivor curves
17 were used to describe the estimated survivor characteristics of the mass
18 property groups. Individual service lives were used for major individual units
19 of plant, such as reservoirs and buildings housing treatment plants, pump
20 stations, offices and shops. The life span concept was recognized by
21 coordinating the lives of associated plant installed in subsequent years with
22 the probable retirement date defined by the life estimated for the major unit.

23 **Q. Did you physically observe the company’s plant and equipment in the**
24 **field?**

25 A. Yes, I reviewed the facilities in April 2019.

1 **Q. What statistical data were employed in the historical analyses**
2 **performed for the purpose of estimating service life characteristics?**

3 A. The data consisted of the entries made to record retirements and other
4 transactions related to the wastewater plant during the period 2005-2018.
5 These entries were classified by depreciable group, type of transaction, the
6 year in which the transaction took place, and the year in which the plant was
7 installed. Types of transactions included in the data were plant additions,
8 retirements, transfers, and balances.

9 **Q. What was the source of these data?**

10 A. They were assembled from Company records related to its utility plant in
11 service.

12 **Q. Were the methods used in the service life study the same as those**
13 **used in other depreciation studies for wastewater plant presented**
14 **before this Commission?**

15 A. Yes. The methods are the same ones that have been presented previously
16 for the City of Lancaster and for other wastewater companies before the
17 Pennsylvania Public Utility Commission and that have been accepted by the
18 Commission in its past orders concerning wastewater utilities.

19 **Q. Are the factors considered in your estimates of service life presented**
20 **in Exhibit No. JJS-2?**

21 A. Yes. A discussion of the factors considered in the estimation of service
22 lives is presented in Part III of Exhibit JJS-2.

23 **Q. Please outline the contents of Exhibit No. JJS-2.**

1 A. Exhibit No. JJS-2 is presented in seven parts. Part I, Introduction, contains
2 statements with respect to the plan of the report, and the basis of the study.
3 Part II, Estimation of Survivor Curves, presents descriptions of the
4 considerations and the methods used in the service life studies. Part III,
5 Service Life Considerations, presents the factors and judgment utilized in
6 the average service life analysis. Part IV, Calculation of Annual and
7 Accrued Depreciation, describes the procedures used in the calculation of
8 group depreciation. Part V, Results of Study, presents a summary by
9 depreciable group of annual depreciation accrual rates and amounts. Part
10 VI, Service Life Statistics presents the statistical analysis of service life
11 estimates; and Part VII, Detailed Depreciation Calculations presents the
12 detailed tabulations of annual depreciation.

13 Table 1, page V-4, presents the estimated survivor curve, the original
14 cost as of December 31, 2019, and the book reserve and calculated annual
15 depreciation for each account or subaccount of Wastewater Plant. Table 2,
16 page V-6, presents the bringforward to December 31, 2019, of the book
17 depreciation reserve as of December 31, 2018. Table 3 on page V-8 sets
18 forth the calculation of the annual accruals used in the bringforward.

19 The section beginning on page VI-2 presents the results of the
20 retirement rate analyses prepared as the historical bases for the service life
21 estimates. The tabulation on page VII-2 presents the cumulative
22 depreciated original cost by year installed. The section beginning on page
23 VII-3 presents the depreciation calculations related to original cost. The
24 tabulations on pages VII-3 through VII-30 present the calculation of annual

1 depreciation by vintage by account for each depreciable group of
2 wastewater plant.

3 **Q. Please outline the contents in Exhibit No. JJS-3.**

4 A. Exhibit No. JJS-3 includes a description of the results, summaries of the
5 depreciation calculations, and the detailed depreciation calculations as of
6 December 31, 2020. The descriptions and explanations presented in
7 Exhibit No. JJS-2 are also applicable to the depreciation calculations
8 presented in Exhibit No. JJS-3. The graphs and tables related to service
9 lives presented in Exhibit No. JJS-2 also support the service life estimates
10 used in Exhibit No. JJS-3, inasmuch as the estimates are the same for both
11 test years. The summary tables and detailed depreciation calculations as of
12 December 31, 2020, are organized and presented in the same manner as
13 those as of December 31, 2019.

14 **Q. Please outline the contents of Exhibit No. JJS-1.**

15 A. Exhibit No. JJS-1 includes a description of the results, summaries of the
16 depreciation calculations, and the detailed depreciation calculations as of
17 December 31, 2018. The descriptions and explanations presented in
18 Exhibit No. JJS-2 are also applicable to the depreciation calculations
19 presented in Exhibit No. JJS-1. The graphs and tables related to service
20 lives presented in Exhibit No. JJS-2 also support the service life estimates
21 used in Exhibit No. JJS-1, inasmuch as the estimates are the same for both
22 test years. The summary tables and detailed depreciation calculations as of
23 December 31, 2018, are organized and presented in the same manner as
24 those as of December 31, 2019.

1 **Q. Please use an example to illustrate the manner in which the study is**
2 **presented in Exhibit Nos. JJS-1 through JJS-3.**

3 A. I will use Account 361.1, Gravity Mains, as my example, inasmuch as it is a
4 significant account and is representative of the manner in which the study is
5 presented.

6 The calculation of the annual depreciation related to the original cost of
7 Gravity Mains, at December 31, 2019, of utility plant in service is presented
8 on the page VII-11 of Exhibit No. JJS-2. The calculation is based on the 55-
9 R2.5 survivor curve, the attained age, and the allocated ratemaking book
10 reserve. The tabulation sets forth the installation year, the original cost,
11 calculated accrued depreciation, allocated ratemaking book reserve, future
12 accruals, remaining life and annual accrual. The totals are brought forward
13 to Table 1 on page VI-4 of Exhibit No. JJS-2. The depreciation calculations
14 for Contributions in Aid of Construction are presented in detail on VII-20 and
15 summarized in Table 1 on page VI-5 of Exhibit No. JJS-2.

16 **Q. How were the Contributions in Aid of Construction determined?**

17 A. The Contributions in Aid of Construction were determined based on the
18 allocation factor established for each municipality on each project.

19 **Q In what manner is net salvage incorporated in the depreciation**
20 **calculations?**

21 A. There were no adjustments for net salvage made to the calculated annual
22 depreciation amounts.

23 **Q. Does this conclude your direct testimony?**

24 A. Yes, it does.