

**BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES
OFFICE OF ADMINISTRATIVE LAW**

In the Matter of:

**THE PETITION OF NEW JERSEY
AMERICAN WATER COMPANY, INC. FOR
APPROVAL OF INCREASED TARIFF RATES
AND CHARGES FOR WATER AND SEWER
SERVICE, CHANGE IN DEPRECIATION
RATES, AND OTHER TARIFF
MODIFICATIONS**

**BPU Docket No.
WR17090985**

**OAL Docket No.
PUC-14251-2017 S**

DIRECT TESTIMONY AND EXHIBITS OF

HOWARD J. WOODS, JR., P.E.

**ON BEHALF OF THE
NEW JERSEY
DIVISION OF RATE COUNSEL**

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**New Jersey American Water Company, Inc.
BPU Docket No. WR17090985
Direct Testimony of Howard J. Woods, Jr., P.E.**

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1 **1. STATEMENT OF QUALIFICATIONS**

2 **Q. PLEASE STATE YOUR NAME AND ADDRESS.**

3 A. My name is Howard J. Woods, Jr. and my address is 49 Overhill Road, East
4 Brunswick, New Jersey 08816-4211.

5

6 **Q. BY WHOM ARE YOU EMPLOYED?**

7 A. I am an independent consultant and the New Jersey Division of Rate Counsel
8 (“Rate Counsel”) has engaged me in this matter.

9

10 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
11 **PROFESSIONAL QUALIFICATIONS.**

12 A. I hold a Bachelor of Civil Engineering from Villanova University (1977) and a
13 Master of Civil Engineering with a concentration in water resources engineering
14 also from Villanova University (1985). I am a registered professional engineer in
15 New Jersey, New York, Maryland, Pennsylvania, Delaware and New Mexico. I am
16 also licensed to perform RAM-WSM security assessments of public water systems.
17 I am an active member of the American Society of Civil Engineers, the National
18 Ground Water Association, the American Water Works Association, the Water
19 Environment Federation and the International Water Association.

20

1 **Q. HAVE YOU PROVIDED TESTIMONY IN UTILITY MATTERS ON**
2 **PRIOR OCCASIONS?**

3 A. Yes. I have testified in numerous rate setting proceedings and quality of service
4 evaluations in matters before the Public Utility Commissions in New Jersey, New
5 York, Connecticut, Delaware, Pennsylvania and Kentucky. The focus of my
6 testimonies is on matters involving utility operations, planning and engineering.

7
8 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE.**

9 A. A detailed description of my professional experience is provided in Appendix A
10 of this Testimony. In summary, I have over 40 years' experience in the planning,
11 design, construction and operation of water and wastewater utility systems. I
12 have worked for a Federal regulatory agency, a large investor-owned water and
13 wastewater utility, a firm engaged in contract operations of municipally owned
14 water and wastewater utilities, and in engineering and operational consulting for
15 the water and wastewater industry. During my career, I have been responsible for
16 all operations functions including regulatory compliance, water production,
17 distribution and maintenance services as well as wastewater collection and
18 treatment. I have evaluated numerous water and wastewater acquisitions and I have
19 advised clients on the sale or acquisition of these systems.

20

1 **2. SCOPE AND PURPOSE OF TESTIMONY**

2 **Q. MR. WOODS, PLEASE DESCRIBE YOUR AREA OF RESPONSIBILITY**
3 **IN THIS MATTER.**

4 A. Rate Counsel engaged me to review New Jersey American Water Company, Inc.'s
5 ("Company") Petition with specific attention to the following areas:

- 6 1. The Company's analysis of water use trends in its various service areas;
- 7 2. The Company's capital construction program and the items of work
8 classified as utility plant in service following the close of the Test Year;
- 9 3. The acquisition of the Borough of Haddonfield water and sewer
10 systems;
- 11 4. The acquisition of Shorelands Water Company;
- 12 5. The acquisition of Roxiticus Water Company;
- 13 6. Issues related to the replacement of lead service lines;
- 14 7. The engineering and operational issues related to the Company's
15 proposed rate stabilization method; and
- 16 8. The Company's proposal to capitalize tank painting.

17
18 **Q. WHAT MATERIALS HAVE YOU REVIEWED IN DISCHARGING THIS**
19 **ASSIGNMENT?**

20 A. I have reviewed the Company's initial filing and responses to discovery requests in
21 this matter. I have also reviewed the Company's supplemental testimony and its

1 9+3 Update to its initial schedules and discovery responses. In addition, I have also
2 reviewed various New Jersey Department of Environmental Protection and New
3 Jersey Board of Public Utilities rules applicable to specific aspects of the
4 Company's proposals.

5

6 **3. SUMMARY OF FINDINGS AND CONCLUSIONS**

7 **Q. HAVE YOU REVIEWED NEW JERSEY AMERICAN WATER**
8 **COMPANY'S FILING FOR A RATE ADJUSTMENT?**

9 A. Yes, I have.

10

11 **Q. WHAT DOES THE COMPANY'S FILING AND THEIR PRE-FILED**
12 **TESTIMONY REQUEST?**

13 A. The Company's September 15, 2017 filing proposes to increase operating revenues
14 by \$129,326,884 or roughly 17.5% more than Base Year revenues of \$740,576,889
15 and roughly 18.9% more than adjusted test year revenues at current rates.¹ The
16 Company has proposed a Test Year ending March 31, 2018.² The Company has
17 requested a post Test Year adjustment to plant in service amounting to

¹ Petition, Exhibit P-2, Schedule 4, Page 1 of 1. Current rates represent those rates in effect at the time of the filing and do not reflect the Tax Cuts and Jobs Act rates put into effect as a result of the Board's generic proceeding.

² Petition, Para. 2, Page 2.

1 \$126,329,714 for construction anticipated to be completed by September 30, 2018,
2 a date six months beyond the close of the Test Year.³

3 In its 9+3 Update, the Company filed schedules showing a revenue increase
4 in excess of the amount originally requested. The 9+3 Schedules claim that a
5 \$136,236,106 increase in revenues, an amount that is 20% greater than the updated
6 adjusted present rate revenues of \$681,016,313,⁴ is necessary.

7

8 **Q. DO YOU BELIEVE THAT THIS RATE INCREASE SHOULD BE**
9 **GRANTED?**

10 A. No, for the following reasons. I believe the Company has under-estimated present
11 rate revenues. I do not agree that the Company's proposed post-Test Year plant
12 additions satisfy the requirements of the Board's Order in In re: Elizabethtown. It
13 is my opinion that the valuation of the Haddonfield systems is too high and I do not
14 believe that acquisition adjustments should be authorized for Haddonfield,
15 Roxiticus Water Company or Shorelands Water Company. The cost to replace
16 customer owned lead service lines should not be included in rate base and
17 subsequently borne by all Company ratepayers. The rate stabilization method
18 proposed by the Company is formulaic rate making and should be rejected. Tank
19 painting should not be capitalized because this would be inconsistent with the
20 Board's prior Order regarding the use of the Uniform System of Accounts.

³ Exhibit PT-3S, Supplemental Testimony of Donald C. Shields, Schedule DCS-1S.

⁴ Exhibit P-2 Schedule 5, Page 1 of 4, Updated January 15, 2018.

1 **4. WATER USE TREND ANALYSIS**

2 **Q. HAVE YOU REVIEWED THE COMPANY'S TESTIMONY AND**
3 **WORKPAPERS THAT SUPPORT THE PROPOSED NORMALIZATION**
4 **ADJUSTMENTS FOR SALES IN ITS SERVICE AREAS?**

5 A. Yes. The Company has identified a statistically meaningful decline in use in
6 several of its service areas and they have developed a use normalization method to
7 reflect this trend. In some of its service areas, the trend analysis does not produce
8 statistically meaningful results and in these areas, the Company has normalized
9 sales using a simple averaging technique or they have presumed that sales volume
10 will decline at a rate of 1% per year. The Company has made no adjustments to the
11 base year Industrial and OPA sales or customer counts in its service areas.

12
13 **Q. PLEASE DESCRIBE THE COMPANY'S TREND ANALYSIS.**

14 A. Let me summarize the analysis described in the Direct Testimony of Gregory
15 Roach presented in Exhibit PT-10. The Company focused on the months of
16 December through April over the last ten years and identified the average use per
17 customer for each month during this period. They calculated a five-month average
18 use per customer and used these data to perform a linear trend analysis. The linear
19 trend analysis is a least-squares method of fitting a straight line to the data. The
20 trend that best fits these data can then be used to project the monthly average use
21 for a future period in time. The monthly average use per customer for the five-

1 month period estimate was extrapolated to project normalized monthly use and this
2 is referred to in the Company's analysis as the base use. The Company then
3 performed an additional analysis to identify the average amount of water used in
4 excess of the base use in each of the last ten years. This was done by assuming that
5 the monthly use derived from the December through April period trend analysis
6 would reflect the actual base use in any one period. The Company then subtracted
7 the linear base use value from the actual use and calculated the non-base or seasonal
8 use. The ten-year average of the non-base use volumes, divided by 12 to arrive at
9 an effective monthly average value for non-base use, was then added to the
10 normalized base use to arrive at total normalized use for the month. In all cases
11 where this trend analysis was used, a high correlation between base use and time
12 was identified and in all cases, the trend demonstrated declining base use.

13 In addition to this trend analysis, the Company also used a trend analysis in
14 some of its smaller service areas to reflect the impact of greater water use
15 efficiency. In these smaller areas, there was insufficient data to develop the same
16 trend analysis used in the larger service areas and the Company assumed that
17 average use would continue to decline at an average rate of 1% per year.

18 Still in other areas, pro forma use was projected to be equivalent to the five-
19 year average of actual customer use. Finally, with respect to Industrial and OPA
20 sales, the Company made no adjustments to the base year use volumes or the
21 number of customers.

1 **Q. DO YOU AGREE THAT THERE IS A DECLINING USE TREND AND DO**
2 **YOU BELIEVE THAT THE IMPACT OF THIS TREND SHOULD BE**
3 **REFLECTED IN RATES DEVELOPED IN THIS PROCEEDING?**

4 A. Yes. With respect to changes in residential use, I believe there is a clear trend
5 toward lower per-customer use. While this is partially offset by customer additions
6 in the Company's service areas, there is a clear trend of declining average use that
7 should be recognized in establishing a normalized sales volume for rate setting
8 purposes. While commercial average use also appears to be declining, the linear
9 trend may not be as strong and this is apparent in the calculation of the correlation
10 coefficient. Where the correlation is strong, the Company used the trend analysis
11 but where it was weak, they used an averaging technique or a flat rate of decline of
12 1% to normalize sales. I believe that these approaches are appropriate with certain
13 adjustments.

14

15 **Q. DO YOU BELIEVE THAT THE COMPANY'S ANALYSIS PROPERLY**
16 **IDENTIFIES THE TREND IN CHANGING AVERAGE CUSTOMER USE?**

17 A. Yes. It is my opinion that the method offered in this proceeding is a sound way of
18 identifying the trend and in normalizing water consumption. In those areas and for
19 those customer groups where Mr. Roach was able to calculate an annual rate of
20 decline in customer use, I am in agreement with his calculations of the rate of
21 decline. However, I do not agree with the way in which the trend was used to
22 establish normalized sales.

1 **Q. PLEASE EXPLAIN WHY YOU BELIEVE THAT THE COMPANY ERRED**
2 **IN APPLYING THE TREND ANALYSIS TO ITS ESTIMATE OF**
3 **NORMALIZED SALES.**

4 A. In his testimony, Mr. Roach developed linear trends for residential and commercial
5 sales in the SA-1 and SA-2 service areas (Rate Schedules A-1 and A-3) and for
6 residential sales in Manville and SA-1D (Rate Schedule A-5), Southampton (Rate
7 Schedule A-8) and Pennsgrove (Rate Schedule A-10).⁵ He used the trend analysis
8 to forecast monthly sales at the close of the Test Year (March 31, 2018) and for the
9 month of March in 2019, 2020, 2021, 2022 and 2023.⁶ I agree with the
10 development of the linear equations used to define the trends and I agree that the
11 monthly use values for March of 2018 through March 2023 were properly
12 calculated.

13 The Company then took the volumetric use calculated for March 2018,
14 which included the base use calculated in Mr. Roach's trend analysis plus his
15 calculation of the monthly average non-base use, to its Normalization Workpapers
16 in SIR-14. In doing so, the Company simply multiplied the March 2018 projection
17 by 12 to arrive at an annual projection. Next, the Company reduced this value by
18 the annual rate of decline calculated by Mr. Roach for a period of 1.333 years to
19 arrive at projected annualized sales as of July 2019. This is a point sixteen months
20 after the close of the Test Year. I believe that this is an error for two reasons. First,
21 it is not correct to annualize the monthly value calculated for March 2018. Instead,

⁵ Exhibit PT-10; Direct Testimony of Gregory P. Roach; Pages 6-9.

⁶ Response to RCR-E-77.

1 Mr. Roach’s trend analysis should be used to forecast the monthly sales for the
2 entire period to be used in setting rates and these monthly values should be added to
3 determine the annual value. Second, I believe the projected period should not be
4 calculated for twelve months ending July 2019 as this is more than nine months
5 past the close of the Test Year. Rather, I believe that the projected use period
6 should be the twelve months ending December 31, 2018. This is a point in time
7 that is nine months after the end of the Test Year and I believe an adjustment to
8 sales at this point would be consistent with the Board’s guidance in In re:
9 Elizabethtown regarding known and measureable changes to income and operating
10 expenses.⁷

11

12 **Q. DO YOU AGREE WITH THE COMPANY’S USE OF A 1% RATE OF**
13 **DECLINE IN AVERAGE USE WHERE THIS METHOD WAS USED IN**
14 **ITS SMALLER SERVICE AREAS?**

15 A. Yes, however, I also believe that the normalization adjustments using this method
16 should estimate sales for the period ending December 31, 2018. It is my opinion
17 that the 1% rate of decline is modestly conservative and this is appropriate for the
18 small service areas in which it has been used.

19

⁷ In Re Elizabethtown Water Company Rate Case; Decision on Motion for Determination of Test Year and Appropriate Time Period for Adjustments; Docket No. WR8504330; Page 2; Fifth paragraph, Item (a).

1 **Q. DO YOU AGREE WITH THE COMPANY’S USE OF A FIVE-YEAR**
2 **AVERAGE TO ESTABLISH SALES IN THE PORTIONS OF ITS SERVICE**
3 **AREA WHERE THIS METHOD WAS USED?**

4 A. Yes, with the condition that estimated sales also are calculated for the period ending
5 December 31, 2018.

6

7 **Q. ARE THERE ANY OTHER ADJUSTMENTS IN THE COMPANY’S**
8 **NORMALIZATION CALCULATIONS THAT YOU BELIEVE SHOULD**
9 **BE MODIFIED?**

10 A. Yes. The Company has made adjustments to reflect anticipated growth within its
11 various service areas. I have no issue with the base number of customers or with
12 the rate of change in those number of customers for each of the Company’s service
13 areas. However, I believe the growth adjustments should reflect the volumetric use
14 per customer anticipated for the period ending December 31, 2018 and the number
15 of customers should be forecast to this point in time and no further.

16

17 **Q. HAVE YOU MADE ADJUSTMENTS TO THE COMPANY’S**
18 **NORMALIZATION AND GROWTH ADJUSTMENTS TO BE**
19 **CONSISTENT WITH YOUR RECOMMENDATIONS?**

20 A. Yes. In Schedule HJW-1, I have summarized my adjustments to GMS Revenues.
21 This schedule also shows a comparison of the Company’s growth-adjusted sales

1 volumes and number of customers to the comparable values I calculated. In its
2 workpapers and revenue summaries, the Company made no adjustments to the
3 number of Industrial and OPA customers nor did they adjust the base year volumes
4 sold to these groups. I also have made no adjustments to these values. Industrial
5 and OPA sales and customers are included in the values shown on Schedule HJW-
6 1. Schedules HJW-2 through HJW-8 shows the detailed calculations of my
7 adjustments. In those cases where Mr. Roach developed a trend analysis, I used his
8 linear equation to estimate the monthly volumetric sales through December 31,
9 2018. These values, which are used in Schedules HJW-2 through HJW-8 to
10 calculate the revenue adjustments, are calculated in Schedules HJW-2A through
11 HJW-6A.

12

13 **Q. WHAT ARE THE RESULTS OF THESE ADJUSTMENTS?**

14 A. As shown in Schedule HJW-1, present rate revenues should be increased by
15 \$3,424,595 over the level projected by the Company in their 9+3 Update in this
16 case. The values shown in Schedule HJW-1 through HJW-8 are calculated using
17 rates in effect prior to any Orders issued by the Board in its generic Tax Cuts and
18 Jobs Act proceeding.

19

1 **5. POST TEST YEAR ADDITIONS**

2 **Q. HAS THE COMPANY REQUESTED A POST TEST YEAR ADJUSTMENT**
3 **TO RATE BASE TO REFLECT CONSTRUCTION THAT WILL BE**
4 **COMPLETED AFTER THE END OF THE TEST YEAR?**

5 A. Yes. Exhibit PT-3S, Schedule DCS-1S identifies several projects that will not be
6 complete before the end of the Test Year. The Company claims that all of the work
7 shown on this exhibit will be complete and represents plant in service prior to
8 September 30, 2018, a point six months beyond the end of the Test Year. Schedule
9 DCS-1S also includes work that will be completed by the end of the Test Year and it
10 also includes numerous routine and recurring construction projects that all will be
11 completed by the end of the Test Year. There is no routine and recurring
12 construction continuing beyond the end of the Test Year in Schedule DCS-1S.

13

14 **Q. HAS THE BOARD PERMITTED THE INCLUSION OF POST TEST YEAR**
15 **CAPITAL ADDITIONS IN THE PAST?**

16 A. In the past, the Board has recognized inclusion of post-test-year adjustments to rate
17 base when they are known and measurable and of major consequence. In *In re*
18 *Elizabethtown Water Company Rate Case*, Docket No. WR85040330 (May 23,
19 1985), the Board stated that the test year to be used in a base rate proceeding must
20 be fully historical prior to the close of record in the proceeding, but that such
21 historical test year data may be adjusted for “known and measurable” changes.

1 Known and measurable changes to the test year must be (1) prudent and major in
2 nature and consequence, (2) carefully quantified through proofs which (3) manifest
3 convincingly reliable data.

4

5 **Q. DO YOU AGREE THAT A POST TEST YEAR ADJUSTMENT SHOULD**
6 **BE ALLOWED IN THIS PROCEEDING?**

7 A. Yes, but not to the extent requested by the Company and shown in Schedule DCS-
8 1S.

9

10 **Q. WHY WOULD YOU EXCLUDE SOME OF THE PROJECTS THAT THE**
11 **COMPANY HAS REQUESTED IN ITS LIST OF POST-TEST YEAR**
12 **ADDITIONS?**

13 A. In *In re Elizabethtown*, the Board defined what exceptions to the Test Year would be
14 allowed for rate making purposes. Instead of providing a blanket adjustment to rate
15 base for any project of any nature completed within six months of the close of the
16 Test Year, the Board allowed only those projects that were “major in nature and
17 consequence” to be considered. In this current matter, the Company has proposed to
18 include eight discrete projects that have in-service dates beyond March 31, 2018.
19 The estimated cost of these projects ranges from \$5.1 million to \$37.9 million. One
20 of the eight projects, the Sunset Road Sewer Improvements, is a wastewater system
21 improvement while all others are water system projects. In determining if a project

1 is “major in nature and consequence,” I believe that the cost of the project relative to
2 the size of the Company must be considered. Further, I believe it is important to
3 consider sewer improvements separately from water improvements because water
4 and sewer rate base is determined separately. Only those projects that are large with
5 respect to the size of the Company should be considered “major” and allowed as a
6 post-Test Year plant adjustment.

7 **Q. HAS THE BOARD SET ANY HARD AND FAST STANDARDS AS TO**
8 **WHAT CONSTITUTES A “MAJOR” PROJECT?**

9 A. The Board has exercised its power to recognize adjustments beyond the test year.
10 Matters of a routine nature like distribution system improvements, periodic
11 replacements of treatment systems, or the addition of new plant that occurs as a
12 matter of course and with frequency have generally been excluded regardless of the
13 size of the utility. In contrast, projects generally agreed to be costly relative to the
14 size of the Company have been recognized as post-Test Year adjustments. To my
15 knowledge and belief, the Board has not set a hard dollar amount to determine what
16 in its judgment is “major” but rather considers the specific circumstances and the
17 size and financial capabilities of the entity making the request. The Board has not
18 said, for example, that all projects greater than \$5,000,000 are “major.” Instead, it is
19 my experience that the Board has exercised judgment in deciding if a post-Test Year
20 adjustment is appropriate.

21

1 **Q. WHAT IS AN APPROPRIATE THRESHOLD TO DETERMINE IF A**
2 **PROJECT IS MAJOR?**

3 A. Clearly, the size and financial capability of the utility should be considered relative
4 to the size of the project in question. A \$1,000,000 project for a Company like New
5 Jersey American is small, considering that the Company has invested over
6 \$868,000,000 in capital investments since its last rate proceeding concluded in
7 2015⁸ and considering that the Company has a rate base value in excess of
8 \$3,000,000,000.⁹ By comparison, the same \$1,000,000 project for a water utility like
9 Gordons Corner Water Company, with a rate base of roughly \$12,000,000 would be
10 a much more significant undertaking. An inspection of Schedule DCS-1S reveals
11 that New Jersey American has 39 discrete projects budgeted at a cost in excess of
12 \$1,000,000. In addition, the Company has undertaken a collection of routine and
13 recurring projects with an estimated aggregate cost of \$236,154,712. The Company
14 has not asked for post-Test Year adjustments to address this significantly larger
15 sum. Given the wide range in size and financial capabilities of water utilities in New
16 Jersey, I believe it would be appropriate to define “major” as a relative percentage of
17 the net plant value dedicated to providing utility service. It is my opinion that this
18 percentage value should be on the order of 0.5% to 3.0% of net plant. Projects of
19 this order of magnitude have the potential to have a material financial impact on a
20 company and its customers.

21

⁸ Petition; Para. 4, Page 2.

⁹ Petition; Exhibit P-2, Schedule 58.

1 **Q. WHAT THRESHOLD WOULD YOU APPLY IN THIS MATTER?**

2 A. I believe it would be appropriate to use 0.5% of net plant to determine what projects
3 meet the “major in nature” criteria set out in the Board’s *In re Elizabethtown* Order.
4 I have applied this threshold to the post-Test Year projects in Schedule DCS-1S and
5 the results of this are shown in Schedule HJW-9.

6

7 **Q. PLEASE LIST THE PROJECTS THAT COMPRISE THE POST TEST**
8 **YEAR ADDITIONS YOU BELIEVE SHOULD BE ALLOWED.**

9 A. A list of the post-Test Year plant additions, including the project cost and
10 completion date is shown in Schedule HJW-9. For the Company’s water operations,
11 only the Oak Glen Water Treatment Plant Expansion, valued at \$26,051,246 and the
12 Raritan Millstone Long Term Flood Control project, valued at \$37,935,115 exceed
13 0.5% of the Company’s net plant value. For the Company’s sewer operations, the
14 Sunset Road Sewer Upgrade project exceeds the 0.5% threshold. The total cost of
15 these three projects is \$72,520,589.

16

17 **Q. SHOULD THE TOTAL OF \$72,520,589 BE ADDED TO THE UPIS**
18 **BALANCE AT THE END OF THE TEST YEAR?**

19 A. As this matter proceeds, the adjustment to the actual Test Year UPIS balance
20 should be updated to reflect the most reliable estimates of the final completion cost
21 for these projects. Construction project estimates typically bear contingency

1 amounts that may not actually be spent and these amounts should not be reflected
2 in rate base. Conversely, costs not anticipated in the construction estimate may be
3 identified only as the work proceeds and as long as these unanticipated costs are
4 prudently incurred, the final estimates should be updated to reflect these amounts.

5

6 **6. HADDONFIELD ACQUISITION**

7 **Q. HAS THE COMPANY ACQUIRED THE WATER AND SANITARY SEWER**
8 **UTILITY ASSETS FORMERLY OWNED BY THE BOROUGH OF**
9 **HADDONFIELD IN CAMDEN COUNTY?**

10 A. It is my understanding that the Company closed on the purchase of these systems on
11 May 21, 2015. In this proceeding, the Company is asking for the net asset value of
12 the system to be added to rate base and for approval to amortize an acquisition
13 adjustment.

14

15 **Q. PLEASE DESCRIBE THE RELEVANT TERMS OF THE ACQUISITION.**

16 A. The Company acquired the water and sewer assets after an extensive public bidding
17 process. Haddonfield received bids from New Jersey American and two other
18 entities and the Borough accepted the Company's proposal to acquire the two utility
19 systems for a total purchase price of \$28,500,000. In its proposal, the Company
20 offered to maintain the existing water rates for Haddonfield ratepayers for a period
21 of three years from the date of Closing. In addition, the Company offered to provide

1 free water and sewer service to seven Borough-owned buildings and facilities. In
2 addition, the Company also committed to make capital improvements to the
3 Haddonfield systems starting with an estimated \$6.5 million in improvements within
4 the first 12 months of closing and a total of an additional \$9.5 million in capital
5 improvements over the first five years. This is a total of \$16 million in capital
6 improvements in the five-year period following closing. The Company also
7 committed to allowing the Borough to retain revenues from cell antennae leases for
8 a period of ten years. The Company has also committed to continue a Senior Citizen
9 subsidy of Camden County Municipal Authority charges. These are the general
10 terms and conditions of the Company's proposal, which the voters approved in a
11 referendum on the sale of the systems.

12
13 **Q. UNDER THESE CONDITIONS, WERE REVENUES GENERATED FROM**
14 **SALES TO HADDONFIELD CUSTOMERS SUFFICIENT TO SUPPORT**
15 **THE FULL COST OF SERVICE?**

16 A. Initially, revenues from water and sewer sales were not adequate to satisfy the
17 revenue requirement for either system. In Docket No. WR15010035, the Company
18 provided two responses to Rate Counsel Data Requests that show the revenue
19 requirement generated by the water and sewer systems. The response to RCR-A-
20 160 showed that the water system presented a revenue requirement of \$766,911 and
21 the sewer system had a revenue requirement of \$1,959,957. In its response to RCR-
22 E-67, the Company also included certain operating expenses associated with Service

1 Company fees that were not included in the estimated O&M expenses depicted in
2 RCR-A-160. RCR-E-67 showed the water system revenue requirement to be
3 \$1,077,590 and the sewer system revenue requirement to be \$1,975,182.

4 **Q. WHAT IS THE SIGNIFICANCE OF THESE REVENUE REQUIREMENT**
5 **AMOUNTS?**

6 A. These amounts represent the additional revenues, beyond that produced under
7 present Haddonfield rates that would need to be recovered from customers to satisfy
8 the full cost of providing service to Haddonfield at the point in time when the
9 system was acquired. Since that time, the Company has invested substantial sums in
10 both water and sewer improvements in Haddonfield and this further increased the
11 cost of providing service.

12
13 **Q. DID THE COMPANY PROPOSE ANY INCREASES IN WATER OR**
14 **SEWER RATES TO OFFSET THE HADDONFIELD REVENUE**
15 **REQUIREMENT?**

16 A. The Company proposed to maintain the existing Haddonfield tariffs in Docket
17 WR15010035. With regard to the water system, this also meant that the Company
18 proposed to refrain from billing any applicable DSIC or PWAC surcharges during
19 the self-imposed three-year rate freeze period because these are items that were not
20 included in the Haddonfield rate structure. This rate proposal was consistent with
21 the Company's bid and it was made known to the Haddonfield registered voters who
22 approved the sale of the system. In this current proceeding, Company witness Paul

1 R. Herbert offered testimony and a cost of service allocation study showing a need
2 to increase Haddonfield water rates. Mr. Herbert's proposal involves increasing the
3 fixed service charge for a 5/8-inch meter from \$4.16 per month to \$12.00 per month,
4 a 188% increase, and increasing the first block volumetric rate from \$5.6000 per
5 thousand gallons to \$6.4700 per thousand gallons, a 15.5% increase.¹⁰ The second
6 and third rate blocks increase at lesser rates. Overall, a Haddonfield customer using
7 6,000 gallons per month will see an increase of 25% if Mr. Herbert's proposal is
8 adopted in this proceeding.¹¹ For sewer customers, the Company is proposing to
9 implement a fixed service charge of \$5.50 per month where no such charge existed
10 before. Residential and commercial volumetric rates will decrease in the first block
11 (first 2,700 gallons) from \$2.69 per thousand gallons to \$1.79 per thousand gallons
12 while the second block (next 10,700 gallons) will increase by 26.5% and the third
13 block (over 13,400 gallons) will increase by 71%.¹² The increase in water revenues
14 resulting from the proposed rates is \$795,713.¹³ For Haddonfield sewer, adjusted
15 present rate revenues are \$1,016,416.¹⁴ At the Company's proposed rates,
16 Haddonfield sewer revenues would increase to \$1,516,984,¹⁵ representing an
17 increase of \$500,568. The increases, while significant, are only fractions of the
18 revenue deficiency that existed at the time of the acquisition and continue today.

19

¹⁰ Exhibit PT-14, Direct Testimony of Paul R. Herbert, Schedule PRH-8, Page 10 of 13.

¹¹ Ibid; Schedule PRH-10, Page 8 of 8.

¹² Ibid; Schedule PRH-8, Page 13 of 13.

¹³ Response to RCR-RD-1. Rate App tab.

¹⁴ Exhibit P-2, Schedule 5, Page 4 of 4; Updated 1/15/2018.

¹⁵ Exhibit P-2, Schedule 5, Page 4 of 4; as-filed.

1 **Q. HOW HAVE THE COMPANY’S CUSTOMERS IN OTHER TARIFF**
2 **GROUPS BEEN AFFECTED IF THE HADDONFIELD RATES WERE NOT**
3 **ADEQUATE TO SUPPORT THE REVENUE REQUIREMENT?**

4 A. In the Company’s 2015 rate case, Docket No. WR15010035, Haddonfield was held
5 out as a separate tariff group and the revenue requirement associated with the water
6 and sewer systems was excluded from rate setting in other tariff groups. This
7 provided protection for the Company’s pre-acquisition customers by shielding them
8 from subsidizing any un-recovered revenue requirement not supported by
9 Haddonfield rates. In this case, the Company has developed a cost of service study
10 that uses the combined costs of providing water service from all service areas to
11 determine the statewide revenue requirement allocated to the various classes of
12 users.¹⁶ Haddonfield is part of the overall GMS class revenue requirement
13 calculation. Therefore, if the revenues generated by the Company’s Haddonfield
14 rate proposal are insufficient to support the cost of the service, then other customers
15 throughout the state will be burdened with the excess revenue requirement.
16 Essentially, pre-acquisition customers will begin supporting the cost of the
17 Company’s expansion in Haddonfield until Haddonfield rates are brought to a level
18 where revenues will support or exceed the local cost of providing service.

19

20 **Q. IS THERE ANY SYNERGIES RESULTING FROM THE ACQUISITION**
21 **THAT WOULD BENEFIT EXISTING CUSTOMERS AND MITIGATE THE**

¹⁶ Company response to RCR-RD-1.

1 **RATE IMPACT OF THE EXCESS HADDONFIELD REVENUE**
2 **REQUIREMENT?**

3 A. I am not aware of any short-term synergies that would benefit existing New Jersey
4 American ratepayers. By contrast, there are significant benefits to Haddonfield
5 ratepayers in the short run. These include avoiding the cost of replacing the Cottage
6 Avenue Standpipe,¹⁷ the Company’s commitment to invest \$16 million in system
7 improvements in five years, retention by the Borough of antennae revenues for a
8 period of ten years and a rate freeze for three years. In this proceeding the Company
9 has identified several projects completed to improve the reliability of sewer
10 operations in Haddonfield. These include the Atlantic Avenue Lift Station Project
11 (\$4,978,799), the Roberts Avenue Sewer Lift Station (\$2,225,655), and the Coles
12 Mill Sewer Lift Station (\$2,009,191). These three projects, which alone represent
13 more than half of the \$16 million promise made to Haddonfield, benefit only
14 Haddonfield sewer customers and provide no benefit to any other customers in New
15 Jersey American’s water or sewer operations. The revenue requirement for these
16 three additions was not part of the revenue deficiency that existed at the time of the
17 acquisition.

18

19 **Q. ARE THE HADDONFIELD WATER OR SEWER SYSTEMS “TROUBLED”**
20 **WATER OR SEWER SYSTEMS?**

21 A. To the best of my knowledge and belief, neither system is or was a troubled system.

¹⁷ Exhibit PT-3, Direct Testimony of Donald C. Shields, P. 39, Line 5 through Line 14.

1

2 **Q. HAVE YOU REVIEWED THE COMPANY'S VALUATION OF THE**
3 **ASSETS OF THE HADDONFIELD WATER AND SEWER SYSTEMS?**

4 A. Yes. I have reviewed the Direct Testimony of Stephanie Cuthbert in this proceeding
5 and the Direct Testimony of Mr. Dennis K. Yoder in Docket WR15010035 and I
6 have also considered the impact of the purchase price on the revenue requirement for
7 the water and sewer systems.

8

9 **Q. WHAT ARE THE RESULTS OF YOUR REVIEW OF THESE**
10 **TESTIMONIES?**

11 A. I have accepted the updated asset register and the original cost values presented in
12 these testimonies; however, I am proposing two adjustments to Ms. Cuthbert's
13 method of valuation.

14

15 **Q. WHAT ARE THOSE ADJUSTMENTS?**

16 A. First, both Mr. Yoder and Ms. Cuthbert ignored the value of land and land rights, so
17 I have added this to the valuation. Second, Mr. Yoder and Ms. Cuthbert used a
18 series of service-life based depreciation rates that were inconsistent with the
19 depreciation rates that have been reviewed and approved by the Board for New
20 Jersey American in prior proceedings and were in effect at the time of the
21 acquisition. The impact of the generally longer life-adjusted depreciation
22 calculations is the inflation of the depreciated original cost value of various assets.
23 The value of the system assets used for rate setting purposes should be determined

1 using a realistic assessment of the depreciated original cost value of the system. It is
2 quite common for older utility systems, like the Haddonfield systems, to have assets
3 in service that are fully depreciated. But that is not a sufficient reason to unilaterally
4 alter the depreciation rates to extend or renew the surviving accounting value of the
5 assets.

6

7 **Q. WHAT ARE THE RESULTS OF YOUR ADJUSTMENTS?**

8 A. Schedule HJW-10 shows the results of my valuation of the system. The detailed
9 calculations supporting this valuation are shown on supporting schedules HJW-10A
10 through HJW-10J. My estimate of the Original Cost Less Depreciation (OCLD)
11 value of the Haddonfield water system is \$11,418,666 and I have estimated the
12 OCLD value of the sewer system at \$11,292,916. The total OCLD value of the
13 systems acquired from Haddonfield amounts to \$22,711,804. This value is
14 \$4,199,506 less than the value developed by Ms. Cuthbert.

15

16 **Q. HOW DOES YOUR OCLD VALUE COMPARE WITH THE ACTUAL**
17 **PURCHASE PRICE?**

18 A. The OCLD value is lower than the actual purchase price of \$28,500,000. It is my
19 opinion that the purchase price of \$28,500,000 represents a premium in excess of the
20 true asset value of \$5,788,418.

21

22 **Q. ARE YOU AWARE OF THE COMPETING BIDS THAT WERE OFFERED**
23 **BY UNITED WATER AND AQUA NEW JERSEY?**

1 A. Yes. United Water (now SUEZ) offered a bid price of \$19,050,000 and Aqua New
2 Jersey offered a bid of \$23,126,000. Both of these bids compare closely with the
3 OCLD value of the assets I calculated.

4
5 **Q. DO YOU BELIEVE THAT THE PREMIUM AMOUNT PAID BY NEW**
6 **JERSEY AMERICAN IN EXCESS OF THE OCLD VALUE IS JUSTIFIED?**

7 A. No. The premium will put upward pressure on the Company's statewide rates and I
8 do not see any benefit to existing customers that could justify this premium. In the
9 Company's testimonies and in responses to various discovery requests, the benefits
10 to Haddonfield customers have been clearly defined. For example, Haddonfield
11 residents have enjoyed the benefit of an immediate rate freeze that has been in place
12 for three years. In addition, Haddonfield customers will see the benefit of the
13 synergies resulting from the integration of the Haddonfield and New Jersey
14 American distribution systems. This had the immediate benefit of allowing the
15 Cottage Avenue Standpipe, a Haddonfield asset, to be retired rather than replaced at
16 great cost to Haddonfield residents. Since the acquisition, the Company has also
17 retired Haddonfield's Centre Street Water Treatment Plant and transferred
18 Haddonfield's allocation to other Company owned wells in a Company-owned
19 system that already enjoyed a substantial surplus allocation. In addition, the
20 Company has committed to investing \$16 million in improvements to the water and
21 sewer system in Haddonfield over the five years following closing and they have
22 made great progress towards this goal, particularly in the wastewater system.
23 Haddonfield ratepayers were shielded from the impact of these additional

1 investments for the three years following closing as a result of the rate covenant.
2 Going forward, the rates proposed by the Company in this proceeding will continue
3 to come up short with respect to the total revenue requirement. For the sewer system
4 alone, the current cost of providing service is \$4,837,015 yet proposed rate revenues
5 from the Haddonfield sewer customers is \$1,516,984.¹⁸ This is only 31% of the cost
6 of service and it is a \$3,320,031 annual shortfall that is being shifted to other New
7 Jersey American ratepayers. By contrast, the benefits that could be realized by
8 existing New Jersey American ratepayers can only be described in the most general
9 of terms and these benefits are only likely to be realized at some distant point in the
10 future when Haddonfield rates are equalized with the Company's statewide rates.

11
12 **Q. DO YOU HAVE A RECOMMENDATION REGARDING RATEBASE**
13 **TREATMENT FOR THE HADDONFIELD ACQUISITION?**

14 A. Yes, the Board should limit the value of the assets recorded by the Company to the
15 OCLD value of the water and sewer systems shown in HJW-10 at the time of the
16 acquisition. These amounts should be brought forward to reflect the additional the
17 depreciation, retirements and additions since the time of the acquisition.

18
19 **Q. DO YOU BELIEVE THE COMPANY SHOULD BE ALLOWED TO**
20 **RECORD AND AMORTIZE AN ACQUISITION ADJUSTMENT FOR THE**
21 **PREMIUM PAID OVER OCLD VALUE?**

¹⁸ Response to RCR-RD-7.

1 A. No. I do not believe that there are any synergies that would benefit existing
2 ratepayers to the extent that a \$5,788,417 premium could be justified. In addition,
3 these were not troubled systems, so an acquisition premium is not warranted as an
4 incentive to the buyer to take on compliance or service problems of a failing entity.
5 While the Company has requested a much smaller adjustment of \$1,588,911, this
6 should also be rejected. I believe this is a risk that the Company and its shareholders
7 took in offering its bid and the consequences of this risk should be borne by the
8 Company's shareholders and not transferred to its ratepayers.

9

10 **7. SHORELANDS WATER CO. ACQUISITION**

11 **Q. HAS THE COMPANY ACQUIRED THE WATER UTILITY FORMERLY**
12 **OWNED AND OPERATED BY SHORELANDS WATER COMPANY?**

13 A. Yes. It is my understanding that the stock of Shorelands Water Company was
14 acquired by American Water in April of 2017 and Shorelands Water Company was
15 subsequently merged into New Jersey American Water Company. Prior to its
16 acquisition, Shorelands was a Board-regulated water utility providing service to
17 approximately 11,000 customers in Hazlet Township in Monmouth County.

18

19 **Q. HOW WAS SHORELANDS RECORDED ON THE BOOKS OF NEW**
20 **JERSEY AMERICAN WATER COMPANY?**

21 A. As a Board regulated water utility prior to its acquisition by American Water Works,
22 the depreciated original cost of the assets of this system were known and recorded in

1 accordance with Board established accounting standards. Upon the merger of the
2 system with New Jersey American, the utility plant assets were recorded on the
3 Company's books at depreciated original cost. The premium paid over and above
4 the depreciated original cost value was recorded to Account 117, Utility Plant
5 Acquisition Adjustments.¹⁹

6

7 **Q. ARE YOU PROPOSING ANY ADJUSTMENTS TO THE ORIGINAL COST**
8 **LESS DEPRECIATION VALUE OF SHORELANDS WATER COMPANY'S**
9 **UTILITY PLANT AS IT WAS RECORDED ON THE COMPANY'S**
10 **BOOKS?**

11 A. No.

12

13 **Q. WHAT IS THE VALUE OF THE ACQUISITION ADJUSTMENT**
14 **ASSOCIATED WITH THE SHORELANDS ACQUISITION?**

15 A. The Company acquired Shorelands for \$51,468,661, an amount that exceeded the
16 original cost less depreciation value of the system by \$26,722,978.²⁰

17

18 **Q. HAS THE COMPANY PROVIDED AN ARGUMENT FOR THIS**
19 **ACQUISITION ADJUSTMENT?**

20 A. Yes, it has. Several witnesses have explained how the physical integration of the
21 Shorelands Water Company system into and with the adjacent New Jersey American

¹⁹ Direct Testimony of Frank X. Simpson; Exhibit PT-4; Page 37, Lines 1 through 20 and the response to RCR-E-42.

²⁰ Ibid; Page 35, Lines 13-14.

1 system will provide operational synergies and allow certain projects to be deferred
2 or avoided altogether. To the extent that certain planned capital improvements can
3 be avoided or delayed, the Company claims that existing ratepayers will benefit from
4 this to the extent that the benefits outweigh the revenue requirement associated with
5 the amortization of the acquisition adjustment. This analysis is provided in
6 Company Witness Frank X. Simpson's Direct Testimony and specifically in
7 Schedule FXS-1. The Company claims it will avoid \$29 million in planned capital
8 construction and defer the implementation of another \$18.9 million of capital
9 construction for a period of five to ten years.²¹ The result of the avoided
10 construction or deferred construction is a savings to ratepayers the Company
11 believes offsets the burden of paying for the acquisition adjustment. In Schedule
12 FXS-1, Mr. Simpson has calculated a net positive benefit with a present value of
13 \$6.6 million.²²

14
15 **Q. DO YOU BELIEVE THAT THE ANALYSIS IN MR. SIMPSON'S FXS-1 IS A**
16 **REASONABLE WAY TO CONSIDER THE IMPACT OF THE**
17 **SHORELANDS ACQUISITION?**

18 A. Yes, but I have a number of concerns about the durability of an approach that
19 presumes value from the deferral or avoidance of capital projects.

20
21 **Q. PLEASE EXPLAIN WHAT YOU MEAN BY THAT STATEMENT.**

²¹ Ibid; Page 38, Lines 8-16.

²² Ibid; Page 39, Lines 5-6.

1 A. The recovery of the amortization of the acquisition adjustment is a fixed, known and
2 measureable cost. The Company clearly paid more for the assets of Shorelands
3 Water Company than those assets are worth and the magnitude of that overpayment
4 is \$26,722,978. If this amount is included in rate base and amortized over 40-years,
5 the Company's customers will pay the Company a return of and return on this excess
6 investment and the annual amortization amount. In the first year, this is a revenue
7 requirement of \$3,964,485.²³ This is cash that will be collected from customers and
8 the amount will not be impacted by the avoidance or deferral of any of the capital
9 projects included in Mr. Simpson's analysis. The benefit in this analysis is derived
10 solely from the Company claiming that it will not spend the sums outlined in the
11 analysis for these or similar projects. Should other reasons arise that cause the
12 Company to undertake items deferred or avoided in this analysis at any point while
13 the acquisition adjustment is being amortized, a portion of the offsetting value to
14 ratepayers will be lost. Similarly, if the Company maintained its overall level of
15 capital spending by using the avoided or deferred cost dollars to implement other
16 needed improvements in other areas of its systems, customers would see the impact
17 of those other investments in rates along with the impact of the acquisition
18 adjustment. There is nothing in this analysis or the Company's testimonies that
19 demonstrates that customers will actually see lower rates because of the acquisition
20 or any of the avoided or deferred projects.

21

²³ Ibid; FXS-1.

1 **Q. HAVE YOU REVIEWED THE PROJECTS THAT THE COMPANY**
2 **CLAIMS IT CAN DEFER OR AVOID?**

3 A. Yes. While these projects are described in Mr. Simpson's schedules and testimony,
4 more detailed explanations of these items were provided in the Direct Testimony of
5 Mr. Shields and in various Discovery responses provided by the Company in this
6 proceeding. I reviewed this information and also considered how sensitive to change
7 the results of Mr. Simpson's analysis may be should conditions differ from those
8 which allowed the Company to conclude that these projects could be deferred or
9 avoided.

10

11 **Q. PLEASE GIVE US AN EXAMPLE OF HOW THE RESULTS OF THE**
12 **ANALYSIS MAY BE SENSITIVE TO CHANGES IN THE CAPITAL**
13 **PROGRAM.**

14 A. First, let us consider the Navy Tank. This is a 1.2 million gallon standpipe with an
15 operating range between 240 feet and 278 feet.²⁴ A change in water level of thirty-
16 eight feet is normally considered to be the maximum range desirable to avoid
17 unwanted pressure fluctuations in the area served by the tank. This is the first
18 project considered in FXS-1 as an avoided cost project. In FXS-1, this project has a
19 cost of \$3,700,000 and it was scheduled to be completed in 2018. The Company
20 originally planned to remove and replace the existing Navy Tank to provide
21 additional distribution storage for customers in Middletown. The Company believes
22 that the Navy Tank can remain in service by reconfiguring the distribution system

²⁴ Response to RCR-E-27.

1 gradient boundaries and placing a greater area on tanks acquired with the Shorelands
2 acquisition. The Navy Tank will not be eliminated.²⁵ The available volume will
3 continue to be needed to service the Company's customers.

4 In FXS-1, the replacement cost is considered to be an avoided expense
5 starting in 2018 and continuing through the full forty-year period of the analysis.
6 That is, the analysis presumes that the existing Navy Tank will remain in service for
7 an additional forty years and no expense will be incurred to replace this storage
8 facility with a new tank. The cost of the tank replacement and the annual
9 depreciation on the investment are treated as avoided costs in this analysis and the
10 analysis calculates the revenue requirement that would have resulted if the project
11 went forward. In 2018, this is the only project in the analysis that is either avoided
12 or deferred and it has an annual first year avoided cost benefit of \$537,872. On the
13 other side of the ledger sheet, we have the inclusion of the acquisition adjustment in
14 rate base and the amortization of the adjustment. In 2018, FXS-1 shows the rate of
15 return on the investment produces a revenue requirement of \$3,110,071 and in
16 addition, the amortization expense of the acquisition adjustment adds an additional
17 \$774,669 to the annual revenue requirement. So, in 2018, ratepayers avoided the
18 cost of replacing the Navy Tank and saved \$537,872 but they are asked to pay
19 \$3,884,740 for the return on the investment in Shorelands and the amortization of
20 the acquisition adjustment. So, in 2018, the Shorelands acquisition cost ratepayers
21 almost \$3,346,868 million that they would not have had to pay if the acquisition did
22 not proceed. Nevertheless, as the analysis rolls forward for the full forty years over

²⁵ Response to RCR-E-28.

1 which the acquisition adjustment is amortized, the benefit accumulates. For the life
2 of the analysis, the calculated benefits exceed the impact of the acquisition premium.
3 The analysis calculates a present value of the annual net losses or benefits and shows
4 that the acquisition and the avoided or deferred projects result in a theoretical benefit
5 to ratepayers of \$6,644,247.

6 The analysis is, however, sensitive to changes and it presumes that the
7 Company has actually decreased its overall utility plant investments by the amount
8 shown for each year. The Navy Tank was built in 1951, so it is already 67 years old.
9 The analysis presumes that this tank will continue in service for forty more years, so
10 it will be 107 years old at the end of the time period considered by FXS-1.

11

12 **Q. DO YOU BELIEVE IT IS REASONABLE TO EXPECT THE NAVY TANK**
13 **TO REMAIN IN SERVICE FOR AN ADDITIONAL FORTY YEARS?**

14 A. While it is likely that the tank can be properly maintained and continue in service for
15 some time, it is safe to assume that the Navy Tank will not last forever. The
16 Company’s current depreciation rate for distribution storage tanks presumes an
17 average life of 72 years. The Navy Tank will reach this milestone in five short
18 years.

19

20 **Q. WHAT ARE THE RESULTS OF THE ANALYSIS IF THE NAVY TANK IS**
21 **ACTUALLY REPLACED AT THE SAME COST OF \$3,700,000 IN THE**
22 **YEAR 2023?**

1 A. If the Navy Tank is replaced at a cost of \$3,700,000 in 2023, the avoided cost
2 benefits associated with this project will end. Ratepayers would be asked to support
3 this investment in their rates after the replacement tank is placed in service. Part of
4 the claimed benefit of the Shorelands acquisition would also be lost at that time. By
5 making this single and fairly minor change to the analysis in FXS-1, the net positive
6 benefit of \$6,644,247 is reversed and the “benefit” of the Shorelands acquisition
7 becomes a net cost of \$197,353.

8

9 **Q. DID YOU CONSIDER ANY OTHER POSSIBLE CHANGES TO THE**
10 **AVOIDED OR DEFERRED COSTS PRESENTED IN FXS-1?**

11 A, Yes, I looked at a number of other projects and concluded that conditions could
12 change on any of a number of these projects that could cause the Company to revert
13 to the original construction schedule for the deferred items or decide that projects on
14 the avoided cost list would once again be needed. For example, the Company could
15 decide that it in fact needs the two Englishtown Wells in the Lakewood area and it
16 needs to pursue the project to develop these wells on the original schedule. This
17 would result in the expense of \$3,500,000 in 2020 as planned. Another example
18 involves the replacement and storm protection of the Newman Springs Clearwell.
19 This project is essentially a storm hardening and resiliency project and it is possible
20 that this project as conceived or a replacement would need to be undertaken in the
21 near future. If we presume that this project is not delayed but undertaken in 2020 as
22 originally planned, as opposed to being undertaken in 2032, the \$4,000,000 cost of

1 the project would actually be incurred in 2020 and ratepayers would be asked to
2 support this cost in their rates.

3

4 **Q. IF THE CHANGES TO THE NAVY TANK PROJECT, THE**
5 **ENGLISHTOWN WELLS PROJECT AND THE NEWMAN SPRINGS**
6 **STATION PROJECT ACTUALLY OCCURRED AS YOU POSTULATE,**
7 **WHAT IMPACT WOULD WE SEE IN THE NET PRESENT VALUE**
8 **ANALYSIS IN FXS-1?**

9 A. The net present value of the avoided and deferred projects, which is shown as a
10 positive benefit of \$6,644,247 for ratepayers would become a net present value loss
11 of \$25,452,118.

12

13 **Q. DO YOU HAVE ANY OTHER CONCERNS ABOUT THE COMPANY'S**
14 **ARGUMENT IN FAVOR OF THE SHORELANDS ACQUISITION**
15 **ADJUSTMENT?**

16 A. Yes, the Company's argument is fundamentally, that the acquisition premium in rate
17 base and the amortization of the premium should be allowed because other capital
18 costs can be avoided or deferred. While this could be true in the local area, there are
19 no guarantees that the projects included in this analysis will not at some point be
20 undertaken directly or effectively provided by some other yet to be defined capital
21 improvement. Furthermore, I have little confidence that the deferred or avoided
22 capital expenses described in the analysis will actually translate to a lower overall
23 level of capital expense in this 40-year period. We have seen in this case a Company

1 that has invested \$868,000,000 in new plant since its last rate case concluded in
2 2015.²⁶ Furthermore, the Company claims that it needs “to upgrade and replace [its]
3 systems and infrastructure that are at the end of their useful lives, which requires
4 significant capital expenditures in order to provide the level of safe, adequate and
5 proper service that [its] customers have come to expect.”²⁷ If projects can be avoided
6 in and around the Shorelands system because of synergies, this simply frees up
7 dollars to be invested in other projects. Ratepayers will see the direct and calculated
8 cost of the acquisition premium but it is unlikely in the broad sense that this will
9 result in a smaller Company-wide investment budget. If dollars are not spent
10 replacing the Navy Tank in 2018, for example, those same \$3,700,000 are likely to
11 find their way into one or more other projects and ratepayers will see the impact of
12 those alternate investments in rates. Unless the Company’s overall capital spending
13 is capped, there is no guarantee that ratepayers will see any benefit from the
14 Shorelands avoided cost or deferred cost projects. Furthermore, it is apparent that
15 the analysis in FXS-1 does not consider any of the capital integration costs or the
16 cost of any internal improvements to the Shorelands system over time.

17
18 **Q. IS THE SHORELANDS WATER COMPANY A TROUBLED SYSTEM?**

19 A. No, to the best of my knowledge and belief, it is not now nor has it been a troubled
20 water system.

²⁶ Direct Testimony of Robert G. MacLean, Exhibit PT-1; Page 8, Line 16.

²⁷ Ibid; Page 10, Lines 13-16.

1 **Q. DO YOU BELIEVE THE COMPANY SHOULD BE ALLOWED TO**
2 **RECORD AND AMORTIZE AN ACQUISITION ADJUSTMENT FOR THE**
3 **PREMIUM PAID OVER OCLD VALUE?**

4 A. No. I do not believe that there are any synergies that would benefit existing
5 ratepayers to the extent that a \$26,722,978 premium could be justified. In addition,
6 this is not a troubled system, so an acquisition premium is not warranted as an
7 incentive to the buyer to take on compliance or service problems of a failing entity.
8 There is no cap on the Company's total annual capital spending, so the value of
9 avoided or deferred plant investments associated with the Shorelands acquisition
10 could simply materialize as other capital investment projects elsewhere in the
11 system. For these reasons, the requested acquisition adjustment should be rejected.
12 I believe this is a risk that the Company and its shareholders took in making its offer
13 to the former stockholders of the Shorelands Water Company and the consequences
14 of this risk should be borne by the Company's shareholders and not transferred to its
15 ratepayers.

16

17 **8. ROXITICUS WATER CO. ACQUISITION**

18 **Q. HAS THE COMPANY ACQUIRED THE ASSETS OF THE ROXITICUS**
19 **WATER COMPANY?**

20 A. Yes, it is my understanding that the Company acquired the assets of Roxiticus Water
21 Company in 2016. This was a small Board-regulated water company serving
22 approximately 100 customers in Mendham, Morris County. When the acquisition

1 occurred, customers of the former Roxiticus Water Company were moved to New
2 Jersey American’s SA-1 tariff rate. This allowed the Roxiticus customers to benefit
3 from lower rates. Prior to the acquisition, Roxiticus was a sale-for-resale customer
4 of New Jersey American. All water distributed by Roxiticus was purchased from
5 New Jersey American. Roxiticus had no other source of supply and no distribution
6 storage within its system.

7

8 **Q. DID THE COMPANY PAY A PREMIUM TO ACQUIRE THE ROXITICUS**
9 **WATER COMPANY SYSTEM?**

10 A. Yes, the Company paid \$300,000 to acquire the system and this amount was
11 \$184,662 in excess of the depreciated original cost of the plant (\$115,338) it
12 acquired.²⁸

13

14 **Q. IS ROXITICUS WATER COMPANY A TROBLED WATER SYSTEM?**

15 A. No, to the best of my knowledge and belief, it is not now nor has it been a troubled
16 water system.

17

18 **Q. DO YOU BELIEVE THE COMPANY SHOULD BE ALLOWED TO**
19 **RECORD AND AMORTIZE AN ACQUISITION ADJUSTMENT FOR THE**
20 **PREMIUM PAID OVER OCLD VALUE?**

21 A. No. I do not believe that there are any synergies that would benefit existing
22 ratepayers to the extent that a \$184,662 premium could be justified. In addition, this

²⁸ Response to RCR-E-42.

1 is not a troubled system, so an acquisition premium is not warranted as an incentive
2 to the buyer to take on compliance or service problems of a failing entity. The
3 requested acquisition adjustment should be rejected. I believe this is a risk that the
4 Company and its shareholders took in offering its bid and the consequences of this
5 risk should be borne by the Company's shareholders and not transferred to its
6 ratepayers.

7

8 **9. LEAD SERVICE LINE RENEWAL**

9 **Q. HAS THE COMPANY MADE A PROPOSAL REGARDING THE**
10 **REPLACEMENT OF LEAD SERVICE LINES IN THIS PROCEEDING?**

11 A. Yes. The Company has made a proposal to implement a lead service line
12 replacement program that includes the full replacement of the service line from the
13 main in the street to the customer's structure. This would involve the replacement of
14 the Company-owned portion of the service line from the main to the property line
15 and the customer-owned portion of the service line from the property line to the
16 structure being served.

17

18 **Q. HAS THE COMPANY ALREADY BEGUN THIS PROGRAM?**

19 A. Yes. This program is underway and the Company has already replaced
20 approximately 115 customer-owned lead services at a cost of \$440,000 and the cost
21 of this program has been deferred to Account 186.²⁹ In this proceeding, the

²⁹ Op. Cit., Simpson; Page 44, Lines 1-6.

1 Company has transferred this balance to Utility Plant in Service and, if this is
2 allowed, the Company will begin recovering a return on and a return of this
3 investment through customer rates.

4 **Q. HAS THE COMPANY EXCEEDED THE LEAD ACTION LEVEL AND IS**
5 **IT REQUIRED BY THE SAFE DRINKING WATER ACT RULES TO**
6 **REPLACE LEAD SERVICE LINES?**

7 A. None of the Company's Community Public Water Supply systems has exceeded the
8 lead or copper action levels and none of these systems has been ordered to replace
9 lead service lines.³⁰

10
11 **Q. IF THERE IS NO REGULATORY OBLIGATION TO REPLACE LEAD**
12 **SERVICE LINES, DO YOU BELIEVE THAT A LEAD SERVICE LINE**
13 **REPLACEMENT IS APPROPRIATE?**

14 A. Yes, a lead service line replacement program is appropriate. Even though the
15 Company has been in compliance with the lead and copper action levels, it is
16 important to recognize that compliance is determined by a statistical analysis of the
17 sampling data. If 90% of the samples collected are below the lead action level, the
18 Company has complied with the Lead and Copper Rule. Even so, as many as 10%
19 of the samples could be above the action level and for these customers, there would
20 be a known potential lead exposure issue. Also, sampling is able to detect lead
21 results at levels below the action level. In these cases, lead exposure also is a
22 potential issue.

³⁰ Response to RCR-E-52.

1

2 **Q. IS THE LEAD ACTION LEVEL A HEALTH BASED STANDARD?**

3 A. No, it is not. This is a “treatment technique” standard. The Safe Drinking Water
4 Act also has a Maximum Contaminant Level Goal, a non-enforceable standard, for
5 lead that is health-based and that level is zero milligrams per liter.

6

7 **Q. IS THERE ANY NATIONAL STANDARDS REGARDING THE**
8 **REPLACEMENT OF LEAD SERVICE LINES?**

9 A. Yes, the American Water Works Association (“AWWA”)³¹ has adopted a national
10 standard, AWWA C810-17 Replacement and Flushing of Lead Service Lines, that
11 provides guidance on the replacement of lead service lines. This Standard
12 recognizes the need to protect public health by identifying and removing all lead
13 service lines over time because no amount of lead exposure is deemed safe.

14

15 **Q. DOES THE CURRENT LEAD AND COPPER RULE OR THE AWWA**
16 **STANDARD REQUIRE THE REPLACEMENT OF CUSTOMER-OWNED**
17 **SERVICE LINES AT COMPANY EXPENSE?**

18 A. Both the Rule and the Standard recommend full replacement of the service line from
19 the main in the street to the customer’s building. Both discourage partial

³¹ AWWA is not an affiliate of the Company but the Company and many of its employees are members. The American Water Works Association is an international, nonprofit, scientific and educational society dedicated to providing total water solutions assuring the effective management of water. Founded in 1881, the Association is the largest organization of water supply professionals in the world.

1 replacements and the Standard recommends prioritizing those services that have
2 undergone partial replacements in any overall replacement strategy. While full
3 replacement is recommended in the strongest terms, neither the Rule nor the
4 Standard requires the Company to bear the cost of replacing privately owned service
5 lines. At 40 CFR 141.84 (d), the Rule states: “In cases where the system does not
6 own the entire lead service line, the system shall notify the owner of the line, or the
7 owner's authorized agent, that the system will replace the portion of the service line
8 that it owns and shall offer to replace the owner's portion of the line. A system is not
9 required to bear the cost of replacing the privately-owned portion of the line, nor is it
10 required to replace the privately-owned portion where the owner chooses not to pay
11 the cost of replacing the privately-owned portion of the line, or where replacing the
12 privately-owned portion would be precluded by State, local or common law.”

13
14 **Q. HOW MANY LEAD SERVICE LINES EXIST IN THE COMPANY’S**
15 **SERVICE AREA?**

16 A. The Company estimates that there are 8,000 to 10,000 lead service lines in its
17 service territory.³² This represents as many as 1.3% to 1.6% of 632,615 services.³³

18
19 **Q. GENERALLY, WHEN WORK MUST BE DONE TO REPAIR OR**
20 **REPLACE A CUSTOMER-OWNED SERVICE LINE, WHO IS**
21 **RESPONSIBLE FOR THE COST OF THAT WORK?**

³² Response to RCR-E-40.

³³ Response to SIR-4; 2016 Annual Report to the Board of Public Utilities; Page 190 of 242.

1 A. The customer is responsible for the cost of repairing or replacing the portion of the
2 service line owned by the customer.

3 **Q. IF THIS IS THE CASE, DO YOU BELIEVE THAT THE COMPANY**
4 **SHOULD TAKE ON THE COST OF REPLACING CUSTOMER-OWNED**
5 **LEAD SERVICES AND THEN RECOVER THAT COST FROM ALL OF**
6 **ITS CUSTOMERS THROUGH RATES?**

7 A. No. I do not believe that one group of customers should be singled out and treated
8 differently because their services are of a particular material. It is important to note
9 that the Company's proposal ultimately asks all customers to bear the cost of this
10 program and I believe that this is not equitable for customers who may have copper
11 or plastic service lines, for example, or for those customers who may have already
12 borne the cost of replacing their own lead service lines. While I do not believe that
13 the Company should be permitted to capitalize the cost of customer-owned lead
14 service replacement, I would support alternative financing programs wherein the
15 Company acts as an agent to secure low interest funds or grants on behalf of its
16 customers who may need to replace a lead service line. I understand that the
17 Company is pursuing funding from the New Jersey Environmental Infrastructure
18 Trust that would provide 90% principal forgiveness for the cost of full lead service
19 line replacement. If these funds could be secured and used for customers who are
20 least likely to be able to afford the cost of the replacement, the work could be
21 completed as recommended by the Rule and the AWWA Standard without causing
22 other customers to subsidize the cost of the program.

23

1 **Q. GIVEN THAT THE COMPANY MAY HAVE AS MANY AS 10,000**
2 **CUSTOMER-OWNED LEAD SERVICES IN ITS SYSTEMS, WHAT IS THE**
3 **ESTIMATED TOTAL COST OF THIS PROGRAM?**

4 A. The average cost of a service replacement appears to be on the order of \$3,826, as
5 shown on Schedule HJW-11. At this unit cost, and the Company's estimate of 8,000
6 to 10,000 services, the total replacement program is likely to cost between \$30.6 and
7 \$38.3 million and this cost is likely to be spread over many years.

8
9 **Q. WHAT IS YOUR RECOMMENDATION REGARDING THE COMPANY'S**
10 **PROPOSAL TO TRANSFER THE \$440,000 ACCUMULATED IN**
11 **ACCOUNT 186 TO UTILITY PLANT IN SERVICE?**

12 A. This amount should be excluded from Utility Plant in Service.

13

14 **10. REVENUE STABILIZATION MECHANISM**

15 **Q. HAS THE COMPANY PROPOSED A REVENUE STABILIZATION**
16 **MECHANISM IN THIS CASE?**

17 A. Yes, it has. The Company has proposed a formulaic approach to maintain its
18 revenues at the minimum level established in this rate case. The intent of the
19 Company's proposal is to maintain revenues at a pre-determined level regardless of
20 weather related variations in sales and additional declines in base use due to
21 customer efficiencies.

22

1 **Q. IF THE COMPANY'S PROPOSAL IS IMPLEMENTED, COULD**
2 **CUSTOMERS SEE ADDITIONAL RATE INCREASES IN THE PERIOD**
3 **FOLLOWING THE CONCLUSION OF THIS BASE RATE CASE AND ITS**
4 **NEXT BASE RATE FILING?**

5 A. Yes. In fact, Schedule DMD-1 shows the effect that such a mechanism would have
6 had for the years 2007 through 2016. Surcharges, or additional revenues collected
7 from customers in excess of base rates, as high as \$30,178,208 would have been
8 collected. With total adjusted Test Year revenues of \$681,016,313, this surcharge
9 would have amounted to a 4.43% increase in rates. Schedule DMD-1 shows that in
10 the ten years from 2007 through 2016, credits would only have been given back to
11 customers in two years, 2005 and 2016.

12
13 **Q. HOW IS A SURCHARGE OR CREDIT CALCULATED UNDER THE**
14 **COMPANY PROPOSAL?**

15 A. In Schedule DMD-1, we can see that the Company is calculating the difference
16 between Authorized Revenues and Actual Revenues on an annual basis. They are
17 also calculating the difference between Authorized Production Costs and Actual
18 Production Costs for the same year. Any savings in Production Costs are subtracted
19 from any shortage in Revenues to determine the amount of the annual surcharge. To
20 the extent that Actual Revenues exceeded the Authorized Revenues and Actual
21 Production Costs were less than Authorized Production Costs, the surplus revenues
22 are increased by the savings in Production Costs to determine the credit due to
23 customers.

1 **Q. DO YOU BELIEVE THAT THIS APPROACH FAIRLY CAPTURES THE**
2 **RELATIONSHIP BETWEEN SALES VOLUME AND THE COST OF**
3 **PROVIDING SERVICE?**

4 A. Notwithstanding a general concern about formulaic rate setting, I believe there are
5 numerous weaknesses in the Company's proposal. First, there does not appear to
6 be a means for reconciling customer additions (organic growth as opposed to
7 customers obtained through acquisitions) and the resulting additional sales,
8 investment and O&M expenses. Authorized revenues are determined in a base rate
9 proceeding by estimating not only volumetric sales but the number of customers to
10 be served. Changes in the number of customers does not seem to be adequately
11 addressed nor is the investment required to service those new customers. Second,
12 production costs can vary for reasons that have nothing to do with the amount of
13 water produced. Chemical costs can be influenced by market conditions effecting
14 the chemical suppliers. The unit cost of coagulants, for example, could change up
15 or down and this will impact the Company's cost of production. Such changes are
16 not apparently accounted for in the proposed mechanism. Third, investments in
17 new treatment systems to improve the efficiency of production (e.g., participation
18 in ELUP programs with resulting savings in power costs, the installation of more
19 efficient pumping units, new more efficient chemical mixing systems, new sludge
20 dewatering systems, etc.) can impact the cost of production regardless of changes
21 in sales volume. In fact, the Company has touted its efforts to reduce operating
22 expenses by making capital investments and claims that it can invest \$7,000,000

1 for every \$1,000,000 in reduced operating costs without impacting rates.³⁴ Such
2 changes are not addressed in the Company's proposal. Fourth, changes in Non-
3 Revenue Water, and in particular improvements that reduce real losses from the
4 system are not addressed in the proposal. Fifth, the current level of forecasting
5 revenues and expenses into the future is limited by *In re: Elizabethtown* to changes
6 that are fixed, known and measureable for a period limited to nine months after the
7 close of the Test Year. Given that the Company has been on a roughly two-year to
8 three-year rate filing cycle and the continued use of the DSIC mechanism will
9 require the Company to file for base rates every three years, a reliable forecast of
10 revenues and expenses for as many as 36 months beyond the end of the Test Year
11 may be needed to properly implement a mechanism like the one proposed by the
12 Company. The use of such forecasts to adjust income and expenses is currently
13 inconsistent with the Board's policy in setting rates.

14
15 **Q. DO YOU BELIEVE THAT SUCH A MECHANISM IS FAIR AND**
16 **EQUITABLE?**

17 A. No. Formulaic rate setting should be avoided because it does not allow all matters
18 effecting rates to be considered. In addition, customers may not receive adequate
19 notice of changes in rates.

20
21 **Q. WHAT IS YOUR RECOMMENDATION REGARDING THE COMPANY'S**
22 **PROPOSED REVENUE STABILIZATION MECHANISM?**

³⁴ Op. Cit., MacLean; Page 16, Lines 14-17.

1 A. The proposal should be rejected by the Board.

2

3 **11. TANK PAINTING**

4 **Q. WHAT HAS THE COMPANY PROPOSED TO DO WITH ITS TANK**
5 **PAINTING EXPENSE IN THIS PROCEEDING?**

6 A. The Company proposes to capitalize the cost of tank painting. They have rebranded
7 tank painting as “engineered tank coating systems” and likened the work to cleaning
8 and lining of unlined water mains.

9

10 **Q. DO YOU AGREE WITH THE COMPANY’S PROPOSAL?**

11 A. No, I do not. When a steel tank is constructed, it is painted and the full cost of the
12 structure, including the initial painting is treated as a capital expense. This is
13 appropriate and consistent with the Uniform System of Accounts adopted by the
14 Board in Docket No. 9326 on September 30, 1959.³⁵ Subsequent painting events in
15 the life of a structure are to be expensed according to the Operating Expense
16 Instructions.³⁶

17

18 **Q. IS TANK PAINTING ANALOGOUS TO CLEANING AND LINING OF**
19 **WATER MAINS?**

20 A. It is not. Cleaning and lining of water mains is normally done on unlined cast iron
21 pipe. These mains were initially installed without an internal cement lining. Over

³⁵ Uniform System of Accounts; Utility Plant Instructions, Section 8, Items 29 and 50.

³⁶ Ibid; Operating Expense Instructions, Section 2, Paragraph C, Item 3.

1 time, these lines have corroded and become tuberculated. The cleaning operation
2 mechanically removes the tuberculations resulting in a smooth surface that can be
3 lined with a new material that was not present at the time of the initial pipe
4 installation. The linings are typically cement mortar or epoxy-based materials that
5 provide a barrier between the iron surface of the pipe and the water it will carry. In
6 the case of cement linings, the purpose is to isolate the iron water main from the
7 water and provide a high pH zone at the face of the metal to prevent further
8 corrosion. The epoxy-based lining systems also isolate the iron pipe surface from
9 the water and can also provide structural support in addition to that available from
10 the original water main. In either case, when water mains are cleaned and lined,
11 something completely new is being installed that was not present at the initial
12 installation. This is not the case with tank painting.

13
14 **Q. IN THIS PROCEEDING, HAS THE COMPANY PROPOSED TO ALSO**
15 **INCREASE THE AMOUNT OF TANK PAINTING DONE IN ANY ONE**
16 **YEAR OVER HISTORIC LEVELS IT HAS ACTUALLY COMPLETED?**

17 A. Yes, it has. The Company claims that it will repaint an average of 6 tanks per year at
18 a typical unit cost of \$1,500,000 per tank.³⁷ This is an average cost of \$9,000,000
19 per year. This is significantly higher than the average cost actually incurred by the
20 Company in recent years. Over the last ten years, the Company has completed an
21 average of \$4,1154,801 in tank painting and in the last three years it has averaged
22 \$3,806,259.

³⁷ Op. Cit.; Shields; Page 32, Line 9.

1

2 **Q. DO YOU BELIEVE THAT THIS EXPENSE SHOULD BE INCREASED TO**
3 **\$9,000,000 PER YEAR?**

4 A. The actual level of tank painting expense has never reached this level. Rate Counsel
5 Witness Robert Henkes has recommended a modified level of tank painting expense
6 and I agree with his recommendation. In future rate proceedings, if the Company is
7 able to demonstrate its ability to increase the level of work to amounts exceeding
8 Mr. Henkes' recommendation, I would support a further increase in this expense at
9 that time. However, consistency with the Uniform System of Accounts should be
10 maintained and this work should be expensed, not capitalized.

11

12 **Q. DOES THIS COMPLETE YOUR TESTIMONY AT THIS TIME?**

13 A. Yes it does.

14

**APPENDIX A - Qualifications
Of
Howard J. Woods, Jr., P.E.**

KEY EXPERIENCE

Mr. Woods has over 40 years of experience in water and wastewater utility engineering and operations. In his career he has worked for US EPA, engineering consultants and in numerous senior engineering and operational roles at a large investor-owned utility. His experience is well rounded, covering all aspects of public water and wastewater operations and management including outsourcing, acquisitions, maintenance, water production, filtration, distribution, water quality, wastewater collection and treatment, regulatory compliance and safety.

Mr. Woods managed numerous water and wastewater management contracts. He has assisted clients in outsourcing management activities and transferring ownership of complete utility systems. He has advised clients on alternative contracting approaches and reduced operating costs by renegotiating plant operations contracts. He has helped clients reduce operating expenses and he has provided expert testimony in construction arbitrations, contamination incidents and utility rate and service proceedings.

EDUCATION

Masters of Civil Engineering, Water Resources – Villanova University

Bachelor of Civil Engineering (cum laude) – Villanova University

ACCOMPLISHMENTS

- Directed and managed the procurement process leading to the sale of a municipal wastewater system in Southeastern Pennsylvania. The sale of the Upper Dublin Township Sanitary Sewer System will yield \$20,000,000 for a system serving approximately 8,000 connections and having annual revenues of \$3,000,000. Advised the Township on alternative outsourcing and contracting approaches, reduced interim operating expenses by 30% prior to the sale by renegotiating the plant operations contract.
- Prepared an analysis of ownership alternatives for Lower Makefield Township's sanitary sewer collection system. Managed a procurement process that led to the receipt of a \$17 million bid for the potential sale of a system serving 10,700 residential and commercial customers.
- Assessed an existing public private partnership contract and future contracting alternatives for the Jersey City Municipal Utilities Authority (JCMUA). Recommended alternative contract terms and assisted JCMUA in negotiating a new ten-year operations agreement saving approximately \$3,000,000 per year.
- Assisted Greater Ouachita Water Company, a non-profit Louisiana water and sewer utility, in evaluating operating contract alternatives. Provided assistance in identifying qualified operators to be invited to bid a multi-year full-service operating contract. Assisted in evaluating bids and in contract negotiations.

ACCOMPLISHMENTS (CONTINUED)

- Completed an independent assessment of ownership and operating alternatives for the Township of Sparta water utility. The study evaluated current operating and financial conditions of the utility and considered two alternative service delivery approaches: contract operation and a sale of the system to an investor-owned utility.
- Completed an assessment of the financial and operating impacts of a proposal by a Pennsylvania municipality to dissolve its municipal water and sewer authority. The authority served multiple political subdivisions and dissolution would have resulted in regulation by the Pennsylvania Public Utility Commission. The additional regulatory burdens identified and limitations on municipal financing capacity resulted in a recommendation to retain authority ownership and operations.
- Completed an analysis of ownership alternatives for the Bristol Township Sewer Department. Reviewed capital needs and financing arrangements, rate structure and system revenues, operational costs and regulatory compliance issues. Assessed potential interest in the acquisition of the system by other municipal and investor-owned entities and assessed the possible impact of a sale on rates and service quality. The study recommended retention of the system by the Township and offered recommendations to reduce costs and improve staffing levels.
- Completed the assessment of a potential water utility acquisition by a Pennsylvania Municipal Authority. Assisted the Authority in developing a bid proposal for the acquisition and assessing the impact on revenue requirement and consumer rates resulting from the acquisition.
- Provided litigation support to Cornwall Borough Municipal Authority in its efforts to prevent Cornwall Borough from dissolving the Authority. Provided expert testimony on the service and financial impacts of dissolving the Authority. Developed capital plans for the Authority and provided expert testimony regarding the need to construct certain fire protection and other distribution improvements.
- Completed an evaluation of the revenue requirement associated with the decommissioning of a wastewater treatment plant and the diversion of wastewater to a regional treatment works for the North Wales Water Authority. Assessed the rate impact to customers of potentially retaining and improving an existing wastewater treatment plant and the rate impact of joining a regional treatment system. The evaluation supported the decision to regionalize the sewage treatment function.
- Assisted the Banco Gubernamental de Fomento para Puerto Rico, Autoridad para el Financiamiento de la Infraestructura de Puerto Rico and PricewaterhouseCoopers in developing a new operating contract for the Puerto Rico Aqueduct and Sewer Authority (PRASA). The contract was developed, bid and awarded in less than six months, cutting the normal procurement time by nearly two-thirds. The value of the contract was \$300 million per year.
- Completed an independent assessment of the planning and engineering decision making for a major water treatment plant renovation project undertaken by Aquarion Water Company of Connecticut in Stamford Connecticut. Evaluated process selection decisions, project sizing and regulatory compliance issues and testified before the Connecticut Department of Public Utility Control on the findings of the evaluation.

ACCOMPLISHMENTS (CONTINUED)

- Completed audits of water production operations and water quality management functions at Aquarion Water Company of Connecticut, Aquarion Water Company of Massachusetts and Aquarion Water Company of New Hampshire. Assessed operational procedures and staffing levels, reviewed risk management plans including emergency response plans and dam safety programs, evaluated programed and preventative maintenance systems and developed recommendations to assist the Company in lowering the cost of service while reducing risk and improving reliability.
- Completed an audit of the watershed and environmental management functions at Aquarion Water Company of Connecticut. Assessed watershed management, monitoring and operational procedures, reviewed compliance tracking systems, reviewed risk management strategies and developed recommendations to assist the Company in reducing risk and improving reliability and watershed protection efforts.
- Completed a management audit of the water distribution function at Aquarion Water Company of Connecticut. Evaluated system monitoring and maintenance practices, assessed the impact of the use of contract maintenance and construction services to reduce Company workforce levels. Developed recommendations to improve the Company's programed and preventative maintenance systems, corrosion control procedures and non-revenue water control programs.
- Completed a management audit of the engineering and planning functions at Aquarion Water Company of Connecticut. Evaluated the Company's planning practices and procedures and developed recommendations to assure the efficient application of capital to the renewal, replacement and expansion of the Company's extensive utility plant assets.
- Assisted Greater Ouachita Water Company, a Louisiana non-profit water and sewer utility, in identifying the cause of water quality complaints resulting from poor color removal filtration processes. Recommended improvements to minimize capital modifications of the chemical feed, filter backwash and spent wash water treatment systems.
- Completed a Comprehensive Technical Assistance (CTA) project for the City of New Brunswick (NJ) Water Utility. The CTA, which was Ordered to be completed by the New Jersey Department of Environmental Protection, developed operating procedures to rectify numerous performance limiting factors that contributed to several drinking water quality issues and Safe Drinking Water Act Rules compliance issues. Completion of the CTA allowed a major component of the Consent Order to be satisfied.
- Provided ongoing technical and operations assistance to the Shelter Island Heights Property Owners Corporation related to the operation and maintenance of the community water and sewer utilities. Developed recommendations for asset maintenance and renewal as well as employee safety.
- Completed a Vulnerability Assessment for a municipally-owned public water system in northern New Jersey. Organized, planned and conducted the assessment using the RAM-WSM methodology. Evaluated existing physical protection systems at utility facilities, developed threat assessments and adversary sequence analyses, prepared recommendations to reduce risk.

ACCOMPLISHMENTS (CONTINUED)

- Completed an energy management evaluation for the Elmira (NY) Water Board and provided operator training on energy management strategies. Recommendations from the study allowed the client to reduce energy expenses by 30% through a series of operational modifications.
- Completed an energy management audit of the Pittsburgh Water and Sewer Authority and identified strategies for reducing power consumption. The results of this investigation provided the foundation for the Authority and its contract manager to develop and implement more effective maintenance and operations procedures to reduce energy costs.
- Served as an expert witness in a matter involving the diversion of service by a large commercial customer of Atlantic City Municipal Utilities Authority (ACMUA). Statistically analyzed customer water use and billing records by relating water use variables (e.g. weather, occupancy rates, and restaurant output) to recorded consumption. Identified periods of service diversion and assisted ACMUA in the collection of revenues and penalties due.
- Served as an expert witness in a matter involving excess billing of a large commercial customer of a New Jersey public utility. Statistically analyzed usage patterns over a ten-year period and identified periods of excess billing. Assisted the customer in negotiating a \$50,000 settlement of the dispute.
- Provided litigation support in a dispute involving cost of service allocations made by Erie City Water Authority (ECWA) in establishing rates covering a ten-year period beginning in 2004. Prepared an expert report addressing the cost allocation methods used by ECWA and demonstrated that the determination of the ECWA revenue requirement was fair and reasonable and that the allocation methods used to assign costs to various rate classes were done using reasonable professional judgment and standard professional care.
- Provided litigation support in a dispute involving water rates billed by Passaic Valley Water Commission to retail customers in the Borough of Lodi. Reviewed past rate setting practices and related rate covenants in the Lodi water system lease, prepared expert testimony and assisted the Passaic Valley Water Commission in developing rates consistent with the Court's Order.
- Developed a model of the major water resources facilities in the Passaic, Pompton, Ramapo and Hackensack River Basins that allows the calculation of the safe and dependable yield of the Wanaque/Monksville, Point View and Oradell Reservoir systems under varying drought conditions. The model is being used by Passaic Valley Water Commission to evaluate long-term water supply management strategies and to plan for future water supply needs.
- Assisted New York City Department of Environmental Protection in compiling a report on the estimated safe yield of the City water supply reservoir system. A current assessment of safe yield was required by agreement of the Parties to the 1954 US Supreme Court Decree governing the use and export of water from the Delaware River Basin. Provided additional consulting assistance on plans to assure system reliability during planned repairs to the Roundout-West Branch Tunnel, an aqueduct that transports up to 800 million gallons of water per day to the City from the Delaware Basin reservoir system.

ACCOMPLISHMENTS (CONTINUED)

- Developed an analysis of the costs of the Hickory Log Creek Reservoir and the yield sharing arrangements between the City of Canton and the Cobb County-Marietta Water Authority. Developed recommended methods to assess the impact of US Army Corps of Engineers operating policies on future operating and capital cost allocations.
- Prepared a long-range water supply needs forecast for the Passaic Valley Water Commission. Analyzed water use patterns within the Commission's retail service area and for over two-dozen large contract customers. Produced population forecasts for the service area and individual water demand forecasts for each contract sale-for-resale customer using statistical and numeric forecasting techniques. The forecast projects total annual demand, average day, maximum month and maximum day demands and forms the basis for other ongoing facility and operations planning efforts.
- Prepared a long-range water supply needs forecast for the North Wales Water Authority. Analyzed water use patterns within the Authority's retail service and identified the water supply requirement for the Authority's share in a regional water supply system. Produced customer forecasts for the service area and individual water demand forecasts for large industrial customers and existing and potential wholesale water customers. Applied statistical and numeric forecasting techniques to assess trends in unit water use for each customer class. The forecast projects total annual demand, average day, maximum month and maximum day demands and forms the basis for other ongoing facility and operations planning efforts.
- Developed a Water Allocation Permit renewal and extension application for the Passaic Valley Water Commission. Secured a new 25-year permit for the diversion of surface water from the Pompton and Passaic Rivers. The new water diversion permit for the Commission supports more flexible operations and more efficient source utilization. The Commission serves a retail service population of 325,000 and effectively serves an additional 260,000 people through sale-for-resale connections.
- Prepared a cost of service allocation study for Passaic Valley Water Commission, a regional water system that serves a large urban retail service population and a significant outlying area through direct retail and wholesale water sales. Allocated costs based on standard methodologies to Owner Cities, External Cities Retail and Wholesale classes of service. The Commission has annual revenues in excess of \$71 million.
- Prepared a cost of service allocation study for three Pennsylvania Municipal Utilities Authorities considering a joint water supply expansion project. Evaluated and allocated anticipated construction and operating costs for the plant expansion and assigned costs of existing facilities using a commodity-demand allocation method. Developed a recommended tariff design to allow for the fair recovery of prospective costs associated with the expanded facilities.
- Prepared a cost allocation study and tariff design study for Bedminster Municipal Utilities Authority. The study developed an integrated five-year financial plan for the Authority and allocated the revenue requirement among water and sewer services. Rates were developed to allow the Authority to properly recover costs from its various water and sewer customer classes.
- Developed a commercial rates study for Whitemarsh Township Authority that

ACCOMPLISHMENTS (CONTINUED)

resulted in the modernization of the Authority's commercial rate structure. A system comprised of 33 different rate costs was replaced with a uniform rate structure including a fixed service charge based on water meter capacity ratios and volumetric changes for the quantity of water actually used.

- Developed a residential rates study for Whitemarsh Township Authority that resulted in evaluating the cost and benefits of converting a fixed-rate EDU tariff to a volumetric tariff. Developed recommendations for new rates for the ensuing five-year period.
- Developed an initial tariff study for Branchville Borough. The Borough had constructed a new community sanitary sewer system to replace hundreds of on-lot disposal systems and small, individual wastewater treatment systems located throughout the Borough. Using engineer's estimates of operating costs, developed a total revenue requirement and allocated that revenue requirement to three classes of customer service. Developed an initial rate structure designed to recover the projected full revenue requirement.
- Prepared a cost of service allocation study for Southeast Morris County Municipal Utilities Authority, a regional water system that serves a suburban retail service population and several wholesale water customers. Allocated costs based on standard methodologies to various classes of residential, commercial industrial and wholesale service. Developed a plan to move each service class to full-cost pricing over time.
- Developed a five-year comprehensive business plan for Passaic Valley Water Commission. This plan moved the Commission from an annual operating budget to a five-year budget that links operating costs, capital construction and debt service requirements to customer growth and revenue requirements and rates. The plan was instrumental in obtaining an improved bond rating and positioning the Commission to undertake a major capital improvement program.
- Developed a five-year comprehensive business plan for the North Wales Water Authority. This plan established a rolling five-year operating and capital budget that links operating costs, capital construction and debt service requirements to customer growth and revenue requirements and rates. The plan was instrumental in maintaining current rates while also maintaining the Authority's AA bond rating.
- Served as an expert witness in an arbitration involving a dispute between a New Jersey municipal water department and A.C. Schultes, Inc., a well contractor. Assisted A.C. Schultes in supporting its claim for a contract modification and the recovery of unanticipated expenses. The arbitrator awarded the contractor 100% of its cost claim.
- Served as an expert witness in a matter involving the alleged contamination of a New Jersey municipal water system with heavy metals and organic chemicals. Reviewed over 38,000 discrete water quality sample results, analyzed the operational records of the system and developed a computer model (EPANET2) depicting water flow and water quality changes over a period spanning two decades. Assisted the client in successfully defeating a threatened class action lawsuit at the certification level.
- Served as a mediator involving a dispute between the Long Beach Township Water Department and Don Siegel Construction Co., Inc., a pipeline installation contractor.

ACCOMPLISHMENTS (CONTINUED)

Assisted the parties in resolving various construction cost claims and in interpreting the contract construction documents. Litigation over the disputes was avoided.

- Developed a review of alternatives for the renovation or replacement of the Ridge Road Reservoir for Perkasio Regional Authority. Analyzed alternatives for reconstructing or replacing an in-ground water distribution reservoir. Developed a scope of services for a site geotechnical evaluation and assessed the potential cost of various renewal strategies.
- Reviewed engineering plans and operational practices in numerous water and wastewater rate adjustment proceedings and quality of service proceedings for the New Jersey Division of Rate Counsel. Assessed utility engineering design and construction plans, developed alternatives to utility proposed projects, and evaluated the utility companies' ability to render safe, adequate and proper water or wastewater service. Provides expert testimony in the following utility rate, franchise expansion and service quality proceedings:
 - Acacia Lumberton Manor Fire Service Complaint
BPU Docket No. WC01080495
 - Applied Waste Water Management Rates
BPU Docket No. WR03030222
 - Applied Waste Water Management Base Rates
BPU Docket No. WR08080550
 - Applied Waste Water Management Franchise
BPU Docket No. WE03070530
 - Applied Waste Water Management Andover Franchise
BPU Docket No. WE04111466
 - Applied Waste Water Management Hillsborough Franchise
BPU Docket No. WE04101349
 - Applied Waste Water Management Oakland Franchise
BPU Docket No. WE04111467
 - Applied Waste Water Management Union Twp. Franchise
BPU Docket No. WE050414
 - Applied Waste Water Management Tewksbury Franchise
BPU Docket No. WR08100908
 - Aqua NJ Freehold Franchise Extension Review
BPU Docket WE09120965
 - Aqua NJ Pine Hill Franchise
BPU Docket No. WE05070581
 - Aqua NJ Upper Freehold Franchise
BPU Docket No. WE05100822
 - Aqua NJ Readington Wastewater Franchise
BPU Docket No. WE07030224
 - Aqua New Jersey Base Rate Case
BPU Docket No. WR07120955
 - Aqua New Jersey Acquisition of Bloomsbury Water
BPU Docket WE09050360
 - Aqua New Jersey Acquisition of Harkers Hollow Water
BPU Docket WM09020119
 - Aqua New Jersey Base Rate Adjustment
BPU Docket No. WR09121005

ACCOMPLISHMENTS (CONTINUED)

- Aqua New Jersey Base Rate Adjustment
BPU Docket No. WR11120859
- Aqua New Jersey Base Rate Adjustment
BPU Docket WR14010019
- Aqua New Jersey DSIC Foundational Filing
BPU Docket No. WR12070685
- Aqua New Jersey Byram Franchise & Acquisition
BPU Docket No. WE15080957
- Aqua New Jersey Cliffside Park Acquisition
BPU Docket No. WE16040307
- Aqua New Jersey Acquisition of Oakwood Village
BPU Docket WM16080739
- Aqua New Jersey Base Rate Adjustments
BPU Docket No. WR16010089
- Aqua NJ Distribution System Improvement Charge
Foundational Filing
BPU Docket No. WR16010090
- Atlantic City Sewerage Company Base Rate Adjustment
BPU Docket No. WR09110940
- Atlantic City Sewerage Company Base Rate Adjustment
BPU Docket WR11040247
- Atlantic City Sewerage Company Base Rate Adjustment
BPU Docket WR14101263
- Bayonne MUA – United Water NJ/ Kohlberg, Kravis, Roberts Joint
Venture Operations & Financing Agreement
BPU Docket No. WM12080777
- Bayview Water Company Rates
BPU Docket No. WR01120818
- Camden and United Water Environmental Services,
Inc. Management Services Agreement Modifications
BPU Docket No. WM12050457
- Borough of Haledon Rates
BPU Docket No. WR01080532
- City of Orange Privatization Review
BPU Docket No. WO03080614
- Crestwood Village Loan Approval
BPU Docket No. WF04091042
- Crestwood Village Water Co Base Rates
BPU Docket No. WR07090706
- Elizabethtown Water Co. v. Clinton Board of Adjustment
BPU Docket No. WE02050289
- Elizabethtown Water Company Rates
BPU Docket No. WR03070510
- Elizabethtown Water Company Franklin Franchise
BPU Docket No. WE05020125
- Elizabethtown Water Company Purchased Water Adjustment Clause
BPU Docket No. WR04070683

ACCOMPLISHMENTS (CONTINUED)

- Environmental Disposal Corporation Main Extension Agreement
BPU Docket No. WO04091030
- Environmental Disposal Corporation Rates
BPU Docket No. WR04080760
- Environmental Disposal Corporation Rates
BPU Docket No. WR07090715
- Environmental Disposal Corporation Change in Control
BPU Docket No. WM15040492
- Fayson Lake Water Company Rates
BPU Docket No. WR03040278
- Fayson Lake Water Company Base Rates
BPU Docket No. WR07010027
- Fayson Lake Water Company Base Rates
BPU Docket WR14050405
- Gordon's Corner Water Company Rates
BPU Docket No. WR03090714
- Gordons Corner Water Co Base Rate Adjustment
BPU Docket No. WR10060430
- Gordons Corner Water Co Base Rate Adjustment
BPU Docket No. WR12090807
- Gordons Corner Water Co Base Rate Adjustment
BPU Docket WR14040325
- Jensens Deep Run Franchise Transfer
BPU Docket No. WE10070453
- Lake Valley Water Company Rates
BPU Docket No. WR04070722
- Mahwah Tank Maintenance Privatization
BPU Docket No. WO15050548
- Middlesex Water Company Rates
BPU Docket No. WR03110900
- Middlesex Water Company Rates
BPU Docket No. WR05050451
- Middlesex Water Company Base Rates
BPU Docket No. WR07040275
- Middlesex Water Co Transmission Main Prudency Review
BPU Docket No. WO08020098
- Middlesex Water Company Base Rates
BPU Docket No. WR09080666
- Middlesex Water Company DSIC Foundational Filing
BPU Docket No. WR12111021
- Middlesex Water Company Base Rates
BPU Docket No. WR12010027
- Middlesex Water Co DSIC Foundational Filing
BPU Docket No. WR14050508
- Middlesex Water Company Base Rate Adjustment
WR15030391

- Montague Water Company Rates

ACCOMPLISHMENTS (CONTINUED)

- BPU Docket No. WR03121034
- Montague Sewer Company Rates
BPU Docket No. WR03121035
- Montague Sewer Company Rates
BPU Docket No WR05121056
- Montague Water Company Acquisition
BPU Docket No. WM10060432
- Montague Water & Sewer Company Rates
BPU Docket No WR12110983
- Mount Holly Water Company Rates
BPU Docket No. WR03070509
- Mount Olive Villages Water & Sewer Franchise
BPU Docket No. WE03120970
- Mount Olive Villages Sewer Base Rate Adjustment
BPU Docket No. WR16050391
- Mount Olive Villages Water Base Rate Adjustment
BPU Docket No. WR16050390
- New Jersey American Water Company Rates
BPU Docket No. WR03070511
- New Jersey American Water Company Rates
BPU Docket No. WR06030257
- New Jersey American Water Acquisition of Mt.
Ephraim and Approval of Municipal Consent
BPU Docket No. WE06060431
- New Jersey American Water Purchased Water Adjustment Clause
BPU Docket No. WR05110976
- New Jersey American Water Company – Mantua Franchise
BPU Docket No. WE07060372
- New Jersey American Water Co – Rocky Hill Franchise
BPU Docket No. WE07020103
- New Jersey American Water Company Rates
BPU Docket No. WR08010020
- New Jersey American Hopewell Township Franchise
BPU Docket No. WE07120981
- New Jersey American Water Co/City of Trenton
Joint Petition for Approval of the Sale of Water System
BPU Docket No. WE08010063
- New Jersey American Water Company Petition for Approval of a
Distribution System Improvement Charge (DSIC)
BPU Docket No. WO08050358
- New Jersey American Water Co Management Audit
BPU Docket No. WA09070510
- New Jersey American Water Base Rate Adjustment
BPU Docket No. WR10040260
- New Jersey American Water Company Franklin Franchise Review
BPU Docket No. WE11070403
- New Jersey American Water Company Base Rate Adjustment
BPU Docket No. WR11070460

ACCOMPLISHMENTS (CONTINUED)

- New Jersey American Water Company Base Rate Adjustment
BPU Docket No. WR15010035
- New Jersey American Water – Eastampton Franchise Review
BPU Docket No. WE17020139
- New Jersey American Water – Shorelands Water Co Acquisition
BPU Docket No. WM16101036
- New Jersey Natural Gas Rates
BPU Docket No. GR07110889
- Oakwood Village Sewer Change in Control
BPU Docket No. WM07070535
- Oakwood Village Sewer System Change in Control
BPU Docket No. WM15091006
- Parkway Water Company Rates
BPU Docket No. WR05070634
- Pinelands Water Company Rates
BPU Docket No. WR03121016
- Pinelands Wastewater Company Rates
BPU Docket No. WR03121017
- Pinelands Water Company Rates
BPU Docket No. WR08040282
- Pinelands Wastewater Company Rates
BPU Docket No. WR08040283
- Pinelands Water Company Rates
BPU Docket No. WR120807342
- Pinelands Wastewater Company Rates
BPU Docket No. WR12080735
- Pinelands Water Company Rates
BPU Docket No. WR15101200
- Pinelands Wastewater Company Rates
BPU Docket No. WR15101202
- Rahway Operational Services Agreement Review
BPU Docket No. WO16070678
- Rock GW, LLC Determination of Applicability of Board Regulation
BPU Docket No. WO08030188
- Rock GW, LLC Determination of Applicability of Board Regulation
BPU Docket No. WO10100739
- Roxbury Water Company Rates
BPU Docket No. WR09010090
- Roxciticus Water Company Change in Control
BPU Docket No. WM15080982
- SB Water & Sewer Company Acquisition
BPU Docket No. WM16030197
- Seabrook Water Company Franchise
BPU Docket No. WC02060340

- Seaview Harbor Water Company Change in Control
BPU Docket No. WM13100957
- Shorelands Water Company Rates

ACCOMPLISHMENTS (CONTINUED)

- BPU Docket No. WR04040295
 - Shorelands Water Company Base Rates
BPU Docket No. WR10060394
 - Shore Water Company Rates
BPU Docket No. WR09070575
 - South Jersey Water Supply Change in Control
BPU Docket No. WM07020076
 - Suez Arlington Hills Wastewater Rates
BPU Docket No. WR16060510
 - Suez Water NJ DSIC Foundational Filing
BPU Docket No. WR13030210
 - Suez Water NJ Borstad Water Company Acquisition
BPU Docket No. WE15111247
 - Suez Water New Jersey Base Rate Adjustment
BPU Docket No. WR15101177
 - Suez Water Toms River Base Rate Adjustments
BPU Docket No. WR15020269
 - Suez Water NJ – USG Cottonwood Agreement
BPU Docket No. WR15070856
 - Suez Water NJ Electrical Efficiency Contract Eval.
BPU Docket No. WO17050494
 - United Water Acquisitions Evaluation
BPU Docket No. WM02060354
 - United Water Arlington Hills Franchise
BPU Docket No. WE07020084
 - United Water Arlington Hills Sewerage Base Rates
BPU Docket No. WR08100929
 - United Water New Jersey Base Rates
BPU Docket No. WR07020135
 - United Water New Jersey Base Rates
BPU Docket No. WR08090710
 - United Water New Jersey Base Rates
BPU Docket No. WR11070428
 - United Water New Jersey DSIC Foundational Filing
BPU Docket No. WR12080724
 - United Water New Jersey Management Audit
BPU Docket: WA05060550
 - United Water New Jersey Affiliate Transaction Review – JPI Painting
BPU Docket No. WO10060410
 - United Water New Jersey Affiliate Transaction
Review – Utility Service Contract
BPU Docket No. WO10060409

- United Water New Jersey Mt Arlington Franchise
Extension Review
BPU Docket No. WE09121006
- United Water New Jersey Vernon Township Franchise

ACCOMPLISHMENTS (CONTINUED)

- Extension Review
BPU Docket WE10110870
 - United Water New Jersey Vernon Township Franchise
Extension Review
BPU Docket WE11030155
 - United Water Great Gorge/Vernon Sewer Base Rates
BPU Docket No. WR10100785
 - United Water Toms River Base Rates
BPU Docket No. WR080830139
 - United Water Toms River Base Rates
BPU Docket No. WR12090830
 - United Water West Milford Sewerage Base Rates
BPU Docket No. WR08100928
- Assisted the New Jersey Division of Rate Counsel in assessing drought conditions effecting water utilities in New Jersey during the 2002 drought. Analyzed proposals for water supply interconnections to mitigate drought impacts, developed position statements regarding pricing alternatives, and provided a critique of State water supply management initiatives prior to and during drought conditions.
- Assisted the New Jersey Division of Rate Counsel in assessing the need for a Distribution System Improvement Charge (DSIC) to allow regulated water utilities to accelerate the recovery of capital investments in water distribution assets (BPU Docket WO10090655). Provided financial analyses of current and prospective distribution renovation programs. Reviewed and commented on draft language for a generic rule making.
- Assisted the Delaware Public Advocate in assessing drought conditions effecting water utilities in northern New Castle County during the 2002 drought (PSC Docket No. 323-02). Reviewed water utility operations prior to and during the drought emergency, assessed the effectiveness of use curtailments, developed recommendations to assure proper, cost-effective resources management for future drought conditions.
- Assisted the Delaware Public Service Commission in a determination of rate base for Artesian Water Company in PSC Docket 08-96. Evaluated selected plant facilities and proposed projects to determine the need to impute revenues for under-utilized facilities in establishing new base rates.
- Assisted the Delaware Public Service Commission in an evaluation of the Initial Tariff filing submitted by Tidewater Environmental Services, Inc. (PSC Docket No. 11-274WW) for wastewater service in a development known as “The Ridings.” Evaluated projected operating expenses and rate base claims and developed recommendations that avoided a potential 17.5% rate increase.
- Prepared an assessment of the water supply capacity certification and water conservation plan submitted by United Water Delaware in PSC Docket 09-282 on behalf of the Delaware Public Service Commission. Evaluated the capacity of the sources of supply available to the Company with respect to projected demands and the requirements of the Delaware Water Supply Self-Sufficiency Act of 2003. Assessed the effectiveness of water conservation activities and developed

ACCOMPLISHMENTS (CONTINUED)

recommendations to improve the efficiency and effectiveness of Company conservation programs.

- Provided expert testimony on behalf of the Delaware Public Advocate in the matter of Inland Bays Preservation Company's request for an increase in wastewater rates before the Delaware Public Service Commission (PSC Docket No. 09-327-WW). Evaluated plant facilities, proposed projects and the allocation of developer contributions in aid of construction to determine rate base. Assessed the level of operating expenses claimed in the filing and recommended adjustments to substantially lower the requested rate increase.
- Provided expert testimony on behalf of the Delaware Public Advocate in the matter of Tidewater Environmental Services, Inc.'s request for a base rate adjustment for seven of its regulated wastewater utility systems (PSC Docket No. 11-329WW). Established independent revenue requirements for each system to assure that costs and rates were properly matched for each independent group of customers served by the Company. Recommended an overall rate adjustment that was equivalent to 60% of the initial rate request and was within 12% of the final Ordered rates in this matter.
- Provided expert testimony on behalf of the Delaware Public Advocate in the matter of Tidewater Utilities, Inc.'s request for a base rate adjustment for its regulated water systems throughout Delaware (PSC Docket 13-466). Provided testimony on engineering and accounting issues related to the determination of the Company's revenue requirement that resulted in a rate settlement equivalent to twenty percent of the Company's filed rate request.
- Provided expert testimony on behalf of the Township of Newtown before the Pennsylvania Public Utility Commission (PUC Dkt. No. P-2012-2327738) in regard to a dispute between the Township and Newtown Artesian Water Company regarding the siting of a proposed new well. Evaluated current and future water supply needs, water quality and treatment needs and the revenue requirement of the proposed project relative to other alternatives.
- Managed 175 municipal and commercial water and wastewater contracts located in seven states for American Water Services/AmericanAnglian Environmental Technologies. Through these contracts, cost effective water and wastewater service was provided to over one million people. Contracts included the 160 MGD City of Buffalo, NY water system and the 30 MGD Scranton Sewer Authority wastewater operations. Directed an operations staff of 700 employees. Eliminated financial losses while improving safety and quality.
- Directed a marketing and business development staff for AmericanAnglian Environmental Technologies that secured the largest operations and maintenance contract awarded in the US in 1999 and the second best overall performance in the US market. Increased revenues by 28%. Evaluated potential contract operations and design/build projects to identify operating and capital savings on hundreds of potential contracts throughout the United States. Evaluations included Atlanta, Georgia, Scranton, Pennsylvania and Springfield, Massachusetts.
- Managed the operations of 16 water systems for New Jersey-American Water Company, a regulated investor-owned utility serving one million people throughout NJ. Coordinated the activities of a decentralized operations staff of 440 to provide reliable water service, ensure environmental compliance, control costs, manage and

ACCOMPLISHMENTS (CONTINUED)

maintain system assets, reduce liability, provide site security and maintain a safe work place, and meet financial objectives. Responsible for the maintenance and operation of all source of supply, treatment, filtration and storage facilities, producing and distributing between 100 MGD and 220 MGD, as well as over 4,000 miles of water transmission and distribution facilities.

- Directed a team of engineering, legal, public relations and financial professionals that planned, designed, permitted and constructed a \$192,000,000 water treatment plant and pipeline system for New Jersey-American Water Company. The intake, constructed in environmentally sensitive areas and the state of the art water filtration plant can be expanded to produce 100 MGD. The project is the principal source of surface water for nearly one million people in southern New Jersey and it was built to allow new regulatory controls on ground water use to go into effect. The project was completed within budget and on schedule.
- Developed the financial model and contract language that allowed water lines to be extended to over 3,000 homes with contaminated private wells in Atlantic County, New Jersey. This program provided the financial assurances needed to construct several miles of water mains, eliminate federal tax liability and reduce costs by 34%.
- Initiated and directed the first study of desalination for public water supply purposes in NJ for the City of Cape May. This project evaluated two desalination technologies and demonstrated that reverse osmosis could be used effectively to treat brackish water at a competitive cost. A full-scale plant has since been placed in service.
- Developed long-range regional water supply plan for Monmouth County, New Jersey, a county that was adding as many as 1,000 water utility customers per year and seriously stressing the water supply. The plan evaluated alternative sources of water, conservation and regional reservoir development. The recommendations avoided \$30,000,000 in capital construction while ensuring a safe supply of water for a 15-year planning period. Negotiated supply sharing operating agreements with the New Jersey Water Supply Authority to implement the plan.
- Directed a staff of engineers and consultants in preparing comprehensive plans for 60 water systems located throughout the United States. Communities served by these systems include: Pittsburgh, Pennsylvania and its surrounding suburbs; Charleston, West Virginia; Richmond, Indiana; E. Saint Louis, Illinois and Monterey, California. Evaluated alternatives and identified the least costly means of providing safe water service for each system. Assessed operations strategies to identify external threats to the reliability and efficiency of these systems. Identified specific capital facility needs and operations strategies for five, ten and fifteen year planning horizons, defined the long term role of each system in prompting regional water supply development, and assessed the impact of future State and Federal water quality regulations on system operations and needs.
- Developed a formula for allocating ground water to 30 water suppliers in southern New Jersey for the New Jersey Department of Environmental Protection and negotiated an implementation agreement with effected suppliers. The New Jersey Legislature adopted the formula in the Water Supply Management Act Amendments of 1992. The allocation formula protects a regional aquifer from over-pumping.
- Developed a plan to convey storm water through a sixty-foot high railroad embankment in Prince Georges County, Maryland. Evaluated alternative methods

ACCOMPLISHMENTS (CONTINUED)

and selected one that allowed an existing culvert to be modified to carry higher flow rates. Saved over \$500,000 in construction costs. The Washington Suburban Sanitary Commission and Prince Georges County adopted the design as a standard in their storm water design manual.

- Negotiated Lakewood, New Jersey's first three-year water and wastewater labor agreement in the face of an impending strike, departing from prior history of year-to-year contract agreements.
- Provided expert testimony in judicial proceedings involving utility rate adjustments before the New Jersey Board of Public Utilities, the Connecticut Department of Public Utility Control and the New York Public Service Commission. Testified on environmental and operations topics including: rate setting strategies, source of supply improvements, water resources management, treatment to mitigate contamination, staffing levels and operating practices. Testified as to the least costly means of operating and maintaining water and wastewater facilities.
- Served as a gubernatorial appointee to the New Jersey Water Supply Advisory Council under Governors Florio and Whitman. Advised the NJ Department of Environmental Protection on a variety of water resources management issues.
- Coordinated the response to an outbreak of giardiasis for the US Environmental Protection Agency. The outbreak affected 20% of the people served by a municipal water system in north-central Pennsylvania. Specified immediate control measures, short-term treatment techniques and long-term treatment improvements to resolve the immediate problem and prevent a recurrence.

AWARDS

John J. Gallen Memorial Award presented by the Villanova University College of Engineering (1988) in recognition of many significant achievements in the field of water supply and distribution, effective leadership in developing regional water supply systems and contributions in the development of comprehensive plans for water supply systems.

George Warren Fuller Award presented by the American Water Works Association (2013) for distinguished service to the water supply field in commemoration of the sound engineering skill, brilliant diplomatic talent and constructive leadership which characterized the life of George Warren Fuller.

REPRESENTATIVE CLIENTS

- A.C. Schultes, Inc.
- Aquarion Water Company of Connecticut
- Aquarion Water Company of Massachusetts
- Atlantic City Municipal Utilities Authority
- Bethlehem Water Authority
- BOC Gases
- Bucks County Water & Sewer Authority
- Camco Management
- Cedar Grove Township
- Consumers New Jersey Water Company
- Delaware Public Advocate
- Delaware Public Service Commission
- D. R. Horton – New Jersey
- Elmira Water Board
- Erie City Water Authority
- Greater Ouachita Water Company
- Harris Defense Group
- Jersey City Municipal Utilities Authority
- Lower Makefield Township
- New Jersey-American Water Company
- New Jersey Division of Rate Counsel
- New Jersey Water Supply Authority
- New York City Department of Environmental Protection
- North Penn Water Authority
- North Wales Water Authority
- Passaic Valley Water Commission
- Perkasio Borough
- Perkasio Borough Authority
- Pricewaterhouse Coopers, LLP
- Southeast Morris County Municipal Utilities Authority
- Sussex Shores Water Company
- Township of Sparta (NJ)
- U.S. Water, LLC
- Upper Dublin Township
- Williams Alaska Resources

PROFESSIONAL QUALIFICATIONS

Registered Professional Engineer in Delaware (2004), Maryland (1982), New Jersey (1984), New Mexico (1987), New York (1984) and Pennsylvania (1983).

Licensed to complete RAM-W vulnerability assessments (2002).

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers, American Water Works Association (Trustee of New Jersey Section), American Water Resource Management Association, International Water Association, National Ground Water Association, National Fire Protection Association, Water Environment Federation, Tau Beta Pi.

PROFESSIONAL HISTORY

HOWARD J. WOODS, JR. & ASSOCIATES, LLC	2000 - Present
General Manager	
AMERICAN WATER WORKS COMPANY	1983 - 2000
American Water Services, Inc.	
Senior Vice President - Operations	1999 - 2000
American Anglian Environmental Tech., L.P.	
Senior Vice President - Business Development	1998 - 1999
American Water Works Service Co.	
Vice President - Special Projects	1997 - 1998
New Jersey-American Water Co., Inc.	
Vice President - Operations	1989 - 1997
American Water Works Service Co.	
Engineering Manager	1988 - 1989
System Director of Planning	1986 - 1988
Division Manager of Operations	1984 - 1986
Division Director of Engineering	1983 - 1984
JOHNSON, MIRMIRAN & THOMPSON	1981 - 1983
Project Engineer	
U.S. ENVIRONMENTAL PROTECTION AGENCY	1977 - 1981
Environmental Engineer	

CONTACT INFORMATION

Howard J. Woods, Jr., P.E.
 Howard J. Woods, Jr. & Associates, L.L.C.
 49 Overhill Road, East Brunswick, NJ 08816-4211
 Phone: 267-254-5667
 E-mail: howard@howardwoods.com

APPENDIX B - Schedules

HJW-1: Revenue Adjustment Summary

HJW-2: Adjustments to SA-1 SA-3 Rate Schedule A-1 GMS

HJW-2A: Calculation of Pro Forma Sales Volumes for Rate Schedule A-1

HJW-3: Adjustments to SA-2 SA-3 Main & SA-1A Rate Schedule A-3 GMS

HJW-3A: Calculation of Pro Forma Sales Volumes for Rate Schedule A-3

HJW-4: Adjustment to SA-2 Manville & SA-1D Rate Schedule A-5 GMS

HJW-4A: Calculation of Pro Forma Sales Volumes for Rate Schedule A-5

HJW-5: Adjustment to SA-3 Southampton Rate Schedule A-8 GMS

HJW-5A: Calculation of Pro Forma Sales Volumes for Rate Schedule A-8

HJW-6: Adjustment to SA-1B Pennsgrove Rate Schedule A-10 GMS

HJW-6A: Calculation of Pro Forma Sales Volumes for Rate Schedule A-10

HJW-7: Adjustment to SA-1C Shorelands Rate Schedule A-11 GMS

HJW-8: Adjustment to SA-1E Haddonfield Rate Schedule A-15 GMS

HJW-9: Summary of Post Test Year Plant Additions

HJW-10: Haddonfield Water & Sewer Valuation

HJW-10A: Water System Facilities

HJW-10B: Water Services

HJW-10C: Water Mains

HJW-10D: Water Valves

HJW-10E: Fire Hydrants

HJW-10F: Sewer Facilities

HJW-10G: Sanitary Laterals

HJW-10H: Sanitary Gravity Mains

HJW-10I: Sanitary Manholes

HJW-10J: Sanitary Force Mains

HJW-11 Privately-Owned Lead Services

APPENDIX B - Schedules

HJW-1: Revenue Adjustment Summary

HJW-2: Adjustments to SA-1 SA-3 Rate Schedule A-1 GMS

HJW-2A: Calculation of Pro Forma Sales Volumes for Rate Schedule A-1

HJW-3: Adjustments to SA-2 SA-3 Main & SA-1A Rate Schedule A-3 GMS

HJW-3A: Calculation of Pro Forma Sales Volumes for Rate Schedule A-3

HJW-4: Adjustment to SA-2 Manville & SA-1D Rate Schedule A-5 GMS

HJW-4A: Calculation of Pro Forma Sales Volumes for Rate Schedule A-5

HJW-5: Adjustment to SA-3 Southampton Rate Schedule A-8 GMS

HJW-5A: Calculation of Pro Forma Sales Volumes for Rate Schedule A-8

HJW-6: Adjustment to SA-1B Pennsgrove Rate Schedule A-10 GMS

HJW-6A: Calculation of Pro Forma Sales Volumes for Rate Schedule A-10

HJW-7: Adjustment to SA-1C Shorelands Rate Schedule A-11 GMS

HJW-8: Adjustment to SA-1E Haddonfield Rate Schedule A-15 GMS

HJW-9: Summary of Post Test Year Plant Additions

HJW-10: Haddonfield Water & Sewer Valuation

HJW-10A: Water System Facilities

HJW-10B: Water Services

HJW-10C: Water Mains

HJW-10D: Water Valves

HJW-10E: Fire Hydrants

HJW-10F: Sewer Facilities

HJW-10G: Sanitary Laterals

HJW-10H: Sanitary Gravity Mains

HJW-10I: Sanitary Manholes

HJW-10J: Sanitary Force Mains

HJW-11 Privately-Owned Lead Services

SCHEDULE HJW-1: REVENUE ADJUSTMENT SUMMARY

At Pre Tax-Adjusted Rates

REVENUE ADJUSTMENTS

	NJAWC		
	9+3	Adjustments	Rate Counsel
<u>General Metered Services</u>			
1. SA-1 + SA-3 Homestead	\$ 324,756,829	\$ 1,558,762	\$ 326,315,591
2. SA-2 + SA-3 Main + SA-1A	\$ 200,676,474	\$ 1,470,259	\$ 202,146,733
3. Manville & SA-1D Applied	\$ 2,271,811	\$ 8,191	\$ 2,280,002
4. Southampton	\$ 232,684	\$ 6,817	\$ 239,501
5. SA-1B Pennsgrove	\$ 2,744,008	\$ 46,967	\$ 2,790,975
6. SA-1C Shorelands	\$ 8,152,528	\$ 311,359	\$ 8,463,887
7. SA-1D Applied Irrigation	\$ 31,439	\$ -	\$ 31,439
8. SA-1E Haddonfield	\$ 2,489,463	\$ 22,240	\$ 2,511,703
9. Total GMS Revenues	<u>\$ 541,355,236</u>	<u>\$ 3,424,595</u>	<u>\$ 544,779,831</u>

BILLING DETERMINANTS

- VOLUMETRIC SALES (1,000 Gal)

	NJAWC		
	9+3	Adjustments	Rate Counsel
<u>General Metered Services</u>			
1. SA-1 + SA-3 Homestead	36,192,178	281,489	36,473,667
2. SA-2 + SA-3 Main + SA-1A	25,829,473	281,306	26,110,779
3. Manville & SA-1D Applied	245,757	2,010	247,767
4. Southampton	22,224	507	22,731
5. SA-1B Pennsgrove	362,237	8,716	370,953
6. SA-1C Shorelands	1,135,104	56,999	1,192,103
7. SA-1D Applied Irrigation	3,618	-	3,618
8. SA-1E Haddonfield	337,980	3,331	341,311
9. Total GMS Revenues	<u>64,128,571</u>	<u>634,358</u>	<u>64,762,929</u>

- CUSTOMERS

<u>General Metered Services</u>			
1. SA-1 + SA-3 Homestead	382,760	(854)	381,906
2. SA-2 + SA-3 Main + SA-1A	222,174	(370)	221,804
3. Manville & SA-1D Applied	4,270	(26)	4,244
4. Southampton	449	-	449
5. SA-1B Pennsgrove	4,167	6	4,173
6. SA-1C Shorelands	10,903	-	10,903
7. SA-1D Applied Irrigation	4	-	4
8. SA-1E Haddonfield	4,726	(1)	4,725
9. Total GMS Revenues	<u>629,453</u>	<u>(1,245)</u>	<u>628,208</u>

Notes:

(1) Revenue Adjustments from Schedules HJW-2 through HJW-

(2) Company Volumetric Sales from SIR-14 9+3 Update, Workpaper 5A, Pages 1 through 5. Rate Counsel Volumetric Sales include Industrial and OPA volumes.

(3) Company customer counts from SIR-14 9+3 Update Workpaper 5A, Pages 1 through 5 including Industrial and OPA customers.

Schedule HJW-2: Adjustment to SA-1 SA-3 Rate Schedule A-1 GMS

Residential	Base Year Actual	Annual Rate of Decline (gal/cust/year) Annual Rate of Customer Growth (customers per month)	Normalized Use at Test Year + Nine Months (December 31, 2018)
Period Ended	31-Mar-17		31-Dec-18
Average Annual Useage Per Customer - 1,000 Gals	74.14	(912)	69.14
Average Number of Customers Base Year	345,953		345,953
Normalized Annual Water Sales - 1,000 Gal	25,648,955		23,917,461
Normalization Adjustment - 1,000 Gallons			(1,731,495)
Growth Adjustment - Customer Additions		213	4,473
Average Annual Use Per Customer - 1,000 Gal			69.14
Increase in Water Sales Due to Customer Additions			309,241
Net Adjustment in Sales Volume (Normalization + Growth)			(1,422,254)
Present Rate Per 1,000 gal			\$ 6.1998
Residential Normalization and Growth Adjustment SA-1 & SA-3			\$ (8,817,690)
Growth Adjustment for Fixed Service Charges			
Monthly Rate for 5/8-inch meter			\$ 16.85
Additional Customers			4,473
Annual Fixed Service Charge Revenues			\$ 904,441
Commercial	Base Year Actual	Annual Rate of Decline (gal/cust/year) Annual Rate of Customer Growth (customers per month)	Normalized Use at Test Year + Nine Months (December 31, 2018)
Period Ended	31-Mar-17		31-Dec-18
Average Annual Useage Per Customer - 1,000 Gals	395.17	(1,140)	378.03
Average Number of Customers Base Year	28,900		28,900
Normalized Annual Water Sales - 1,000 Gal	11,420,413		10,925,154
Normalization Adjustment - 1,000 Gallons			(495,259)
Growth Adjustment - Customer Additions		0	0
Average Annual Use Per Customer - 1,000 Gal			378.03
Increase in Water Sales Due to Customer Additions			0
Net Adjustment in Sales Volume (Normalization + Growth)			(495,259)
Present Rate Per 1,000 gal			\$ 6.1998
Commercial Normalization and Growth Adjustment SA-1 & SA-3			\$ (3,070,509)
Updated Company GMS Rate Schedule A-1 Revenues			\$ 324,756,829
Less: Company Growth Adjustments			\$ (3,497,094)
Net			\$ 321,259,735
Less: Company Residential Normalization Adjustments			\$ (12,757,502)
Less: Company Commercial Normalization Adjustments			\$ (3,282,112)
Net			\$ 337,299,349
Rate Counsel Residential Normalization and Growth Adjustment			\$ (8,817,690)
Rate Counsel Commercial Normalization and Growth Adjustment			\$ (3,070,509)
Rate Counsel Fixed Service Charge Growth Adjustment			\$ 904,441
TOTAL SA-1 SA-3 - Homestead GMS Rate Schedule A-1			\$ 326,315,591
Adjustment From Company Revenues			\$ 1,558,762

Notes:

- (1) Base Year Values from 9+3 Uptdae to SIR-14, Page 26 of 46
- (2) Rate of Decline in Customer use from RCR-E-077 Updated 1.15.18
- (3) Rate of Customer Growth from 9+3 Update to SIR-15, Page 1 of 2

Schedule HJW-2A: Calculation of ProForma Sales Volumes for Rate Schedule A-1

Residential		Commercial	
-0.2085 Slope		-0.2599 Slope	
13,452 Intercept		37,757 Intercept	
Date	Day	Trend Base Use (Kgal/Mo)	Trend Base Use (Kgal/Mo)
31-Jan-18		43,131	4,460
28-Feb-18		43,159	4,455
31-Mar-18		43,190	4,448
30-Apr-18		43,220	4,442
31-May-18		43,251	4,435
30-Jun-18		43,281	4,429
31-Jul-18		43,312	4,423
31-Aug-18		43,343	4,416
30-Sep-18		43,373	4,410
31-Oct-18		43,404	4,404
30-Nov-18		43,434	4,397
31-Dec-18		43,465	4,391
Total Base Use (Kgal)		53,110	318,048
Non-Base Use		16,025	59,985
<hr/> Total Use (Kgal)		69,135	378,033

Schedule HJW-3: Adjustment to SA-2 SA-3 Main & SA-1A Rate Schedule A-3 GMS

Residential	Base Year Actual	Annual Rate of Decline (gal/cust/year) Annual Rate of Customer Growth (customers per month)	Normalized Use at Test Year + Nine Months (December 31, 2018)
Period Ended	31-Mar-17		31-Dec-18
Average Annual Useage Per Customer - 1,000 Gals	76.60	(1,344)	69.24
Average Number of Customers Base Year	206,089		206,089
Normalized Annual Water Sales - 1,000 Gal	15,786,417		14,268,572
Normalization Adjustment - 1,000 Gallons			(1,517,845)
Growth Adjustment - Customer Additions		52	1,092
Average Annual Use Per Customer - 1,000 Gal			69.24
Increase in Water Sales Due to Customer Additions			75,605
Net Adjustment in Sales Volume (Normalization + Growth)			(1,442,241)
Present Rate Per 1,000 gal			\$ 6.0533
Residential Normalization and Growth Adjustment			\$ (8,730,317)
Growth Adjustment for Fixed Service Charges			
Monthly Rate for 5/8-inch meter			\$ 16.85
Additional Customers			1,092
Annual Fixed Service Charge Revenues			\$ 220,802

Commercial	Base Year Actual	Annual Rate of Decline (gal/cust/year) Annual Rate of Customer Growth (customers per month)	Normalized Use at Test Year + Nine Months (December 31, 2018)
Period Ended	31-Mar-17		31-Dec-18
Average Annual Useage Per Customer - 1,000 Gals	500.82	(3,264)	470.19
Average Number of Customers Base Year	12,500		12,500
Normalized Annual Water Sales - 1,000 Gal	6,260,250		5,877,325
Normalization Adjustment - 1,000 Gallons			(382,925)
Growth Adjustment - Customer Additions		4	84
Average Annual Use Per Customer - 1,000 Gal			470.19
Increase in Water Sales Due to Customer Additions			39,496
Net Adjustment in Sales Volume (Normalization + Growth)			(343,429)
Present Rate Per 1,000 gal			\$ 6.0533
Commercial Normalization and Growth Adjustment			\$ (2,078,881)
Growth Adjustment for Fixed Service Charges			
Monthly Rate for 5/8-inch meter			\$ 16.85
Additional Customers			84
Annual Fixed Service Charge Revenues			\$ 16,985
Updated Company GMS Rate Schedule A-3 Revenues			\$ 200,676,474
Less: Company Growth Adjustments			\$ (1,471,342)
Net			\$ 199,205,132
Less: Company Residential Normalization Adjustments			\$ (10,938,240)
Less: Company Commercial Normalization Adjustments			\$ (2,574,771)
Net			\$ 212,718,143
Rate Counsel Residential Normalization and Growth Adjustment			\$ (8,730,317)
Rate Counsel Commercial Normalization and Growth Adjustment			\$ (2,078,881)
Rate Counsel Fixed Service Charge Growth Adjustment - Residential			\$ 220,802
Rate Counsel Fixed Service Charge Growth Adjustment - Commercial			\$ 16,985
TOTAL SA-2 (Excl'd Manville) SA-3 - Main & SA-1A GMS Rate Schedule A-1			\$ 202,146,733

Adjustment From Company Revenues \$ 1,470,259

Notes:

- (1) Base Year Values from 9+3 Updtae to SIR-14, Page 27 of 46
- (2) Rate of Decline in Customer use from RCR-E-077 Updated 1.15.18
- (3) Rate of Customer Growth from 9+3 Update to SIR-15, Page 1 of 2

Schedule HJW-3A: Calculation of ProForma Sales Volumes for Rate Schedule A-3

Residential		Commercial	
-0.3060 Slope		-0.7455 Slope	
18,120 Intercept		66,251 Intercept	
Date	Day	Trend Base Use (Kgal/Mo)	Trend Base Use (Kgal/Mo)
31-Jan-18	43,131	4,921	34,098
28-Feb-18	43,159	4,912	34,077
31-Mar-18	43,190	4,903	34,054
30-Apr-18	43,220	4,894	34,032
31-May-18	43,251	4,884	34,008
30-Jun-18	43,281	4,875	33,986
31-Jul-18	43,312	4,866	33,963
31-Aug-18	43,343	4,856	33,940
30-Sep-18	43,373	4,847	33,917
31-Oct-18	43,404	4,837	33,894
30-Nov-18	43,434	4,828	33,872
31-Dec-18	43,465	4,819	33,849
Total Base Use (Kgal)		58,442	407,690
Non-Base Use		10,793	62,496
<hr/> Total Use (Kgal)		69,235	<hr/> 470,186

Schedule HJW-4: Adjustment to SA-2 Manville & SA-1D Rate Schedule A-5 GMS

Residential	Base Year Actual	Annual Rate of Decline (gal/cust/year) Annual Rate of Customer Growth (customers per month)	Normalized Use at Test Year + Nine Months (December 31, 2018)
Period Ended	31-Mar-17		31-Dec-18
Average Annual Useage Per Customer - 1,000 Gals	55.50	(648)	55.82
Average Number of Customers Base Year	4,377		4,377
Normalized Annual Water Sales - 1,000 Gal	242,924		244,342
Normalization Adjustment - 1,000 Gallons			1,418
Growth Adjustment - Customer Additions		(8)	(168)
Average Annual Use Per Customer - 1,000 Gal			55.82
Increase in Water Sales Due to Customer Additions			(9,378)
Net Adjustment in Sales Volume (Normalization + Growth)			(7,960)
Present Rate Per 1,000 gal			\$ 5.6185
Residential Normalization and Growth Adjustment			\$ (44,725)
Growth Adjustment for Fixed Service Charges			
Monthly Rate for 5/8-inch meter			\$ 16.85
Additional Customers			(168)
Annual Fixed Service Charge Revenues			\$ (33,970)

Commercial	Base Year Actual	Annual Rate of Decline (gal/cust/year) Annual Rate of Customer Growth (customers per month)	Normalized Use at Test Year + Nine Months (December 31, 2018)
Period Ended	31-Mar-17		31-Dec-18
Average Annual Useage Per Customer - 1,000 Gals	185.14		177.71
Average Number of Customers Base Year	26		26
Normalized Annual Water Sales - 1,000 Gal	4,814		4,620
Normalization Adjustment - 1,000 Gallons			(193)
Growth Adjustment - Customer Additions		0	-
Average Annual Use Per Customer - 1,000 Gal			177.71
Increase in Water Sales Due to Customer Additions			-
Net Adjustment in Sales Volume (Normalization + Growth)			(193)
Present Rate Per 1,000 gal			\$ 5.6185
Commercial Normalization and Growth Adjustment			\$ (1,085)
Updated Company GMS Rate Schedule A-5 Revenues			\$ 2,271,811
Less: Company Growth Adjustments			\$ 78,318
Net			\$ 2,350,129
Less: Company Residential Normalization Adjustments			\$ (8,557)
Less: Company Commercial Normalization Adjustments			\$ (1,096)
Net			\$ 2,359,782
Rate Counsel Residential Normalization and Growth Adjustment			\$ (44,725)
Rate Counsel Commercial Normalization and Growth Adjustment			\$ (1,085)
Rate Counsel Fixed Service Charge Growth Adjustment - Residential			\$ (33,970)
TOTAL SA-2 Manville & SA-1D Rate Schedule A-5 GMS			\$ 2,280,002
Adjustment From Company Revenues			\$ 8,191

Notes:

- (1) Base Year Values from 9+3 Updtae to SIR-14, Page 28 of 46
- (2) Rate of Decline in Customer use from RCR-E-077 Updated 1.15.18
- (3) Rate of Customer Growth from 9+3 Update to SIR-15, Page 1 of 2

Schedule HJW-4A: Calculation of ProForma Sales Volumes for Rate Schedule A-5

Residential			Commercial
-0.1475 Slope			
10,783 Intercept			
		Trend Base Use	Trend Base Use
<u>Date</u>	<u>Day</u>	<u>(Kgal/Mo)</u>	<u>(Kgal/Mo)</u>
31-Jan-18	43,131	4,419	-
28-Feb-18	43,159	4,415	-
31-Mar-18	43,190	4,410	-
30-Apr-18	43,220	4,406	-
31-May-18	43,251	4,401	-
30-Jun-18	43,281	4,397	-
31-Jul-18	43,312	4,392	-
31-Aug-18	43,343	4,388	-
30-Sep-18	43,373	4,383	-
31-Oct-18	43,404	4,379	-
30-Nov-18	43,434	4,374	-
31-Dec-18	43,465	4,370	-
	Total Base Use (Kgal)	52,734	-
	Non-Base Use	3,090	
	<u>Total Use (Kgal)</u>	<u>55,824</u>	<u>177,710</u>

Notes:

(1) The Commercial volume is the Five-Year Average

Schedule HJW-5: Adjustment to SA-3 Southampton Rate Schedule A-8 GMS

Residential	Base Year Actual	Annual Rate of Decline (gal/cust/year) Annual Rate of Customer Growth (customers per month)	Normalized Use at Test Year + Nine Months (December 31, 2018)
Period Ended	31-Mar-17		31-Dec-18
Average Annual Usage Per Customer - 1,000 Gals	53.66	(1,188)	48.08
Average Number of Customers Base Year	409		409
Normalized Annual Water Sales - 1,000 Gal	<u>21,947</u>		<u>19,663</u>
Normalization Adjustment - 1,000 Gallons			(2,284)
Growth Adjustment - Customer Additions		-	-
Average Annual Use Per Customer - 1,000 Gal			48.08
Increase in Water Sales Due to Customer Additions			-
Net Adjustment in Sales Volume (Normalization + Growth)			(2,284)
Present Rate Per 1,000 gal			\$ 5.2433
Residential Normalization and Growth Adjustment			<u>\$ (11,975)</u>
Commercial	Base Year Actual	Annual Rate of Decline (gal/cust/year) Annual Rate of Customer Growth (customers per month)	Normalized Use at Test Year + Nine Months (December 31, 2018)
Period Ended	31-Mar-17		31-Dec-18
Average Annual Usage Per Customer - 1,000 Gals	73.42		76.70
Average Number of Customers Base Year	40		40
Normalized Annual Water Sales - 1,000 Gal	<u>2,937</u>		<u>3,068</u>
Normalization Adjustment - 1,000 Gallons			131
Growth Adjustment - Customer Additions		0	-
Average Annual Use Per Customer - 1,000 Gal			76.70
Increase in Water Sales Due to Customer Additions			-
Net Adjustment in Sales Volume (Normalization + Growth)			131
Present Rate Per 1,000 gal			\$ 5.2433
Commercial Normalization and Growth Adjustment			<u>\$ 688</u>
Updated Company GMS Rate Schedule A-8 Revenues			\$ 232,684
Less: Company Growth Adjustments			<u>\$ 4,157</u>
Net			\$ 236,841
Less: Company Residential Normalization Adjustments			\$ (14,634)
Less: Company Commercial Normalization Adjustments			<u>\$ 687</u>
Net			\$ 250,788
Rate Counsel Residential Normalization and Growth Adjustment			\$ (11,975)
Rate Counsel Commercial Normalization and Growth Adjustment			\$ 688
TOTAL SA-3 Southampton Rate Schedule A-8 GMS			<u>\$ 239,501</u>
Adjustment From Company Revenues			\$ 6,817

Notes:

- (1) Base Year Values from 9+3 Updtae to SIR-14, Page 29 of 46
- (2) Rate of Decline in Customer use from RCR-E-077 Updated 1.15.18
- (3) Rate of Customer Growth from 9+3 Update to SIR-15, Page 1 of 2

Schedule HJW-5A: Calculation of ProForma Sales Volumes for Rate Schedule A-8

Residential			Commercial	
	-0.2724 Slope			Slope
	15,306 Intercept			Intercept
Date	Day	Trend Base Use (Kgal/Mo)	Trend Base Use (Kgal/Mo)	
31-Jan-18	43,131	3,558	-	
28-Feb-18	43,159	3,550	-	
31-Mar-18	43,190	3,542	-	
30-Apr-18	43,220	3,534	-	
31-May-18	43,251	3,525	-	
30-Jun-18	43,281	3,517	-	
31-Jul-18	43,312	3,509	-	
31-Aug-18	43,343	3,500	-	
30-Sep-18	43,373	3,492	-	
31-Oct-18	43,404	3,483	-	
30-Nov-18	43,434	3,475	-	
31-Dec-18	43,465	3,467	-	
Total Base Use (Kgal)		42,152	-	
Non-Base Use		5,924		
<hr/>				
Total Use (Kgal)		48,076	76,700	

Notes:

(1) The Commercial volume is the Five-Year Average

Schedule HJW-6: Adjustment to SA-1B Pennsgrove Rate Schedule A-10 GMS

Residential	Base Year Actual	Annual Rate of Decline (gal/cust/year) Annual Rate of Customer Growth (customers per month)	Normalized Use at Test Year + Nine Months (December 31, 2018)
Period Ended	31-Mar-17		31-Dec-18
Average Annual Usage Per Customer - 1,000 Gals	63.54	(1,416)	58.01
Average Number of Customers Base Year	3,925		3,925
Normalized Annual Water Sales - 1,000 Gal	<u>249,395</u>		<u>227,689</u>
Normalization Adjustment - 1,000 Gallons			(21,705)
Growth Adjustment - Customer Additions		(1)	(21)
Average Annual Use Per Customer - 1,000 Gal			58.01
Increase in Water Sales Due to Customer Additions			(1,218)
Net Adjustment in Sales Volume (Normalization + Growth)			(22,923)
Present Rate Per 1,000 gal			\$ 4.4988
Residential Normalization and Growth Adjustment			\$ (103,128)
Growth Adjustment for Fixed Service Charges			
Monthly Rate for 5/8-inch meter			\$ 16.85
Additional Customers			(21)
Annual Fixed Service Charge Revenues			\$ (4,246)
Commercial	Base Year Actual	Annual Rate of Decline (gal/cust/year) Annual Rate of Customer Growth (customers per month)	Normalized Use at Test Year + Nine Months (December 31, 2018)
Period Ended	31-Mar-17		31-Dec-18
Average Annual Usage Per Customer - 1,000 Gals	523.55		516.70
Average Number of Customers Base Year	210		210
Normalized Annual Water Sales - 1,000 Gal	<u>109,946</u>		<u>108,507</u>
Normalization Adjustment - 1,000 Gallons			(1,438)
Growth Adjustment - Customer Additions		0	-
Average Annual Use Per Customer - 1,000 Gal			516.70
Increase in Water Sales Due to Customer Additions			-
Net Adjustment in Sales Volume (Normalization + Growth)			(1,438)
Present Rate Per 1,000 gal			\$ 4.4988
Commercial Normalization and Growth Adjustment			\$ (6,472)
Updated Company GMS Rate Schedule A-10 Revenues			\$ 2,744,008
Less: Company Growth Adjustments			\$ 30,519
Net			\$ 2,774,527
Less: Company Residential Normalization Adjustments			\$ (123,820)
Less: Company Commercial Normalization Adjustments			\$ (6,474)
Net			\$ 2,904,821
Rate Counsel Residential Normalization and Growth Adjustment			\$ (103,128)
Rate Counsel Commercial Normalization and Growth Adjustment			\$ (6,472)
Rate Counsel Fixed Service Charge Growth Adjustment - Residential			\$ (4,246)
TOTAL SA-1B Pennsgrove Rate Schedule A-10 GMS			\$ 2,790,975
Adjustment From Company Revenues			\$ 46,967

Notes:

- (1) Base Year Values from 9+3 Updtae to SIR-14, Page 30 of 46
- (2) Rate of Decline in Customer use from RCR-E-077 Updated 1.15.18
- (3) Rate of Customer Growth from 9+3 Update to SIR-15, Page 1 of 2

Schedule HJW-6A: Calculation of ProForma Sales Volumes for Rate Schedule A-10

Residential		Commercial	
	-0.3221 Slope		Slope
	18,474 Intercept		Intercept
Date	Day	Trend Base Use (Kgal/Mo)	Trend Base Use (Kgal/Mo)
31-Jan-18	43,131	4,584	-
28-Feb-18	43,159	4,575	-
31-Mar-18	43,190	4,565	-
30-Apr-18	43,220	4,555	-
31-May-18	43,251	4,545	-
30-Jun-18	43,281	4,535	-
31-Jul-18	43,312	4,525	-
31-Aug-18	43,343	4,515	-
30-Sep-18	43,373	4,506	-
31-Oct-18	43,404	4,496	-
30-Nov-18	43,434	4,486	-
31-Dec-18	43,465	4,476	-
Total Base Use (Kgal)		54,363	-
Non-Base Use		3,647	-
<hr/>			
Total Use (Kgal)		58,010	516,700

Notes:

(1) The Commercial volume is the Five-Year Average

Schedule HJW-7: Adjustment to SA-1C Shorelands Rate Schedule A-11 GMS

Residential	Base Year Actual	Annual Rate of Decline (gal/cust/year) Annual Rate of Customer Growth (customers per month)	Normalized Use at Test Year + Nine Months (December 31, 2018)
Period Ended	31-Mar-17		31-Dec-18
Average Annual Useage Per Customer - 1,000 Gals	91.26	(912.60)	89.66
Average Number of Customers Base Year	<u>10,200</u>		<u>10,200</u>
Normalized Annual Water Sales - 1,000 Gal	930,852		914,530
Normalization Adjustment - 1,000 Gallons			(16,322)
Growth Adjustment - Customer Additions		-	-
Average Annual Use Per Customer - 1,000 Gal			89.66
Increase in Water Sales Due to Customer Additions			-
Net Adjustment in Sales Volume (Normalization + Growth)			(16,322)
Present Rate Per 1,000 gal			\$ <u>4.7740</u>
Residential Normalization and Growth Adjustment			\$ (77,920)
Commercial	Base Year Actual	Annual Rate of Decline (gal/cust/year) Annual Rate of Customer Growth (customers per month)	Normalized Use at Test Year + Nine Months (December 31, 2018)
Period Ended	31-Mar-17		31-Dec-18
Average Annual Useage Per Customer - 1,000 Gals	418.62		394.84
Average Number of Customers Base Year	<u>703</u>		<u>703</u>
Normalized Annual Water Sales - 1,000 Gal	294,290		277,573
Normalization Adjustment - 1,000 Gallons			(16,717)
Growth Adjustment - Customer Additions		0	-
Average Annual Use Per Customer - 1,000 Gal			<u>394.84</u>
Increase in Water Sales Due to Customer Additions			-
Net Adjustment in Sales Volume (Normalization + Growth)			(16,717)
Present Rate Per 1,000 gal			\$ <u>4.7740</u>
Commercial Normalization and Growth Adjustment			\$ (79,809)
Updated Company GMS Rate Schedule A-11 Revenues			\$ 8,152,528
Less: Company Growth Adjustments			\$ 39,247
Net			<u>\$ 8,191,775</u>
Less: Company Residential Normaliztion Adjustments			\$ (350,034)
Less: Company Commercial Normalization Adjustments			<u>\$ (79,807)</u>
Net			\$ 8,621,616
Rate Counsel Residential Normalization and Growth Adjustment			\$ (77,920)
Rate Counsel Commercial Normalization and Growth Adjustment			\$ (79,809)
TOTAL SA-1C Shorelands Rate Schedule A-11 GMS			<u>\$ 8,463,887</u>
Adjustment From Company Revenues			\$ 311,359

Notes:

- (1) Base Year Values from 9+3 Updtae to SIR-14, Page 31 of 46
- (2) Rate of Decline in Customer use from 9+3 Update to SIR-14, Page 31 of 46, converted from 1% per year to Gall/Cust/year
- (3) Rate of Customer Growth from 9+3 Update to SIR-15, Page 1 of 2

Schedule HJW-8: Adjustment to SA-1E Haddonfield Rate Schedule A-15 GMS

Residential	Base Year Actual	Annual Rate of Decline (gal/cust/year) Annual Rate of Customer Growth (customers per month)	Normalized Use at Test Year + Nine Months (December 31, 2018)
Period Ended	31-Mar-17		31-Dec-18
Average Annual Useage Per Customer - 1,000 Gals	67.60	(676.00)	66.41
Average Number of Customers Base Year	4,275		4,275
Normalized Annual Water Sales - 1,000 Gal	288,990		283,923
Normalization Adjustment - 1,000 Gallons			(5,067)
Growth Adjustment - Customer Additions		-	-
Average Annual Use Per Customer - 1,000 Gal			66.41
Increase in Water Sales Due to Customer Additions			-
Net Adjustment in Sales Volume (Normalization + Growth)			(5,067)
Present Rate Per 1,000 gal			\$ 6.6681
Residential Normalization and Growth Adjustment			\$ (33,789)

Commercial	Base Year Actual	Annual Rate of Decline (gal/cust/year) Annual Rate of Customer Growth (customers per month)	Normalized Use at Test Year + Nine Months (December 31, 2018)
Period Ended	31-Mar-17		31-Dec-18
Average Annual Useage Per Customer - 1,000 Gals	117.13		115.67
Average Number of Customers Base Year	392		392
Normalized Annual Water Sales - 1,000 Gal	45,915		45,343
Normalization Adjustment - 1,000 Gallons			(572)
Growth Adjustment - Customer Additions		0	-
Average Annual Use Per Customer - 1,000 Gal			115.67
Increase in Water Sales Due to Customer Additions			-
Net Adjustment in Sales Volume (Normalization + Growth)			(572)
Present Rate Per 1,000 gal			\$ 6.6681
Commercial Normalization and Growth Adjustment			\$ (3,816)
Updated Company GMS Rate Schedule A-11 Revenues			\$ 2,489,463
Less: Company Growth Adjustments			\$ 1,873
Net			\$ 2,491,336
Less: Company Residential Normaliztion Adjustments			\$ (54,158)
Less: Company Commercial Normalization Adjustments			\$ (3,814)
Net			\$ 2,549,308
Rate Counsel Residential Normalization and Growth Adjustment			\$ (33,789)
Rate Counsel Commercial Normalization and Growth Adjustment			\$ (3,816)
TOTAL SA-1E Haddonfield Rate Schedule A-15 GMS			\$ 2,511,703
Adjustment From Company Revenues			\$ 22,240

Notes:

- (1) Base Year Values from 9+3 Updtae to SIR-14, Page 32 of 46
- (2) Rate of Decline in Customer use from 9+3 Update to SIR-14, Page 32 of 46, converted from 1% per year to Gall/Cust/year
- (3) Rate of Customer Growth from 9+3 Update to SIR-15, Page 1 of 2

Schedule HIW-9: Summary of Post Test Year Plant Additions
 Test Year 31-Mar-18

Projected Test Year Net Plant: Water \$ 3,724,041,368
 Wastewater \$ 200,053,644

Project	Description	UPIS Additions Apr 2017 through Sep 2018	In Service Date	Water	Wastewater	Percent of Projected Net Plant	Major In Nature & Consequence	Post Test Year Completions - Water	Post Test Year Completions - Wastewater
I18-190009	Oak Glen WTP Expansion	\$26,051,246	04/30/18	\$26,051,246		0.70%	YES	\$ 26,051,246	
I18-180043	Rumson-Sea Bright Transmission Main	\$4,198,204	05/10/17	\$-		0.00%	NO		
I18-250060-01	RM Raw Water Pumping Improvements Phase 1	\$2,300,927	10/03/17	\$-		0.00%	NO		
I18-250060-02	RM Raw Water Pumping Improvements Phase 2	\$12,771,183	09/30/18	\$12,771,183		0.34%	NO		
I18-230010	Sunset Road Sewer Upgrades	\$8,534,228	09/30/18		\$8,534,228	4.27%	YES		\$ 8,534,228
I18-190023	Sunset Road WTP Expansion	\$17,380,652	06/30/18	\$17,380,652		0.47%	NO		
I18-150084	Permanent CBVOC Treatment Sys A-1:CPS	\$10,053,688	09/30/18	\$10,053,688		0.27%	NO		
I18-190004	Oak Street Treatment Improvements	\$8,450,643	09/30/18	\$8,450,643		0.23%	NO		
I18-250013	RM Long Term Flood Control - FMP-A10	\$37,935,115	09/30/18	\$37,935,115		1.02%	YES	\$ 37,935,115	
I18-120022	S. Linwood Station-Well Improv	\$5,152,959	09/30/18	\$5,152,959		0.14%	NO		

Company Proposed Post Test Year Additions \$ 117,795,486 \$ 8,534,228
 Rate Counsel Recommended Post Test Year Plant Adjustments \$ 63,986,361 \$ 8,534,228
 Rate Counsel Adjustments \$ (53,809,125) \$ -

Schedule HJW-10: Haddonfield Water & Sewer Valuation

Haddonfield Water System

Item	Company Original Cost	Company OCLD	RC Original Cost	RC OCLD	OCLD Variance
Facilities	\$ 3,793,658.00	\$ 2,516,916.30	\$ 3,793,658.00	\$ 1,542,275.84	(\$974,640.46)
Services	\$ 2,151,404.60	\$ 1,375,796.92	\$ 1,885,804.60	\$ 1,229,096.48	(\$146,700.44)
Water Mains	\$ 9,630,014.00	\$ 5,527,232.35	\$ 9,630,014.00	\$ 4,885,920.84	(\$641,311.51)
Valves	\$ 467,306.50	\$ 393,193.23	\$ 467,306.50	\$ 385,413.44	(\$7,779.79)
Hydrants	\$ 753,650.00	\$ 571,282.80	\$ 753,650.00	\$ 488,293.30	(\$82,989.50)
Total Water	\$ 16,796,033.10	\$ 10,384,421.60	\$ 16,530,433.10	\$ 8,530,999.90	(\$1,853,421.70)
DESIGN & PERMITTING ENGINEERING (12%)	\$ 2,015,523.97	\$ 1,246,130.59	\$ 1,983,651.97	\$ 1,023,719.99	
CONTRACT ADMINISTRATION (3%)	\$ 503,880.99	\$ 311,532.65	\$ 495,912.99	\$ 255,930.00	
CONSTRUCTION OVERSIGHT (5%)	\$ 839,801.66	\$ 519,221.08	\$ 826,521.66	\$ 426,549.99	
Subtotal	\$ 3,359,206.62	\$ 2,076,884.32	\$ 3,306,086.62	\$ 1,706,199.98	(\$370,684.34)
Land & Land Rights (RCR-E-69, Docket WR15010035)	\$ -	\$ -	\$ 1,181,466.14	\$ 1,181,466.14	\$1,181,466.14
TOTAL WATER SYSTEM VALUE	\$ 20,155,239.72	\$ 12,461,305.92	\$ 21,017,985.86	\$ 11,418,666.02	(\$1,042,639.90)

Haddonfield Sewer System

Item	Company Original Cost	Company OCLD	RC Original Cost	RC OCLD	Variance
Facilities	\$ 1,679,393.00	\$ 1,451,314.83	\$ 1,679,393.00	\$ 1,202,729.52	(\$248,585.31)
Laterals	\$ 2,312,134.66	\$ 1,669,395.69	\$ 2,312,134.66	\$ 1,235,195.89	(\$434,199.80)
Gravity Mains	\$ 10,402,327.64	\$ 7,474,987.64	\$ 10,402,327.64	\$ 5,193,416.60	(\$2,281,571.04)
Manholes	\$ 1,408,607.50	\$ 1,114,692.81	\$ 1,408,607.50	\$ 865,725.66	(\$248,967.15)
Force Main	\$ 514,896.48	\$ 331,094.60	\$ 514,896.48	\$ 147,803.11	(\$183,291.49)
Total Sewer	\$ 16,317,359.28	\$ 12,041,485.57	\$ 16,317,359.28	\$ 8,644,870.78	(\$3,396,614.79)
DESIGN & PERMITTING ENGINEERING (12%)	\$ 1,958,083.11	\$ 1,444,978.27	\$ 1,958,083.11	\$ 1,037,384.49	
CONTRACT ADMINISTRATION (3%)	\$ 489,520.78	\$ 361,244.57	\$ 489,520.78	\$ 259,346.12	
CONSTRUCTION OVERSIGHT (5%)	\$ 815,867.96	\$ 602,074.28	\$ 815,867.96	\$ 432,243.54	
Subtotal	\$ 3,263,471.86	\$ 2,408,297.11	\$ 3,263,471.86	\$ 1,728,974.16	(\$679,322.96)
Land & Land Rights (RCR-E-69, Docket WR15050035)	\$ -	\$ -	\$ 919,071.25	\$ 919,071.25	\$919,071.25
TOTAL SEWER SYSTEM VALUE	\$ 19,580,831.14	\$ 14,449,782.68	\$ 20,499,902.39	\$ 11,292,916.19	(\$3,156,866.49)

TOTAL VALUE

TOTAL VALUE	\$ 39,736,070.86	\$ 26,911,088.60	\$ 41,517,888.25	\$ 22,711,582.21	(\$4,199,506.39)
System Purchase Price		\$ 28,500,000.00		\$ 28,500,000.00	
Acquisition Premium		(\$1,588,911.40)		(\$5,788,417.79)	
Proposed Rate Revenues - Sewer (RCR-RD-7)				\$ 1,516,984	
Haddonfield Sewer Revenue Requirement (RCR-RD-7)				\$ 4,837,015	
Unrecovered Revenue Requirement				\$ (3,320,031.00)	

Competing Bids

Aqua New Jersey, Inc. Bid Dated May 14, 2014
 United Water Bid Dated May 14, 2014

\$23,126,000.00
 \$19,050,000.00

Schedule HJW-10(Continued): Haddonfield Water & Sewer Valuation**ADJUSTMENTS TO UPIS AND ACCUMULATED**

DEPRECIATION	Company	Rate Counsel	RC Adjustment
Original Cost Water	\$ 16,796,033.10	\$ 16,530,433.10	\$ (265,600.00)
Allocation of Engineering & Oversight Costs	\$ 3,359,206.62	\$ 3,306,086.62	\$ (53,120.00)
Land & Land Rights	\$ -	\$ 1,181,466.14	\$ 1,181,466.14
Total Original Cost Value Water	\$ 20,155,239.72	\$ 21,017,985.86	\$ 862,746.14
Accumulated Depreciation - Water	\$ 7,693,933.80	\$ 9,599,319.84	\$ 1,905,386.04
Net Plant Value - Water	\$ 12,461,305.92	\$ 11,418,666.02	\$ (1,042,639.90)
Original Cost - Sewer	\$ 16,317,359.28	\$ 16,317,359.28	\$ -
Allocation of Engineering & Oversight Costs	\$ 3,263,471.86	\$ 3,263,471.86	\$ -
Land & Land Rights	\$ -	\$ 919,071.25	\$ 919,071.25
Total Original Cost Value Sewer	\$ 19,580,831.14	\$ 20,499,902.39	\$ 919,071.25
Accumulated Depreciation - Sewer	\$ 5,131,048.45	\$ 9,206,986.20	\$ 4,075,937.74
Net Plant Value - Sewer	\$ 14,449,782.68	\$ 11,292,916.19	\$ (3,156,866.49)
Total Net Plant Water & Sewer	\$ 26,911,088.60	\$ 22,711,582.21	\$ (4,199,506.39)

ADJUSTMENTS TO ACQUISITION ADJUSTMENT

Company Acquisition Adjustment from SIR-54	\$ 1,798,368.73
Rate Counsel Recommended Acquisition Adjustment	\$ -
Rate Counsel Adjustment	\$ (1,798,368.73)

Schedule HJW-10A: Water System Facilities									
YEAR OF PURCHASE	ITEM	AGE (YEARS)	ORIGINAL COST	LIFE	DEPRECIATION FACTOR	DEPRECIATION COST	Company OCLD	2014	
								WATER SYSTEM FACILITIES	
1909	WATER WORKS BUILDING	105	\$ 25,000.00	90	1.00	\$ 25,000.00			
1909	SUCTION WELL	105	\$ 4,000.00	90	1.00	\$ 4,000.00			
1909	FILTER BUILDING	105	\$ 12,000.00	90	1.00	\$ 12,000.00			
2002	FILTER BUILDING ROOF	12	\$ 21,000.00	40	0.30	\$ 6,300.00			\$ 14,700.00
2006	FILTER BUILDING RETAINING WALL	8	\$ 193,300.00	90	0.09	\$ 17,182.22			\$ 176,117.78
1940	FILTERS (3)	74	\$ 20,000.00	90	0.82	\$ 16,444.44			\$ 3,555.56
2000	FILTER MEDIA (2)	14	\$ 48,000.00	30	0.47	\$ 22,400.00			\$ 25,600.00
1955	CHLORINATION BUILDING	59	\$ 5,000.00	90	0.66	\$ 3,277.78			\$ 1,722.22
2003	CHLORINATION BUILDING	11	\$ 15,000.00	40	0.28	\$ 4,125.00			\$ 10,875.00
2006	CHLORINATION EQUIPMENT	8	\$ 13,000.00	15	0.53	\$ 6,933.33			\$ 6,066.67
2013	CHLORINE BUILDING HEATING	1	\$ 15,000.00	20	0.05	\$ 750.00			\$ 14,250.00
1979	GENERATOR BUILDING	35	\$ 13,500.00	90	0.39	\$ 5,250.00			\$ 8,250.00
2000	GENERATOR BUILDING	14	\$ 14,000.00	40	0.35	\$ 4,900.00			\$ 9,100.00
1979	STANDBY GENERATOR	35	\$ 20,000.00	40	0.88	\$ 17,500.00			\$ 2,500.00
1996	DISTRIBUTION PUMP (500 GPM)	18	\$ 13,138.00	50	0.36	\$ 4,729.68			\$ 8,408.32
1995	DISTRIBUTION PUMP (1100 GPM)	19	\$ 12,712.00	50	0.38	\$ 4,830.56			\$ 7,881.44
1995	DISTRIBUTION PUMP 1500 GPM)	19	\$ 3,343.00	50	0.38	\$ 1,270.34			\$ 2,072.66
2001	DRIVE FOR 500 GPM PUMP	13	\$ 10,000.00	20	0.65	\$ 6,500.00			\$ 3,500.00
2002	DRIVE FOR 1100 GPM PUMP	12	\$ 12,000.00	20	0.60	\$ 7,200.00			\$ 4,800.00
2012	DRIVE FOR 1500 GPM PUMP	2	\$ 15,000.00	20	0.10	\$ 1,500.00			\$ 13,500.00
1969	PUMP PIPING, VALVE, ETC	45	\$ 5,354.00	75	0.60	\$ 3,212.40			\$ 2,141.60
1998	PUMP SUCTION PIPE	16	\$ 4,688.00	75	0.21	\$ 1,000.11			\$ 3,687.89
1909	AERATOR BUILDING	105	\$ 5,000.00	90	1.00	\$ 5,000.00			\$ -
2004	AERATOR	10	\$ 236,850.00	75	0.13	\$ 31,580.00			\$ 205,270.00
1998	CONTROL EQUIPMENT	16	\$ 183,051.00	25	0.64	\$ 117,152.64			\$ 65,898.36
1968	LAKE ST WATER PLANT BUILDING	46	\$ 60,541.00	90	0.51	\$ 30,943.18			\$ 29,597.82
1968	LAKE ST BELOW GRADE RES (2)	46	\$ 306,402.00	90	0.51	\$ 156,605.47			\$ 149,796.53
1968	LAKE STREET FILTRATION	46	\$ 115,274.00	75	0.61	\$ 70,701.39			\$ 44,572.61
1968	LAKE STREET TREATMENT &	46	\$ 33,413.00	40	1.00	\$ 33,413.00			\$ -
1979	LAKE ST CLEAR WELL PUMPS	35	\$ 115,274.00	50	0.70	\$ 80,691.80			\$ 34,582.20
1968	LAKE ST. PUMP STATION (FANCEY)	46	\$ 25,000.00	90	0.51	\$ 12,777.78			\$ 12,222.22
1968	LAKE ST PUMP EQUIPMENT	46	\$ 15,254.00	50	0.92	\$ 14,033.68			\$ 1,220.32
1968	LAKE STREET GENERATOR	46	\$ 6,102.00	40	1.00	\$ 6,102.00			\$ -
1899	COTTAGE AVE STANDPIPE	115	\$ 15,000.00	100	1.00	\$ 15,000.00			\$ -
1997	COTTAGE AVE STANDPIPE PAINTING	17	\$ 140,000.00	20	0.85	\$ 119,000.00			\$ 21,000.00
2013	COTTAGE AVE STANDPIPE	1	\$ 10,000.00	25	0.04	\$ 400.00			\$ 9,600.00
1991	COTTAGE AVE ROOF REPLACEMENT	23	\$ 16,500.00	75	0.31	\$ 5,060.00			\$ 11,440.00
2014	COTTAGE AVE OVERFLOW PIPE	0	\$ 9,000.00	75	0.00	\$ -			\$ 9,000.00
1909	BUILDING STANDPIPE	105	\$ 1,100.00	90	1.00	\$ 1,100.00			\$ -
1935	BUILDING WELL A	79	\$ 3,245.00	90	0.88	\$ 2,848.39			\$ 396.61
2006	GENERATOR PURCHASE - WELL A	8	\$ 25,995.00	90	0.09	\$ 2,310.67			\$ 23,684.33
2001	BUILDING A IMPROVEMENTS	13	\$ 11,200.00	40	0.33	\$ 3,640.00			\$ 7,560.00
2008	WELL A REDRILL & PUMP	6	\$ 214,000.00	30	0.20	\$ 42,800.00			\$ 171,200.00
1959	WELL 5 BUILDING	55	\$ 28,108.00	90	0.61	\$ 17,177.11			\$ 10,930.89

Schedule HJW-10A: Water System Facilities									
YEAR OF PURCHASE	ITEM	2014 AGE (YEARS)	ORIGINAL COST	LIFE	DEPRECIATION FACTOR	DEPRECIATION COST	Company OCLD		
2003	WELL 5 BUILDING IMPROVEMENTS	11	\$ 34,181.00	40	0.28	\$ 9,399.78	\$ 24,781.23		
2007	WEL L 5 REDEVELOPMENT & PUMP	7	\$ 59,450.00	15	0.47	\$ 27,743.33	\$ 31,706.67		
1971	WELL 7 BUILDING	43	\$ 64,432.00	90	0.48	\$ 30,784.18	\$ 33,647.82		
2000	WELL 7 REDEVELOPMENT & PUMP	14	\$ 59,850.00	20	0.70	\$ 41,895.00	\$ 17,955.00		
2000	VFD DRIVE 1000 GPM WELL (100 HP)	14	\$ 8,800.00	20	0.70	\$ 6,160.00	\$ 2,640.00		
1997	INTERCONNECTIONS WITH NJAW	17	\$ 90,601.00	100	0.17	\$ 15,402.17	\$ 75,198.83		
2009	WATER METER REPLACEMENTS	5	\$ 1,405,000.00	35	0.14	\$ 200,714.29	\$ 1,204,285.71		
	TOTAL		\$ 3,793,658.00			\$ 1,276,741.70	\$ 2,516,916.30		

Notes:

- (1) Cottage Ave Standpipe removed from service following acquisition. (Shields p.39) OCLD \$ 115,177.35
- (2) Centre Street Filtration Plant decommissioned after acquisition. OCLD \$ 448,265.80
- (3) Haddonfield allocations transferred to NJAW wells. System has a surplus of 1,233.253 MGM (39.78 MGD).

Schedule HJW-10A: Water System Facilities						
YEAR OF PURCHASE	ITEM	Account	NJAW Rate	Accumulated Depreciation	RC	OCLD
1909	WATER WORKS BUILDING	331	2.67%	\$ 25,000	\$ -	\$ -
1909	SUCTION WELL	315	2.71%	\$ 4,000	\$ -	\$ -
1909	FILTER BUILDING	331	2.67%	\$ 12,000	\$ -	\$ -
2002	FILTER BUILDING ROOF	331	2.67%	\$ 6,728	\$ 14,271.60	\$ -
2006	FILTER BUILDING RETAINING WALL	331	2.67%	\$ 41,289	\$ 152,011.12	\$ -
1940	FILTERS (3)	332.1	3.48%	\$ 20,000	\$ -	\$ -
2000	FILTER MEDIA (2)	332.2	0.07%	\$ 470	\$ 47,529.60	\$ -
1955	CHLORINATION BUILDING	331	2.67%	\$ 5,000	\$ -	\$ -
2003	CHLORINATION BUILDING	331	2.67%	\$ 4,406	\$ 10,594.50	\$ -
2006	CHLORINATION EQUIPMENT	332.1	3.48%	\$ 3,619	\$ 9,380.80	\$ -
2013	CHLORINE BUILDING HEATING	331	2.67%	\$ 401	\$ 14,599.50	\$ -
1979	GENERATOR BUILDING	331	2.67%	\$ 12,616	\$ 884.25	\$ -
2000	GENERATOR BUILDING	331	2.67%	\$ 5,233	\$ 8,766.80	\$ -
1979	STANDBY GENETATOR	323	2.61%	\$ 18,270	\$ 1,730.00	\$ -
1996	DISTRIBUTION PUMP (500 GPM)	325	2.78%	\$ 6,574	\$ 6,563.74	\$ -
1995	DISTRIBUTION PUMP (1100 GPM)	325	2.78%	\$ 6,714	\$ 5,997.52	\$ -
1995	DISTRIBUTION PUMP 1500 GPM)	325	2.78%	\$ 1,766	\$ 1,577.23	\$ -
2001	DRIVE FOR 500 GPM PUMP	328	5.74%	\$ 7,462	\$ 2,538.00	\$ -
2002	DRIVE FOR 1100 GPM PUMP	328	5.74%	\$ 8,266	\$ 3,734.40	\$ -
2012	DRIVE FOR 1500 GPM PUMP	328	5.74%	\$ 1,722	\$ 13,278.00	\$ -
1969	PUMP, PIPING, VALVE, ETC	325	2.78%	\$ 5,354	\$ -	\$ -
1998	PUMP SUCTION PIPE	328	5.74%	\$ 4,305	\$ 382.54	\$ -
1909	AERATOR BUILDING	331	2.67%	\$ 5,000	\$ -	\$ -
2004	AERATOR	332.1	3.48%	\$ 82,424	\$ 154,426.20	\$ -
1998	CONTROL EQUIPMENT	397	11.62%	\$ 183,051	\$ -	\$ -
1968	LAKE ST WATER PLANT BUILDING	331	2.67%	\$ 60,541	\$ -	\$ -
1968	LAKE ST BELOW GRADE RES (2)	342	2.06%	\$ 290,347	\$ 16,055.46	\$ -
1968	LAKE STREET FILTRATION	332.1	3.48%	\$ 115,274	\$ -	\$ -
1968	LAKE STREET TREATMENT &	397	11.62%	\$ 33,413	\$ -	\$ -
1979	LAKE ST CLEAR WELL PUMPS	325	2.78%	\$ 112,162	\$ 3,112.40	\$ -
1968	LAKE ST. PUMP STATION (FANCEY)	331	2.67%	\$ 25,000	\$ -	\$ -
1968	LAKE ST PUMP EQUIPMENT	325	2.78%	\$ 15,254	\$ -	\$ -
1968	LAKE STREET GENERATOR	323	2.61%	\$ 6,102	\$ -	\$ -
1899	COTTAGE AVE STANDPIPE	342	2.06%	\$ 15,000	\$ -	\$ -
1997	COTTAGE AVE STANDPIPE PAINTING	342	2.06%	\$ 49,028	\$ 90,972.00	\$ -
2013	COTTAGE AVE STANDPIPE	397	11.62%	\$ 1,162	\$ 8,838.00	\$ -
1991	COTTAGE AVE ROOF REPLACEMENT	331	2.67%	\$ 10,133	\$ 6,367.35	\$ -
2014	COTTAGE AVE OVERFLOW PIPE	342	2.06%	\$ -	\$ 9,000.00	\$ -
1909	BUILDING STANDPIPE	342	2.06%	\$ 1,100	\$ -	\$ -
1935	BUILDING WELL A	311	3.04%	\$ 3,245	\$ -	\$ -
2006	GENERATOR PURCHASE - WELL A	323	2.61%	\$ 5,428	\$ 20,567.24	\$ -
2001	BUILDING A IMPROVEMENTS	311	3.04%	\$ 4,426	\$ 6,773.76	\$ -
2008	WELL A REDRILL & PUMP	314	2.80%	\$ 35,952	\$ 178,048.00	\$ -
1959	WELL 5 BUILDING	311	3.04%	\$ 28,108	\$ -	\$ -

Schedule HJW-10A: Water System Facilities						
YEAR OF PURCHASE	ITEM	Account	NJAW Rate	Accumulated Depreciation	RC OCLD	
2003	WELL 5 BUILDING IMPROVEMENTS	311	3.04%	\$ 11,430	\$ 22,750.87	
2007	WELL 5 REDEVELOPMENT & PUMP	314	2.80%	\$ 11,652	\$ 47,797.80	
1971	WELL 7 BUILDING	311	3.04%	\$ 64,432	\$ -	
2000	WELL 7 REDEVELOPMENT & PUMP	314	2.80%	\$ 23,461	\$ 36,388.80	
2000	VFD DRIVE 1000 GPM WELL (100 HP)	328	5.74%	\$ 7,072	\$ 1,728.32	
1997	INTERCONNECTIONS WITH NJAW	343	0.91%	\$ 14,016	\$ 76,585.03	
2009	WATER METER REPLACEMENTS	346	11.90%	\$ 835,975	\$ 569,025.00	
	TOTAL			\$ 2,251,382	\$ 1,542,275.84	

Schedule HW-10B: Water Services									
WATER SERVICES									
YEAR OF PURCHASE	ITEM	NO. OF ITEMS	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
2014	1" - UP TO 30" LONG	24	0	75	\$ 1,700.00	\$ 40,800.00	0	\$ -	\$ 40,800.00
2014	1" - 31" TO 50"	23	0	75	\$ 2,000.00	\$ 46,000.00	0	\$ -	\$ 46,000.00
2014	1" - UP TO 40" LONG	45	0	75	\$ 1,500.00	\$ 67,500.00	0	\$ -	\$ 67,500.00
2013	1" - UP TO 30" LONG	61	1	75	\$ 1,200.00	\$ 73,200.00	0.01	\$ 16.00	\$ 72,224.00
2013	1" - 31" TO 75" LONG	31	1	75	\$ 1,450.00	\$ 44,950.00	0.01	\$ 19.33	\$ 44,350.67
2013	1.5" - UP TO 30" LONG	1	1	75	\$ 2,000.00	\$ 2,000.00	0.01	\$ 26.67	\$ 1,973.33
2013	2" - UP TO 30" LONG	1	1	75	\$ 3,000.00	\$ 3,000.00	0.01	\$ 40.00	\$ 2,960.00
2012	CEDAR AVE WATER MAIN	40	2	75	\$ 500.00	\$ 20,000.00	0.03	\$ 13.33	\$ 19,466.67
2012	CENTRE STREET UTILITIES	13	2	75	\$ 1,200.00	\$ 15,600.00	0.03	\$ 32.00	\$ 15,184.00
2011	WATER SERVICES- STATION	20	3	75	\$ 1,200.00	\$ 24,000.00	0.04	\$ 48.00	\$ 23,040.00
2011	AVENUE	6	3	75	\$ 700.00	\$ 4,200.00	0.04	\$ 28.00	\$ 4,032.00
2010	KINGS COURT	1	4	75	\$ 1,500.00	\$ 1,500.00	0.05	\$ 80.00	\$ 1,420.00
2011	1" SERVICE - WOODLAND	36	3	75	\$ 1,100.00	\$ 39,600.00	0.04	\$ 44.00	\$ 38,016.00
2011	1" SERVICE- TANNER	33	3	75	\$ 1,000.00	\$ 33,000.00	0.04	\$ 40.00	\$ 31,680.00
2011	2" SERVICE -TANN ER	1	3	75	\$ 1,100.00	\$ 1,100.00	0.04	\$ 44.00	\$ 1,056.00
2010	CHESTNUT/REDMAN	65	4	75	\$ 1,300.00	\$ 84,500.00	0.05	\$ 69.33	\$ 79,993.33
2009	COLONIAL/LAKE	66	5	75	\$ 800.00	\$ 52,800.00	0.07	\$ 53.33	\$ 49,280.00
2007	RHOADES AVE	50	7	75	\$ 900.00	\$ 45,000.00	0.09	\$ 84.00	\$ 40,800.00
2007	WALNUT	35	7	75	\$ 1,100.00	\$ 38,500.00	0.09	\$ 102.67	\$ 34,906.67
2007	SYLVAN LAKE- 1" WATER SERVICE	6	7	75	\$ 1,500.00	\$ 9,000.00	0.09	\$ 140.00	\$ 8,160.00
2007	SYLVAN LAKE-2" WATER SERVICE	1	7	75	\$ 1,500.00	\$ 1,500.00	0.09	\$ 140.00	\$ 1,360.00
2006	2006 ROAD PROGRAM	80	8	75	\$ 1,200.00	\$ 96,000.00	0.11	\$ 128.00	\$ 85,760.00
2005	2005 ROAD PROGRAM	74	9	75	\$ 1,200.00	\$ 88,800.00	0.12	\$ 144.00	\$ 78,144.00
2004		52	10	75	\$ 1,200.00	\$ 62,400.00	0.13	\$ 160.00	\$ 54,080.00
2003		15	11	75	\$ 1,200.00	\$ 18,000.00	0.15	\$ 176.00	\$ 15,360.00
2002		15	12	75	\$ 1,200.00	\$ 18,000.00	0.16	\$ 192.00	\$ 15,120.00
2001		20	13	75	\$ 1,200.00	\$ 24,000.00	0.17	\$ 208.00	\$ 19,840.00
2000		20	14	75	\$ 1,276.60	\$ 25,532.00	0.19	\$ 238.30	\$ 20,766.03
1999		20	15	75	\$ 1,245.40	\$ 24,908.00	0.20	\$ 249.08	\$ 19,926.40
1998		20	16	75	\$ 1,218.10	\$ 24,362.00	0.21	\$ 259.86	\$ 19,164.77
1997		20	17	75	\$ 1,190.80	\$ 23,816.00	0.23	\$ 269.91	\$ 18,417.71
1996		30	18	75	\$ 1,167.40	\$ 35,022.00	0.24	\$ 280.18	\$ 26,616.72
1995		30	19	75	\$ 1,123.20	\$ 33,696.00	0.25	\$ 284.54	\$ 25,159.68
1994		30	20	75	\$ 1,105.00	\$ 33,150.00	0.27	\$ 294.67	\$ 24,310.00
1993		30	21	75	\$ 1,079.00	\$ 32,370.00	0.28	\$ 302.12	\$ 23,306.40
1992		30	22	75	\$ 1,028.30	\$ 30,849.00	0.29	\$ 301.63	\$ 21,799.96
1991		30	23	75	\$ 993.20	\$ 29,796.00	0.31	\$ 304.58	\$ 20,658.56
1990		30	24	75	\$ 971.10	\$ 29,133.00	0.32	\$ 310.75	\$ 19,810.44
1989		30	25	75	\$ 952.90	\$ 28,587.00	0.33	\$ 317.63	\$ 19,058.00
1988		30	26	75	\$ 928.20	\$ 27,846.00	0.35	\$ 321.78	\$ 18,192.72
1987		20	27	75	\$ 910.00	\$ 18,200.00	0.36	\$ 327.60	\$ 11,648.00
1986		44	28	75	\$ 884.00	\$ 38,896.00	0.37	\$ 330.03	\$ 24,374.83

Schedule HW-10B: Water Services									
WATER SERVICES									
YEAR OF PURCHASE	ITEM	NO. OF ITEMS	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
			2014						
1985		32	29	75	\$ 859.30	\$ 27,497.60	0.39	\$ 332.26	\$ 16,865.19
1984		50	30	75	\$ 842.40	\$ 42,120.00	0.40	\$ 336.96	\$ 25,272.00
1983		32	31	75	\$ 834.60	\$ 26,707.20	0.41	\$ 344.97	\$ 15,668.22
1982		32	32	75	\$ 802.10	\$ 25,667.20	0.43	\$ 342.23	\$ 14,715.86
1981		32	33	75	\$ 751.40	\$ 24,044.80	0.44	\$ 330.62	\$ 13,465.09
1980		43	34	75	\$ 686.40	\$ 29,515.20	0.45	\$ 311.17	\$ 16,134.98
1979		32	35	75	\$ 638.30	\$ 20,425.60	0.47	\$ 297.87	\$ 10,893.65
1978		27	36	75	\$ 582.40	\$ 15,724.80	0.48	\$ 279.55	\$ 8,176.90
1977		0	37	75	\$ -	\$ -	0.49	\$ -	\$ -
1976		0	38	75	\$ -	\$ -	0.51	\$ -	\$ -
1975		0	39	75	\$ -	\$ -	0.52	\$ -	\$ -
1974		11	40	75	\$ 410.80	\$ 4,518.80	0.53	\$ 219.09	\$ 2,103.77
1973		0	41	75	\$ -	\$ -	0.55	\$ -	\$ -
1972		0	42	75	\$ -	\$ -	0.56	\$ -	\$ -
1971		0	43	75	\$ -	\$ -	0.57	\$ -	\$ -
1970		0	44	75	\$ -	\$ -	0.59	\$ -	\$ -
1969		0	45	75	\$ -	\$ -	0.60	\$ -	\$ -
1968		0	46	75	\$ -	\$ -	0.61	\$ -	\$ -
1967		0	47	75	\$ -	\$ -	0.63	\$ -	\$ -
1966		0	48	75	\$ -	\$ -	0.64	\$ -	\$ -
1965		11	49	75	\$ 197.60	\$ 2,173.60	0.65	\$ 129.10	\$ 753.51
1964		0	50	75	\$ -	\$ -	0.67	\$ -	\$ -
1963		0	51	75	\$ -	\$ -	0.68	\$ -	\$ -
1962		121	52	75	\$ 176.80	\$ 21,392.80	0.69	\$ 122.58	\$ 6,560.46
1961		0	53	75	\$ -	\$ -	0.71	\$ -	\$ -
1960		98	54	75	\$ 167.70	\$ 16,434.60	0.72	\$ 120.74	\$ 4,601.69
1959		0	55	75	\$ -	\$ -	0.73	\$ -	\$ -
1958		0	56	75	\$ -	\$ -	0.75	\$ -	\$ -
1957		0	57	75	\$ -	\$ -	0.76	\$ -	\$ -
1956		0	58	75	\$ -	\$ -	0.77	\$ -	\$ -
1955		706	59	75	\$ 167.70	\$ 118,396.20	0.79	\$ 131.92	\$ 25,257.86
1954		0	60	75	\$ -	\$ -	0.80	\$ -	\$ -
1953		0	61	75	\$ -	\$ -	0.81	\$ -	\$ -
1952		0	62	75	\$ -	\$ -	0.83	\$ -	\$ -
1951		0	63	75	\$ -	\$ -	0.84	\$ -	\$ -
1950		0	64	75	\$ -	\$ -	0.85	\$ -	\$ -
1949		0	65	75	\$ -	\$ -	0.87	\$ -	\$ -
1948		0	66	75	\$ -	\$ -	0.88	\$ -	\$ -
1947		0	67	75	\$ -	\$ -	0.89	\$ -	\$ -
1946		0	68	75	\$ -	\$ -	0.91	\$ -	\$ -
1945		716	69	75	\$ 167.70	\$ 120,073.20	0.92	\$ 154.28	\$ 9,605.86
1944		0	70	75	\$ -	\$ -	0.93	\$ -	\$ -
1943		0	71	75	\$ -	\$ -	0.95	\$ -	\$ -
1942		0	72	75	\$ -	\$ -	0.96	\$ -	\$ -
1941		0	73	75	\$ -	\$ -	0.97	\$ -	\$ -
1940		0	74	75	\$ -	\$ -	0.99	\$ -	\$ -
1935		0	79	75	\$ -	\$ -	1.05	\$ -	\$ -
1925		0	89	75	\$ -	\$ -	1.00	\$ -	\$ -
1909		0	105	75	\$ 18.20	\$ 18.20	1.00	\$ 1,200.00	\$ -
		4500			\$ 2,151,404.60	\$ 2,151,404.60		\$ 775,607.68	\$ 1,375,796.92
					\$ RC Correction	\$ 1,885,804.60		\$ -	\$ 1,375,791.93

Schedule HJW-10B: Water Services					
WATER SERVICES					
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	RC OCLD
2014	1"- UP TO 30' LONG	345	1.82%	\$ -	\$40,800.00
2014	1"- 31' TO 50'	345	1.82%	\$ -	\$46,000.00
2014	1"- UPTO40' LONG	345	1.82%	\$ -	\$67,500.00
2013	1"- UP TO 30' LONG	345	1.82%	\$ 1,332.24	\$71,867.76
2013	1" • 31' TO 75' LONG	345	1.82%	\$ 818.09	\$44,131.91
2013	1.5" • UPTO 30' LONG	345	1.82%	\$ 36.40	\$1,963.60
2013	2"- UP TO 30' LONG	345	1.82%	\$ 54.60	\$2,945.40
2012	CEDAR AVE WATER MAIN	345	1.82%	\$ 728.00	\$19,272.00
2012	CENTRE STREET UTILITIES	345	1.82%	\$ 567.84	\$15,032.16
2011	WATER SERVICES- STATION	345	1.82%	\$ 1,310.40	\$22,689.60
2011	AVENUE	345	1.82%	\$ 229.32	\$3,970.68
2010	KINGS COURT	345	1.82%	\$ 109.20	\$1,390.80
2011	1" SERVICE - WOODLAND	345	1.82%	\$ 2,162.16	\$37,437.84
2011	1" SERVICE - TANNER	345	1.82%	\$ 1,801.80	\$31,198.20
2011	2" SERVICE - TANNER	345	1.82%	\$ 60.06	\$1,039.94
2010	CHESTNUT/REDMAN	345	1.82%	\$ 6,151.60	\$78,348.40
2009	COLONIAL LAKE	345	1.82%	\$ 4,804.80	\$47,995.20
2007	RHOADES AVE	345	1.82%	\$ 5,733.00	\$39,267.00
2007	WALNUT	345	1.82%	\$ 4,904.90	\$33,595.10
2007	SYLVAN LAKE- 1" WATER SERVICE	345	1.82%	\$ 1,146.60	\$7,853.40
2007	SYLVAN LAKE-2" WATER SERVICE	345	1.82%	\$ 191.10	\$1,308.90
2006	2006 ROAD PROGRAM	345	1.82%	\$ 13,977.60	\$82,022.40
2005	2005 ROAD PROGRAM	345	1.82%	\$ 14,545.44	\$74,254.56
2004		345	1.82%	\$ 11,356.80	\$51,043.20
2003		345	1.82%	\$ 3,603.60	\$14,396.40
2002		345	1.82%	\$ 3,931.20	\$14,068.80
2001		345	1.82%	\$ 5,678.40	\$18,321.60
2000		345	1.82%	\$ 6,505.55	\$19,026.45
1999		345	1.82%	\$ 6,799.88	\$18,108.12
1998		345	1.82%	\$ 7,094.21	\$17,267.79
1997		345	1.82%	\$ 7,368.67	\$16,447.33
1996		345	1.82%	\$ 11,473.21	\$23,548.79
1995		345	1.82%	\$ 11,652.08	\$22,043.92
1994		345	1.82%	\$ 12,066.60	\$21,083.40
1993		345	1.82%	\$ 12,371.81	\$19,998.19
1992		345	1.82%	\$ 12,351.94	\$18,497.06
1991		345	1.82%	\$ 12,472.61	\$17,323.39
1990		345	1.82%	\$ 12,725.29	\$16,407.71
1989		345	1.82%	\$ 13,007.09	\$15,579.92
1988		345	1.82%	\$ 13,176.73	\$14,669.27
1987		345	1.82%	\$ 8,943.48	\$9,256.52
1986		345	1.82%	\$ 19,821.40	\$19,074.60

Schedule HJW-10B: Water Services				
WATER SERVICES				
YEAR OF PURCHASE ITEM	Account	NJAWC Rate	Accumulated Depreciation	RC OCLD
1985	345	1.82%	\$ 14,513.23	\$12,984.37
1984	345	1.82%	\$ 22,997.52	\$19,122.48
1983	345	1.82%	\$ 15,068.20	\$11,639.00
1982	345	1.82%	\$ 14,948.58	\$10,718.62
1981	345	1.82%	\$ 14,441.31	\$9,603.49
1980	345	1.82%	\$ 18,264.01	\$11,251.19
1979	345	1.82%	\$ 13,011.11	\$7,414.49
1978	345	1.82%	\$ 10,302.89	\$5,421.91
1977	345	1.82%	\$ -	\$0.00
1976	345	1.82%	\$ -	\$0.00
1975	345	1.82%	\$ -	\$0.00
1974	345	1.82%	\$ 3,289.69	\$1,229.11
1973	345	1.82%	\$ -	\$0.00
1972	345	1.82%	\$ -	\$0.00
1971	345	1.82%	\$ -	\$0.00
1970	345	1.82%	\$ -	\$0.00
1969	345	1.82%	\$ -	\$0.00
1968	345	1.82%	\$ -	\$0.00
1967	345	1.82%	\$ -	\$0.00
1966	345	1.82%	\$ -	\$0.00
1965	345	1.82%	\$ 1,938.42	\$235.18
1964	345	1.82%	\$ -	\$0.00
1963	345	1.82%	\$ -	\$0.00
1962	345	1.82%	\$ 20,246.15	\$1,146.65
1961	345	1.82%	\$ -	\$0.00
1960	345	1.82%	\$ 16,151.92	\$282.68
1959	345	1.82%	\$ -	\$0.00
1958	345	1.82%	\$ -	\$0.00
1957	345	1.82%	\$ -	\$0.00
1956	345	1.82%	\$ -	\$0.00
1955	345	1.82%	\$ 118,396.20	\$0.00
1954	345	1.82%	\$ -	\$0.00
1953	345	1.82%	\$ -	\$0.00
1952	345	1.82%	\$ -	\$0.00
1951	345	1.82%	\$ -	\$0.00
1950	345	1.82%	\$ -	\$0.00
1949	345	1.82%	\$ -	\$0.00
1948	345	1.82%	\$ -	\$0.00
1947	345	1.82%	\$ -	\$0.00
1946	345	1.82%	\$ -	\$0.00
1945	345	1.82%	\$ 120,073.20	\$0.00
1944	345	1.82%	\$ -	\$0.00
1943	345	1.82%	\$ -	\$0.00
1942	345	1.82%	\$ -	\$0.00
1941	345	1.82%	\$ -	\$0.00
1940	345	1.82%	\$ -	\$0.00
1935	345	1.82%	\$ -	\$0.00
1925	345	1.82%	\$ -	\$0.00
1909	345	1.82%	\$ 656,708.12	\$1,229,096.48

Schedule HJW-10C: Water Mains

WATER MAIN										
YEAR OF PURCHASE	ITEM	LINEAR FEET OF PIPE	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	OCCLD	
2014	8" DIRECTIONAL DRILL WATER MAIN - GROVE PROJECT	2,740	0	100	\$ 115.00	\$ 315,100.00	-	\$ -	\$ 315,100.00	
2014	8" WATER MAIN - GROVE PROJECT	450	0	100	\$ 375.00	\$ 168,750.00	-	\$ -	\$ 168,750.00	
2014	6" WATER MAIN - GROVE PROJECT	49	0	100	\$ 175.00	\$ 8,575.00	-	\$ -	\$ 8,575.00	
2014	4" WATER MAIN - GROVE PROJECT	30	0	100	\$ 168.00	\$ 5,040.00	-	\$ -	\$ 5,040.00	
2014	8" FITTINGS	10	0	100	\$ 200.00	\$ 2,000.00	-	\$ -	\$ 2,000.00	
2014	6" FITTINGS	5	0	100	\$ 150.00	\$ 750.00	-	\$ -	\$ 750.00	
2014	4" FITTINGS	5	0	100	\$ 125.00	\$ 625.00	-	\$ -	\$ 625.00	
2014	8" TEES	11	0	100	\$ 600.00	\$ 6,600.00	-	\$ -	\$ 6,600.00	
2014	REDUCERS	4	0	100	\$ 700.00	\$ 2,800.00	-	\$ -	\$ 2,800.00	
2014	CLDIP MJT CAPS	4	0	100	\$ 500.00	\$ 2,000.00	-	\$ -	\$ 2,000.00	
2014	8" WATER MAIN	1,300	0	100	\$ 106.00	\$ 137,800.00	-	\$ -	\$ 137,800.00	
2013	8 " WATER MAIN	3,177	1	100	\$ 110.00	\$ 349,470.00	0.01	\$ 1.10	\$ 345,975.30	
2013	6" WATER MAIN	70	1	100	\$ 55.00	\$ 3,850.00	0.01	\$ 0.55	\$ 3,811.50	
2013	4" WATER MAIN	53	1	100	\$ 55.00	\$ 2,915.00	0.01	\$ 0.55	\$ 2,885.85	
2012	8" WATER MAIN -	2,100	2	100	\$ 100.00	\$ 210,000.00	0.02	\$ 2.00	\$ 205,800.00	
2012	6" FITTINGS - CEDAR	5	2	100	\$ 250.00	\$ 1,250.00	0.02	\$ 5.00	\$ 1,225.00	
2012	8" FITTINGS - CEDAR	8	2	100	\$ 400.00	\$ 3,200.00	0.02	\$ 8.00	\$ 3,136.00	
2012	CENTRE STREET-	792	2	100	\$ 100.00	\$ 79,200.00	0.02	\$ 2.00	\$ 77,616.00	
2012	CENTRE STREET 8" FITTINGS	9	2	100	\$ 275.00	\$ 2,475.00	0.02	\$ 5.50	\$ 2,425.50	

Schedule HJW-10C: Water Mains

WATER MAIN										
YEAR OF PURCHASE	ITEM	LINEAR FEET OF PIPE	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	OCCLD	
2012	CENTR E STREET 8" FITTINGS	2	2	100	\$ 550.00	\$ 1,100.00	0.02	\$ 11.00	\$ 1,078.00	
2011		-	3	100	\$ -	\$ -	0.03	\$ -	\$ -	
2011	6" MAIN- WOODLAND	15	3	100	\$ 55.00	\$ 825.00	0.03	\$ 1.65	\$ 800.25	
2011	8" MAIN- WOODLAND	2,753	3	100	\$ 65.00	\$ 178,945.00	0.03	\$ 1.95	\$ 173,576.65	
2011	8" FITTINGS - WOODLAND	48	3	100	\$ 225.00	\$ 10,800.00	0.03	\$ 6.75	\$ 10,476.00	
2011	8" WATER MAIN - TANNER	1,385	3	100	\$ 95.00	\$ 131,575.00	0.03	\$ 2.85	\$ 127,627.75	
2011	8" FITTING - TANNER	39	3	100	\$ 400.00	\$ 15,600.00	0.03	\$ 12.00	\$ 15,132.00	
2011	8" WATER MAIN - WOODLAND	3,810	3	100	\$ 100.00	\$ 381,000.00	0.03	\$ 3.00	\$ 369,570.00	
2011	8" FITTINGS - WOODLAND	45	3	100	\$ 225.00	\$ 10,125.00	0.03	\$ 6.75	\$ 9,821.25	
2009	8" WATER MAIN - REDMAN	1,120	5	100	\$ 135.00	\$ 151,200.00	0.05	\$ 6.75	\$ 143,640.00	
2008	8" WATER MAIN	1,614	6	100	\$ 70.00	\$ 112,980.00	0.06	\$ 4.20	\$ 106,201.20	
2008	12" WATER MAIN	43	6	100	\$ 101.00	\$ 4,343.00	0.06	\$ 6.06	\$ 4,082.42	
2008	6" WATER MAIN	30	6	100	\$ 60.00	\$ 1,800.00	0.06	\$ 3.60	\$ 1,692.00	
2007	8" WATER MAIN - RHOADES	1,587	7	100	\$ 68.00	\$ 107,916.00	0.07	\$ 4.76	\$ 100,361.88	
2007	8" FITTINGS - RHOADES	1	7	100	\$ 500.00	\$ 500.00	0.07	\$ 35.00	\$ 465.00	
2007	8" WATER MAIN - WALNUT	1,300	7	100	\$ 100.00	\$ 130,000.00	0.07	\$ 7.00	\$ 120,900.00	
2007	6" WATER MAIN - SYLVAN LAKE	724	7	100	\$ 60.00	\$ 43,440.00	0.07	\$ 4.20	\$ 40,399.20	
2007	6" FITTINGS - SYLVAN LAKE	10	7	100	\$ 375.00	\$ 3,750.00	0.07	\$ 26.25	\$ 3,487.50	
2006	6" WATER MAIN	100	8	100	\$ 120.00	\$ 12,000.00	0.08	\$ 9.60	\$ 11,040.00	
2005	6" WATER MAIN	80	9	100	\$ 120.00	\$ 9,600.00	0.09	\$ 10.80	\$ 8,736.00	
2004	6" WATER MAIN	80	10	100	\$ 110.00	\$ 8,800.00	0.10	\$ 11.00	\$ 7,920.00	
2003	6" WATER MAIN	75	11	100	\$ 110.00	\$ 8,250.00	0.11	\$ 12.10	\$ 7,342.50	
2002	6" WATER MAIN	60	12	100	\$ 110.00	\$ 6,600.00	0.12	\$ 13.20	\$ 5,808.00	

Schedule HJW-10C: Water Mains

WATER MAIN										
YEAR OF PURCHASE	ITEM	LINEAR FEET OF PIPE	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	OCCLD	
2001	6" WATER MAIN	100	13	100	\$ 110.00	\$ 11,000.00	0.13	\$ 14.30	\$ 9,570.00	
2000	6" WATER MAIN	75	14	100	\$ 110.00	\$ 8,250.00	0.14	\$ 15.40	\$ 7,095.00	
1999	6" WATER MAIN	600	15	100	\$ 110.00	\$ 66,000.00	0.15	\$ 16.50	\$ 56,100.00	
1998	4" WATER MAIN	400	16	100	\$ 90.00	\$ 36,000.00	0.16	\$ 14.40	\$ 30,240.00	
1997		-	17	100	\$ -	\$ -	0.17	\$ -	\$ -	
1996	8" WATER MAIN	2,180	18	100	\$ 115.00	\$ 250,700.00	0.18	\$ 20.70	\$ 205,574.00	
1995		-	19	100	\$ -	\$ -	0.19	\$ -	\$ -	
1994		-	20	100	\$ -	\$ -	0.20	\$ -	\$ -	
1993		-	21	100	\$ -	\$ -	0.21	\$ -	\$ -	
1992		-	22	100	\$ -	\$ -	0.22	\$ -	\$ -	
1991		-	23	100	\$ -	\$ -	0.23	\$ -	\$ -	
1990	8" WATER MAIN	800	24	100	\$ 115.00	\$ 92,000.00	0.24	\$ 27.60	\$ 69,920.00	
1989	6" WATER MAIN	810	25	100	\$ 95.00	\$ 76,950.00	0.25	\$ 23.75	\$ 57,712.50	
1988		-	26	100	\$ -	\$ -	0.26	\$ -	\$ -	
1987		-	27	100	\$ -	\$ -	0.27	\$ -	\$ -	
1986	6" WATER MAIN	800	28	100	\$ 95.00	\$ 76,000.00	0.28	\$ 26.60	\$ 54,720.00	
1985		-	29	100	\$ -	\$ -	0.29	\$ -	\$ -	
1984	6" WATER MAIN	1,650	30	100	\$ 95.00	\$ 156,750.00	0.30	\$ 28.50	\$ 109,725.00	
1983		-	31	100	\$ -	\$ -	0.31	\$ -	\$ -	
1982		-	32	100	\$ -	\$ -	0.32	\$ -	\$ -	
1981		-	33	100	\$ -	\$ -	0.33	\$ -	\$ -	
1980		-	34	100	\$ -	\$ -	0.34	\$ -	\$ -	
1979		-	35	100	\$ -	\$ -	0.35	\$ -	\$ -	
1978		-	36	100	\$ -	\$ -	0.36	\$ -	\$ -	
1977		-	37	100	\$ -	\$ -	0.37	\$ -	\$ -	
1976		-	38	100	\$ -	\$ -	0.38	\$ -	\$ -	
1975		-	39	100	\$ -	\$ -	0.39	\$ -	\$ -	
1974	6" WATER MAIN	700	40	100	\$ 85.00	\$ 59,500.00	0.40	\$ 34.00	\$ 35,700.00	
1973		-	41	100	\$ -	\$ -	0.41	\$ -	\$ -	
1972		-	42	100	\$ -	\$ -	0.42	\$ -	\$ -	
1971		-	43	100	\$ -	\$ -	0.43	\$ -	\$ -	
1970		-	44	100	\$ -	\$ -	0.44	\$ -	\$ -	
1969		-	45	100	\$ -	\$ -	0.45	\$ -	\$ -	
1968	16" WATER MAIN	3,000	46	100	\$ 110.00	\$ 330,000.00	0.46	\$ 50.60	\$ 178,200.00	

Schedule HJW-10C: Water Mains

WATER MAIN										
YEAR OF PURCHASE	ITEM	LINEAR FEET OF PIPE	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	OCCLD	
1967		-	47	100	\$ -	\$ -	0.47	\$ -	\$ -	
1966		-	48	100	\$ -	\$ -	0.48	\$ -	\$ -	
1965	12" WATER MAIN	710	49	100	\$ 85.00	\$ 60,350.00	0.49	\$ 41.65	\$ 30,778.50	
1964		-	50	100	\$ -	\$ -	0.50	\$ -	\$ -	
1963		-	51	100	\$ -	\$ -	0.51	\$ -	\$ -	
1962	12" WATER MAIN	3,390	52	100	\$ 75.00	\$ 254,250.00	0.52	\$ 39.00	\$ 122,040.00	
1962	8" WATER MAIN	3,500	52	100	\$ 65.00	\$ 227,500.00	0.52	\$ 33.80	\$ 109,200.00	
1962	6" WATER MAIN	1,587	52	100	\$ 55.00	\$ 87,285.00	0.52	\$ 28.60	\$ 41,896.80	
1962	4" WATER MAIN	6,000	52	100	\$ 45.00	\$ 270,000.00	0.52	\$ 23.40	\$ 129,600.00	
1961		-	53	100	\$ -	\$ -	0.53	\$ -	\$ -	
1960	6" WATER MAIN	6,075	54	100	\$ 50.00	\$ 303,750.00	0.54	\$ 27.00	\$ 139,725.00	
1959		-	55	100	\$ -	\$ -	0.55	\$ -	\$ -	
1958		-	56	100	\$ -	\$ -	0.56	\$ -	\$ -	
1957		-	57	100	\$ -	\$ -	0.57	\$ -	\$ -	
1956		-	58	100	\$ -	\$ -	0.58	\$ -	\$ -	
1955	3" WATER MAIN	4,920	59	100	\$ 55.00	\$ 270,600.00	0.59	\$ 32.45	\$ 110,946.00	
1955	6" WATER MAIN	41,500	59	100	\$ 45.00	\$ 1,867,500.00	0.59	\$ 26.55	\$ 765,675.00	
1955	4" WATER MAIN	5,000	59	100	\$ 35.00	\$ 175,000.00	0.59	\$ 20.65	\$ 71,750.00	
1954		-	60	100	\$ -	\$ -	0.60	\$ -	\$ -	
1953		-	61	100	\$ -	\$ -	0.61	\$ -	\$ -	
1952		-	62	100	\$ -	\$ -	0.62	\$ -	\$ -	
1951		-	63	100	\$ -	\$ -	0.63	\$ -	\$ -	
1950		-	64	100	\$ -	\$ -	0.64	\$ -	\$ -	
1949		-	65	100	\$ -	\$ -	0.65	\$ -	\$ -	
1948		-	66	100	\$ -	\$ -	0.66	\$ -	\$ -	
1947		-	67	100	\$ -	\$ -	0.67	\$ -	\$ -	
1946		-	68	100	\$ -	\$ -	0.68	\$ -	\$ -	
1945	12" WATER MAIN	3,660	69	100	\$ 30.00	\$ 109,800.00	0.69	\$ 20.70	\$ 34,038.00	
1945	10" WATER MAIN	4,410	69	100	\$ 40.00	\$ 176,400.00	0.69	\$ 27.60	\$ 54,684.00	
1945	8" WATER MAIN	3,090	69	100	\$ 35.00	\$ 108,150.00	0.69	\$ 24.15	\$ 33,526.50	
1945	6" WATER MAIN	33,670	69	100	\$ 30.00	\$ 1,010,100.00	0.69	\$ 20.70	\$ 313,131.00	

Schedule HJW-10C: Water Mains

WATER MAIN		YEAR OF PURCHASE	ITEM	LINEAR FEET OF PIPE	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	OCLD
1945	4" WATER MAIN		6,000	69	100	\$ 10.00	\$ 60,000.00		0.69	\$ 6.90	\$ 18,600.00
1944			-	70	100	\$ -	\$ -		0.70	\$ -	\$ -
1943			-	71	100	\$ -	\$ -		0.71	\$ -	\$ -
1942			-	72	100	\$ -	\$ -		0.72	\$ -	\$ -
1941			-	73	100	\$ -	\$ -		0.73	\$ -	\$ -
1940			-	74	100	\$ -	\$ -		0.74	\$ -	\$ -
1939			-	75	100	\$ -	\$ -		0.75	\$ -	\$ -
1938			-	76	100	\$ -	\$ -		0.76	\$ -	\$ -
1937			-	77	100	\$ -	\$ -		0.77	\$ -	\$ -
1936			-	78	100	\$ -	\$ -		0.78	\$ -	\$ -
1935	12" WATER MAIN		1,650	79	100	\$ 15.00	\$ 24,750.00		0.79	\$ 11.85	\$ 5,197.50
1935	8" WATER MAIN		10,000	79	100	\$ 12.00	\$ 120,000.00		0.79	\$ 9.48	\$ 25,200.00
1935	6" WATER MAIN		41,917	79	100	\$ 10.00	\$ 419,170.00		0.79	\$ 7.90	\$ 88,025.70
1935	4" WATER MAIN		52,942	79	100	\$ 5.00	\$ 264,710.00		0.79	\$ 3.95	\$ 55,589.10
1934			-	80	100	\$ -	\$ -		0.80	\$ -	\$ -
1933			-	81	100	\$ -	\$ -		0.81	\$ -	\$ -
1932			-	82	100	\$ -	\$ -		0.82	\$ -	\$ -
1931			-	83	100	\$ -	\$ -		0.83	\$ -	\$ -
1930			-	84	100	\$ -	\$ -		0.84	\$ -	\$ -
1929			-	85	100	\$ -	\$ -		0.85	\$ -	\$ -
1928			-	86	100	\$ -	\$ -		0.86	\$ -	\$ -
1927			-	87	100	\$ -	\$ -		0.87	\$ -	\$ -
1926			-	88	100	\$ -	\$ -		0.88	\$ -	\$ -
1925			-	89	100	\$ -	\$ -		0.89	\$ -	\$ -
1924			-	90	100	\$ -	\$ -		0.90	\$ -	\$ -
1923			-	91	100	\$ -	\$ -		0.91	\$ -	\$ -
1922			-	92	100	\$ -	\$ -		0.92	\$ -	\$ -
1921			-	93	100	\$ -	\$ -		0.93	\$ -	\$ -
1920			-	94	100	\$ -	\$ -		0.94	\$ -	\$ -
1919			-	95	100	\$ -	\$ -		0.95	\$ -	\$ -
1918			-	96	100	\$ -	\$ -		0.96	\$ -	\$ -
1917			-	97	100	\$ -	\$ -		0.97	\$ -	\$ -
1916			-	98	100	\$ -	\$ -		0.98	\$ -	\$ -
1915			-	99	100	\$ -	\$ -		0.99	\$ -	\$ -

Schedule HJW-10C: Water Mains

WATER MAIN										
YEAR OF PURCHASE	ITEM	LINEAR FEET OF PIPE	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	OCLD	
1914		-	100	100	\$ -	\$ -	1.00	\$ -	\$ -	
1913		-	101	100	\$ -	\$ -	1.00	\$ -	\$ -	
1912		-	102	100	\$ -	\$ -	1.00	\$ -	\$ -	
1911		-	103	100	\$ -	\$ -	1.00	\$ -	\$ -	
1910		-	104	100	\$ -	\$ -	1.00	\$ -	\$ -	
1909		-	105	100	\$ -	\$ -	1.00	\$ -	\$ -	
1908		-	106	100	\$ -	\$ -	1.00	\$ -	\$ -	
1907		-	107	100	\$ -	\$ -	1.00	\$ -	\$ -	
1906		-	108	100	\$ -	\$ -	1.00	\$ -	\$ -	
1905		-	109	100	\$ -	\$ -	1.00	\$ -	\$ -	
1904		-	110	100	\$ -	\$ -	1.00	\$ -	\$ -	
1903		-	111	100	\$ -	\$ -	1.00	\$ -	\$ -	
1902		-	112	100	\$ -	\$ -	1.00	\$ -	\$ -	
1901		-	113	100	\$ -	\$ -	1.00	\$ -	\$ -	
1900	12" WATER MAIN	2,400	114	100	\$ 10.00	\$ 24,000.00	1.00	\$ 10.00	\$ -	
		269,279				\$ 9,630,014.00		\$ 4,102,781.65	\$ 5,527,232.35	

Schedule HJW-10C: Water Mains

WATER MAIN						
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD	
2014	8" DIRECTIONAL DRILL WATER MAIN - GROVE PROJECT	343.2	1.14%	\$ -	\$ 315,100.00	
2014	8" WATER MAIN - GROVE PROJECT	343.2	1.14%	\$ -	\$ 168,750.00	
2014	6" WATER MAIN - GROVE PROJECT	343.2	1.14%	\$ -	\$ 8,575.00	
2014	4" WATER MAIN - GROVE PROJECT	343.1	1.52%	\$ -	\$ 5,040.00	
2014	8" FITTINGS	343.2	1.14%	\$ -	\$ 2,000.00	
2014	6" FITTINGS	343.2	1.14%	\$ -	\$ 750.00	
2014	4" FITTINGS	343.1	1.52%	\$ -	\$ 625.00	
2014	8" TEES	343.2	1.14%	\$ -	\$ 6,600.00	
2014	REDUCERS	343	0.91%	\$ -	\$ 2,800.00	
2014	CLDIP MJT CAPS	343	0.91%	\$ -	\$ 2,000.00	
2014	8" WATER MAIN	343.2	1.14%	\$ -	\$ 137,800.00	
2013	8 " WATER MAIN	343.2	1.14%	\$ 3,983.96	\$ 345,486.04	
2013	6" WATER MAIN	343.2	1.14%	\$ 43.89	\$ 3,806.11	
2013	4" WATER MAIN	343.1	1.52%	\$ 44.31	\$ 2,870.69	
2012	8" WATER MAIN -	343.2	1.14%	\$ 4,788.00	\$ 205,212.00	
2012	6" FITTINGS - CEDAR	343.2	1.14%	\$ 28.50	\$ 1,221.50	
2012	8" FITTINGS - CEDAR	343.2	1.14%	\$ 72.96	\$ 3,127.04	
2012	CENTRE STREET-	343.2	1.14%	\$ 1,805.76	\$ 77,394.24	
2012	CENTRE STREET 8" FITTINGS	343.2	1.14%	\$ 56.43	\$ 2,418.57	

Schedule HJW-10C: Water Mains

WATER MAIN		Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD
YEAR OF PURCHASE	ITEM				
2012	CENTR E STREET 8" FITTINGS	343.2	1.14%	\$ 25.08	\$ 1,074.92
2011		343	0.91%	\$ -	\$ -
2011	6" MAIN- WOODLAND	343.2	1.14%	\$ 28.22	\$ 796.79
2011	8" MAIN- WOODLAND	343.2	1.14%	\$ 6,119.92	\$ 172,825.08
2011	8" FITTINGS - WOODLAND	343.2	1.14%	\$ 369.36	\$ 10,430.64
2011	8" WATER MAIN - TANNER	343.2	1.14%	\$ 4,499.87	\$ 127,075.14
2011	8" FITTING - TANN	343.2	1.14%	\$ 533.52	\$ 15,066.48
2011	8" WATER MAIN -	343.2	1.14%	\$ 13,030.20	\$ 367,969.80
2011	8" FITTINGS - WOODLAND	343.2	1.14%	\$ 346.28	\$ 9,778.73
2009	8" WATER MAIN - REDMAN	343.2	1.14%	\$ 8,618.40	\$ 142,581.60
2008	8" WATER MAIN	343.2	1.14%	\$ 7,727.83	\$ 105,252.17
2008	12" WATER MAIN	343.3	0.91%	\$ 237.13	\$ 4,105.87
2008	6" WATER MAIN	343.2	1.14%	\$ 123.12	\$ 1,676.88
2007	8" WATER MAIN - RHOADES	343.2	1.14%	\$ 8,611.70	\$ 99,304.30
2007	8" FITTINGS - RHOADES	343.2	1.14%	\$ 39.90	\$ 460.10
2007	8" WATER MAIN - WALNUT	343.2	1.14%	\$ 10,374.00	\$ 119,626.00
2007	6" WATER MAIN - SYLVAN LAKE	343.2	1.14%	\$ 3,466.51	\$ 39,973.49
2007	6" FITTINGS - SYLVAN LAKE	343.2	1.14%	\$ 299.25	\$ 3,450.75
2006	6" WATER MAIN	343.2	1.14%	\$ 1,094.40	\$ 10,905.60
2005	6" WATER MAIN	343.2	1.14%	\$ 984.96	\$ 8,615.04
2004	6" WATER MAIN	343.2	1.14%	\$ 1,003.20	\$ 7,796.80
2003	6" WATER MAIN	343.2	1.14%	\$ 1,034.55	\$ 7,215.45
2002	6" WATER MAIN	343.2	1.14%	\$ 902.88	\$ 5,697.12

Schedule HJW-10C: Water Mains

WATER MAIN		Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD
YEAR OF PURCHASE	ITEM				
2001	6" WATER MAIN	343.2	1.14%	\$ 1,630.20	\$ 9,369.80
2000	6" WATER MAIN	343.2	1.14%	\$ 1,316.70	\$ 6,933.30
1999	6" WATER MAIN	343.2	1.14%	\$ 11,286.00	\$ 54,714.00
1998	4" WATER MAIN	343.2	1.14%	\$ 6,566.40	\$ 29,433.60
1997		343	0.91%	\$ -	\$ -
1996	8" WATER MAIN	343.2	1.14%	\$ 51,443.64	\$ 199,256.36
1995		343	0.91%	\$ -	\$ -
1994		343	0.91%	\$ -	\$ -
1993		343	0.91%	\$ -	\$ -
1992		343	0.91%	\$ -	\$ -
1991		343	0.91%	\$ -	\$ -
1990	8" WATER MAIN	343.2	1.14%	\$ 25,171.20	\$ 66,828.80
1989	6" WATER MAIN	343.2	1.14%	\$ 21,930.75	\$ 55,019.25
1988		343	0.91%	\$ -	\$ -
1987		343	0.91%	\$ -	\$ -
1986	6" WATER MAIN	343.2	1.14%	\$ 24,259.20	\$ 51,740.80
1985		343	0.91%	\$ -	\$ -
1984	6" WATER MAIN	343.2	1.14%	\$ 53,608.50	\$ 103,141.50
1983		343	0.91%	\$ -	\$ -
1982		343	0.91%	\$ -	\$ -
1981		343	0.91%	\$ -	\$ -
1980		343	0.91%	\$ -	\$ -
1979		343	0.91%	\$ -	\$ -
1978		343	0.91%	\$ -	\$ -
1977		343	0.91%	\$ -	\$ -
1976		343	0.91%	\$ -	\$ -
1975		343	0.91%	\$ -	\$ -
1974	6" WATER MAIN	343.2	1.14%	\$ 27,132.00	\$ 32,368.00
1973		343	0.91%	\$ -	\$ -
1972		343	0.91%	\$ -	\$ -
1971		343	0.91%	\$ -	\$ -
1970		343	0.91%	\$ -	\$ -
1969		343	0.91%	\$ -	\$ -
1968	16" WATER MAIN	343.3	0.91%	\$ 138,138.00	\$ 191,862.00

Schedule HJW-10C: Water Mains

WATER MAIN						
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD	
1967		343	0.91%	\$ -	\$ -	-
1966		343	0.91%	\$ -	\$ -	-
1965	12" WATER MAIN	343.3	0.91%	\$ 26,910.07	\$ 33,439.94	
1964		343	0.91%	\$ -	\$ -	-
1963		343	0.91%	\$ -	\$ -	-
1962	12" WATER MAIN	343.3	0.91%	\$ 120,311.10	\$ 133,938.90	
1962	8" WATER MAIN	343.2	1.14%	\$ 134,862.00	\$ 92,638.00	
1962	6" WATER MAIN	343.2	1.14%	\$ 51,742.55	\$ 35,542.45	
1962	4" WATER MAIN	343.1	1.52%	\$ 213,408.00	\$ 56,592.00	
1961		343	0.91%	\$ -	\$ -	-
1960	6" WATER MAIN	343.2	1.14%	\$ 186,988.50	\$ 116,761.50	
1959		343	0.91%	\$ -	\$ -	-
1958		343	0.91%	\$ -	\$ -	-
1957		343	0.91%	\$ -	\$ -	-
1956		343	0.91%	\$ -	\$ -	-
1955	3" WATER MAIN	343.1	1.52%	\$ 242,674.08	\$ 27,925.92	
1955	6" WATER MAIN	343.2	1.14%	\$ 1,256,080.50	\$ 611,419.50	
1955	4" WATER MAIN	343.1	1.52%	\$ 156,940.00	\$ 18,060.00	
1954		343	0.91%	\$ -	\$ -	-
1953		343	0.91%	\$ -	\$ -	-
1952		343	0.91%	\$ -	\$ -	-
1951		343	0.91%	\$ -	\$ -	-
1950		343	0.91%	\$ -	\$ -	-
1949		343	0.91%	\$ -	\$ -	-
1948		343	0.91%	\$ -	\$ -	-
1947		343	0.91%	\$ -	\$ -	-
1946		343	0.91%	\$ -	\$ -	-
1945	12" WATE R MAIN	343.3	0.91%	\$ 68,943.42	\$ 40,856.58	
1945	10" WATER MAIN	343.3	0.91%	\$ 110,761.56	\$ 65,638.44	
1945	8" WATER MAIN	343.2	1.14%	\$ 85,070.79	\$ 23,079.21	
1945	6" WATER MAIN	343.2	1.14%	\$ 794,544.66	\$ 215,555.34	

Schedule HJW-10C: Water Mains

WATER MAIN		Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD
YEAR OF PURCHASE	ITEM				
1945	4" WATER MAIN	343.1	1.52%	\$ 60,000.00	\$ -
1944		343	0.91%	\$ -	\$ -
1943		343	0.91%	\$ -	\$ -
1942		343	0.91%	\$ -	\$ -
1941		343	0.91%	\$ -	\$ -
1940		343	0.91%	\$ -	\$ -
1939		343	0.91%	\$ -	\$ -
1938		343	0.91%	\$ -	\$ -
1937		343	0.91%	\$ -	\$ -
1936		343	0.91%	\$ -	\$ -
1935	12" WATER MAIN	343.3	0.91%	\$ 17,792.78	\$ 6,957.23
1935	8" WATER MAIN	343.2	1.14%	\$ 108,072.00	\$ 11,928.00
1935	6" WATER MAIN	343.2	1.14%	\$ 377,504.50	\$ 41,665.50
1935	4" WATER MAIN	343.1	1.52%	\$ 264,710.00	\$ -
1934		343	0.91%	\$ -	\$ -
1933		343	0.91%	\$ -	\$ -
1932		343	0.91%	\$ -	\$ -
1931		343	0.91%	\$ -	\$ -
1930		343	0.91%	\$ -	\$ -
1929		343	0.91%	\$ -	\$ -
1928		343	0.91%	\$ -	\$ -
1927		343	0.91%	\$ -	\$ -
1926		343	0.91%	\$ -	\$ -
1925		343	0.91%	\$ -	\$ -
1924		343	0.91%	\$ -	\$ -
1923		343	0.91%	\$ -	\$ -
1922		343	0.91%	\$ -	\$ -
1921		343	0.91%	\$ -	\$ -
1920		343	0.91%	\$ -	\$ -
1919		343	0.91%	\$ -	\$ -
1918		343	0.91%	\$ -	\$ -
1917		343	0.91%	\$ -	\$ -
1916		343	0.91%	\$ -	\$ -
1915		343	0.91%	\$ -	\$ -

Schedule HJW-10C: Water Mains

WATER MAIN		Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD
YEAR OF PURCHASE	ITEM				
1914		343	0.91%	\$ -	\$ -
1913		343	0.91%	\$ -	\$ -
1912		343	0.91%	\$ -	\$ -
1911		343	0.91%	\$ -	\$ -
1910		343	0.91%	\$ -	\$ -
1909		343	0.91%	\$ -	\$ -
1908		343	0.91%	\$ -	\$ -
1907		343	0.91%	\$ -	\$ -
1906		343	0.91%	\$ -	\$ -
1905		343	0.91%	\$ -	\$ -
1904		343	0.91%	\$ -	\$ -
1903		343	0.91%	\$ -	\$ -
1902		343	0.91%	\$ -	\$ -
1901		343	0.91%	\$ -	\$ -
1900	12" WATER MAIN	343.3	0.91%	\$ 24,000.00	\$ -
				\$ 4,744,093.16	\$ 4,885,920.84

Schedule HJW-100: Water Valves

YEAR OF PURCHASE	ITEM	#OF VALVES	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
2014	8" WATER VALVES	19	0	100	\$ 1,100.00	\$ 20,900.00	-	\$ -	\$ 20,900.00
2014	6" WATER VALVES	1	0	100	\$ 900.00	\$ 900.00	-	\$ -	\$ 900.00
2014	4" WATER VALVES	2	0	100	\$ 750.00	\$ 1,500.00	-	\$ -	\$ 1,500.00
2014	8" WATER VALVES	6	0	100	\$ 2,500.00	\$ 15,000.00	-	\$ -	\$ 15,000.00
2014	4" INSERTION VALVE	1	0	100	\$ 6,900.00	\$ 6,900.00	-	\$ -	\$ 6,900.00
2013	8" WATER VALVES	30	1	100	\$ 2,200.00	\$ 66,000.00	0.01	\$ 22.00	\$ 65,340.00
2013	6" WATER VALVES	1	1	100	\$ 1,700.00	\$ 1,700.00	0.01	\$ 17.00	\$ 1,683.00
2012	8" WATER VALVES - CEDAR	8	2	100	\$ 900.00	\$ 7,200.00	0.02	\$ 18.00	\$ 7,056.00
2012	6" INSERTION VALVES - CEDAR	7	2	100	\$ 2,500.00	\$ 17,500.00	0.02	\$ 50.00	\$ 17,150.00
2012	CENTRE STREET - 8" WATER VALVES	4	2	100	\$ 1,400.00	\$ 5,600.00	0.02	\$ 28.00	\$ 5,488.00
2011		0	3	100	\$ -	\$ -	0.03	\$ -	\$ -
2011	8" WATER VALVE - TANNER	16	3	100	\$ 900.00	\$ 14,400.00	0.03	\$ 27.00	\$ 13,968.00
2011	8" WATER VALVES-WOODLAND	18	3	100	\$ 1,250.00	\$ 22,500.00	0.03	\$ 37.50	\$ 21,825.00
2009	8" WATER VALVES-REDMAN	6	5	100	\$ 1,300.00	\$ 7,800.00	0.05	\$ 65.00	\$ 7,410.00
2008	8" WATER VALVES	6	6	100	\$ 1,100.00	\$ 6,600.00	0.06	\$ 66.00	\$ 6,204.00
2008	12" WATER VALVES	2	6	100	\$ 6,000.00	\$ 12,000.00	0.06	\$ 360.00	\$ 11,280.00
2007	WALNUT AVE	8	7	100	\$ 2,850.00	\$ 22,800.00	0.07	\$ 199.50	\$ 21,204.00
2007	SYLVAN LAKE - 6" WATER	2	7	100	\$ 950.00	\$ 1,900.00	0.07	\$ 66.50	\$ 1,767.00
2007	RHOADES AVE	7	7	100	\$ 4,000.00	\$ 28,000.00	0.07	\$ 280.00	\$ 26,040.00
2006	6" WATER VALVES	6	8	100	\$ 1,200.00	\$ 7,200.00	0.07	\$ 96.00	\$ 6,624.00
2005		0	9	100	\$ -	\$ -	0.08	\$ -	\$ -
2004		0	10	100	\$ -	\$ -	0.09	\$ -	\$ -
2003		0	11	100	\$ -	\$ -	0.10	\$ -	\$ -
2002	6" WATER VALVES	4	12	100	\$ 1,200.00	\$ 4,800.00	0.11	\$ 144.00	\$ 4,224.00
2001		0	13	100	\$ -	\$ -	0.12	\$ -	\$ -
2000		0	14	100	\$ -	\$ -	0.13	\$ -	\$ -
1999	6" WATER VALVES	20	15	100	\$ 1,489.60	\$ 29,792.00	0.14	\$ 223.44	\$ 25,323.20
1998	4" WATER VALVES	15	16	100	\$ 1,396.50	\$ 20,947.50	0.15	\$ 223.44	\$ 17,595.90
1997		0	17	100	\$ -	\$ -	0.16	\$ -	\$ -
1996	8" WATER VALVES	10	18	100	\$ 2,250.00	\$ 22,500.00	0.17	\$ 405.00	\$ 18,450.00
1995		0	19	100	\$ -	\$ -	0.18	\$ -	\$ -
1994		0	20	100	\$ -	\$ -	0.19	\$ -	\$ -
1993		0	21	100	\$ -	\$ -	0.20	\$ -	\$ -
1992	8" WATER VALVES	2	22	100	\$ 2,000.00	\$ 4,000.00	0.21	\$ 440.00	\$ 3,120.00
1992	6" WATER VALVES	1	22	100	\$ 1,280.00	\$ 1,280.00	0.22	\$ 281.60	\$ 998.40
1992	4" WATER VALVES	2	22	100	\$ 1,200.00	\$ 2,400.00	0.22	\$ 264.00	\$ 1,872.00
1991		0	23	100	\$ -	\$ -	0.22	\$ -	\$ -
1990	6" WATER VALVES	4	24	100	\$ 1,216.00	\$ 4,864.00	0.23	\$ 291.84	\$ 3,696.64
1989	8" WATER VALVES	10	25	100	\$ 1,875.00	\$ 18,750.00	0.24	\$ 468.75	\$ 14,062.50
1989		0	25	100	\$ -	\$ -	0.25	\$ -	\$ -
1989		0	25	100	\$ -	\$ -	0.25	\$ -	\$ -
1988		0	26	100	\$ -	\$ -	0.26	\$ -	\$ -
1987		0	27	100	\$ -	\$ -	0.27	\$ -	\$ -
1986	6" WATER VALVES	6	28	100	\$ 1,056.00	\$ 6,336.00	0.28	\$ 295.68	\$ 4,561.92
1986		0	28	100	\$ -	\$ -	0.28	\$ -	\$ -
1986		0	28	100	\$ -	\$ -	0.28	\$ -	\$ -
1985		0	29	100	\$ -	\$ -	0.29	\$ -	\$ -
1984	8" WATER VALVES	6	30	100	\$ 1,600.00	\$ 9,600.00	0.30	\$ 480.00	\$ 6,720.00
1984		0	30	100	\$ -	\$ -	0.30	\$ -	\$ -

Schedule HJW-100: Water Valves

YEAR OF PURCHASE	ITEM	#OF VALVES	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
1983		0	31	100	\$ -	\$ -	0.31	\$ -	\$ -
1982		0	32	100	\$ -	\$ -	0.32	\$ -	\$ -
1981		0	33	100	\$ -	\$ -	0.33	\$ -	\$ -
1980		0	34	100	\$ -	\$ -	0.34	\$ -	\$ -
1979		0	35	100	\$ -	\$ -	0.35	\$ -	\$ -
1978		0	36	100	\$ -	\$ -	0.36	\$ -	\$ -
1977		0	37	100	\$ -	\$ -	0.37	\$ -	\$ -
1976		0	38	100	\$ -	\$ -	0.38	\$ -	\$ -
1975		0	39	100	\$ -	\$ -	0.39	\$ -	\$ -
1974	6" WATER VALVES	5	40	100	\$ 608.00	\$ 3,040.00	0.40	\$ 243.20	\$ 1,824.00
1973		0	41	100	\$ -	\$ -	0.41	\$ -	\$ -
1972		0	42	100	\$ -	\$ -	0.42	\$ -	\$ -
1971		0	43	100	\$ -	\$ -	0.43	\$ -	\$ -
1970		0	44	100	\$ -	\$ -	0.44	\$ -	\$ -
1969		0	45	100	\$ -	\$ -	0.45	\$ -	\$ -
1968	16" WATER VALVES	8	46	100	\$ 1,500.00	\$ 12,000.00	0.46	\$ 690.00	\$ 6,480.00
1967		0	47	100	\$ -	\$ -	0.47	\$ -	\$ -
1966		0	48	100	\$ -	\$ -	0.48	\$ -	\$ -
1965	12" WATER VALVES	5	49	100	\$ 1,250.00	\$ 6,250.00	0.49	\$ 612.50	\$ 3,187.50
1964		0	50	100	\$ -	\$ -	0.50	\$ -	\$ -
1963		0	51	100	\$ -	\$ -	0.51	\$ -	\$ -
1962	12" WATER VALVES	13	52	100	\$ 1,000.00	\$ 13,000.00	0.52	\$ 520.00	\$ 6,240.00
1962	8" WATER VALVES	11	52	100	\$ 500.00	\$ 5,500.00	0.52	\$ 260.00	\$ 2,640.00
1962	6" WATER VALVES	3	52	100	\$ 320.00	\$ 960.00	0.52	\$ 166.40	\$ 460.80
1962	4" WATER VALVES	2	52	100	\$ 300.00	\$ 600.00	0.52	\$ 156.00	\$ 288.00
1961		0	53	100	\$ -	\$ -	0.53	\$ -	\$ -
1960	6" WATER VALVES	22	54	100	\$ 288.00	\$ 6,336.00	0.54	\$ 155.52	\$ 2,914.56
1959		0	55	100	\$ -	\$ -	0.55	\$ -	\$ -
1958		0	56	100	\$ -	\$ -	0.56	\$ -	\$ -
1957		0	57	100	\$ -	\$ -	0.57	\$ -	\$ -
1956		0	58	100	\$ -	\$ -	0.58	\$ -	\$ -
1955	8" WATER VALVES	16	59	100	\$ 425.00	\$ 6,800.00	0.59	\$ 250.75	\$ 2,788.00
1955	6" WATER VALVES	40	59	100	\$ 272.00	\$ 10,880.00	0.59	\$ 160.48	\$ 4,460.80
1955	4" WATER VALVES	6	59	100	\$ 255.00	\$ 1,530.00	0.59	\$ 150.45	\$ 627.30
1954		0	60	100	\$ -	\$ -	0.60	\$ -	\$ -
1953		0	61	100	\$ -	\$ -	0.61	\$ -	\$ -
1952		0	62	100	\$ -	\$ -	0.62	\$ -	\$ -
1951		0	63	100	\$ -	\$ -	0.63	\$ -	\$ -
1950		0	64	100	\$ -	\$ -	0.64	\$ -	\$ -
1949		0	65	100	\$ -	\$ -	0.65	\$ -	\$ -
1948		0	66	100	\$ -	\$ -	0.66	\$ -	\$ -
1947		0	67	100	\$ -	\$ -	0.67	\$ -	\$ -
1946		0	68	100	\$ -	\$ -	0.68	\$ -	\$ -
1945	8" WATER VALVES	11	69	100	\$ 175.00	\$ 1,925.00	0.69	\$ 120.75	\$ 596.75
1945	6" WATER VALVES	33	69	100	\$ 112.00	\$ 3,696.00	0.69	\$ 77.28	\$ 1,145.76
1945	4" WATER VALVES	6	69	100	\$ 105.00	\$ 630.00	0.69	\$ 72.45	\$ 195.30
1944		0	70	100	\$ -	\$ -	0.70	\$ -	\$ -
1943		0	71	100	\$ -	\$ -	0.71	\$ -	\$ -
1942		0	72	100	\$ -	\$ -	0.72	\$ -	\$ -
1941		0	73	100	\$ -	\$ -	0.73	\$ -	\$ -

Schedule HJW-100: Water Valves										
YEAR OF PURCHASE	ITEM	#OF VALVES	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD	
1940		0	74	100	\$ -	\$ -	0.74	\$ -	\$ -	
1939		0	75	100	\$ -	\$ -	0.75	\$ -	\$ -	
1938		0	76	100	\$ -	\$ -	0.76	\$ -	\$ -	
1937		0	77	100	\$ -	\$ -	0.77	\$ -	\$ -	
1936		0	78	100	\$ -	\$ -	0.78	\$ -	\$ -	
1935	8" WATER VALVES	4	79	100	\$ 125.00	\$ 500.00	0.79	\$ 98.75	\$ 105.00	
1935	6" WATER VALVES	13	79	100	\$ 80.00	\$ 1,040.00	0.79	\$ 63.20	\$ 218.40	
1935	4" WATER VALVES	10	79	100	\$ 75.00	\$ 750.00	0.79	\$ 59.25	\$ 157.50	
1934		0	80	100	\$ -	\$ -	0.80	\$ -	\$ -	
1933		0	81	100	\$ -	\$ -	0.81	\$ -	\$ -	
1932		0	82	100	\$ -	\$ -	0.82	\$ -	\$ -	
1931		0	83	100	\$ -	\$ -	0.83	\$ -	\$ -	
1930		0	84	100	\$ -	\$ -	0.84	\$ -	\$ -	
1929		0	85	100	\$ -	\$ -	0.85	\$ -	\$ -	
1928		0	86	100	\$ -	\$ -	0.86	\$ -	\$ -	
1927		0	87	100	\$ -	\$ -	0.87	\$ -	\$ -	
1926		0	88	100	\$ -	\$ -	0.88	\$ -	\$ -	
1925		0	89	100	\$ -	\$ -	0.89	\$ -	\$ -	
1924		0	90	100	\$ -	\$ -	0.90	\$ -	\$ -	
1923		0	91	100	\$ -	\$ -	0.91	\$ -	\$ -	
1922		0	92	100	\$ -	\$ -	0.92	\$ -	\$ -	
1921		0	93	100	\$ -	\$ -	0.93	\$ -	\$ -	
1920		0	94	100	\$ -	\$ -	0.94	\$ -	\$ -	
1919		0	95	100	\$ -	\$ -	0.95	\$ -	\$ -	
1918		0	96	100	\$ -	\$ -	0.96	\$ -	\$ -	
1917		0	97	100	\$ -	\$ -	0.97	\$ -	\$ -	
1916		0	98	100	\$ -	\$ -	0.98	\$ -	\$ -	
1915		0	99	100	\$ -	\$ -	0.99	\$ -	\$ -	
1914		0	100	100	\$ -	\$ -	1.00	\$ -	\$ -	
1913		0	101	100	\$ -	\$ -	1.00	\$ -	\$ -	
1912		0	102	100	\$ -	\$ -	1.00	\$ -	\$ -	
1911		0	103	100	\$ -	\$ -	1.00	\$ -	\$ -	
1910		0	104	100	\$ -	\$ -	1.00	\$ -	\$ -	
1909		0	105	100	\$ -	\$ -	1.00	\$ -	\$ -	
1908		0	106	100	\$ -	\$ -	1.00	\$ -	\$ -	
1907		0	107	100	\$ -	\$ -	1.00	\$ -	\$ -	
1906		0	108	100	\$ -	\$ -	1.00	\$ -	\$ -	
1905		0	109	100	\$ -	\$ -	1.00	\$ -	\$ -	
1904		0	110	100	\$ -	\$ -	1.00	\$ -	\$ -	
1903		0	111	100	\$ -	\$ -	1.00	\$ -	\$ -	
1902		0	112	100	\$ -	\$ -	1.00	\$ -	\$ -	
1901		0	113	100	\$ -	\$ -	1.00	\$ -	\$ -	
1900	12" WATER VALVES	2	114	100	\$ 100.00	\$ 200.00	1.00	\$ 100.00	\$ -	
		440			\$ 467,306.50	\$ 467,306.50		\$ 74,113.27	\$ 393,193.23	

Schedule HAW-10D: Water Valves

YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD
2014	8" WATER VALVES	343.2	1.14%	\$ -	\$ 20,900.00
2014	6" WATER VALVES	343.2	1.14%	\$ -	\$ 900.00
2014	4" WATER VALVES	343.1	1.52%	\$ -	\$ 1,500.00
2014	8" WATER VALVES	343.2	1.14%	\$ -	\$ 15,000.00
2014	4" INSERTION VALVE	343.1	1.52%	\$ -	\$ 6,900.00
2013	8" WATER VALVES	343.2	1.14%	\$ 752.40	\$ 65,247.60
2013	6" WATER VALVES	343.2	1.14%	\$ 19.38	\$ 1,680.62
2012	8" WATER VALVES - CEDAR	343.2	1.14%	\$ 164.16	\$ 7,035.84
2012	6" INSERTION VALVES - CEDAR	343.2	1.14%	\$ 399.00	\$ 17,101.00
2012	CENTRE STREET - 8" WATER VALVES	343.2	1.14%	\$ 127.68	\$ 5,472.32
2011		343	0.91%	\$ -	\$ -
2011	8" WATER VALVE - TANNER	343.2	1.14%	\$ 492.48	\$ 13,907.52
2011	8" WATER VALVES-WOODLAND	343.2	1.14%	\$ 769.50	\$ 21,730.50
2009	8" WATER VALVES-REDMAN	343.2	1.14%	\$ 444.60	\$ 7,355.40
2008	8" WATER VALVES	343.2	1.14%	\$ 451.44	\$ 6,148.56
2008	12" WATER VALVES	343.3	0.91%	\$ 655.20	\$ 11,344.80
2007	WALNUT AVE	343	0.91%	\$ 1,452.36	\$ 21,347.64
2007	SYLVAN LAKE - 6" WATER	343.2	1.14%	\$ 151.62	\$ 1,748.38
2007	RHOADES AVE	343	0.91%	\$ 1,783.60	\$ 26,216.40
2006	6" WATER VALVES	343.2	1.14%	\$ 656.64	\$ 6,543.36
2005		343	0.91%	\$ -	\$ -
2004		343	0.91%	\$ -	\$ -
2003		343	0.91%	\$ -	\$ -
2002	6" WATER VALVES	343.2	1.14%	\$ 656.64	\$ 4,143.36
2001		343	0.91%	\$ -	\$ -
2000		343	0.91%	\$ -	\$ -
1999	6" WATER VALVES	343.2	1.14%	\$ 5,094.43	\$ 24,697.57
1998	4" WATER VALVES	343.1	1.52%	\$ 5,094.43	\$ 15,853.07
1997		343	0.91%	\$ -	\$ -
1996	8" WATER VALVES	343.2	1.14%	\$ 4,617.00	\$ 17,883.00
1995		343	0.91%	\$ -	\$ -
1994		343	0.91%	\$ -	\$ -
1993		343	0.91%	\$ -	\$ -
1992	8" WATER VALVES	343.2	1.14%	\$ 1,003.20	\$ 2,996.80
1992	6" WATER VALVES	343.2	1.14%	\$ 321.02	\$ 958.98
1992	4" WATER VALVES	343.2	1.14%	\$ 601.92	\$ 1,798.08
1991		343	0.91%	\$ -	\$ -
1990	6" WATER VALVES	343.2	1.14%	\$ 1,330.79	\$ 3,533.21
1989	8" WATER VALVES	343.2	1.14%	\$ 5,343.75	\$ 13,406.25
1989		343	0.91%	\$ -	\$ -
1989		343	0.91%	\$ -	\$ -
1988		343	0.91%	\$ -	\$ -
1987		343	0.91%	\$ -	\$ -
1986	6" WATER VALVES	343.2	1.14%	\$ 2,022.45	\$ 4,313.55
1986		343	0.91%	\$ -	\$ -
1986		343	0.91%	\$ -	\$ -
1985		343	0.91%	\$ -	\$ -
1984	8" WATER VALVES	343.2	1.14%	\$ 3,283.20	\$ 6,316.80
1984		343	0.91%	\$ -	\$ -

Schedule HJW-10D: Water Valves

YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD
1983		343	0.91%	\$ -	\$ -
1982		343	0.91%	\$ -	\$ -
1981		343	0.91%	\$ -	\$ -
1980		343	0.91%	\$ -	\$ -
1979		343	0.91%	\$ -	\$ -
1978		343	0.91%	\$ -	\$ -
1977		343	0.91%	\$ -	\$ -
1976		343	0.91%	\$ -	\$ -
1975		343	0.91%	\$ -	\$ -
1974	6" WATER VALVES	343.2	1.14%	\$ 1,386.24	\$ 1,653.76
1973		343	0.91%	\$ -	\$ -
1972		343	0.91%	\$ -	\$ -
1971		343	0.91%	\$ -	\$ -
1970		343	0.91%	\$ -	\$ -
1969		343	0.91%	\$ -	\$ -
1968	16" WATER VALVES	343.3	0.91%	\$ 5,023.20	\$ 6,976.80
1967		343	0.91%	\$ -	\$ -
1966		343	0.91%	\$ -	\$ -
1965	12" WATER VALVES	343.3	0.91%	\$ 2,786.88	\$ 3,463.13
1964		343	0.91%	\$ -	\$ -
1963		343	0.91%	\$ -	\$ -
1962	12" WATER VALVES	343.3	0.91%	\$ 6,151.60	\$ 6,848.40
1962	8" WATER VALVES	343.2	1.14%	\$ 3,260.40	\$ 2,239.60
1962	6" WATER VALVES	343.2	1.14%	\$ 569.09	\$ 390.91
1962	4" WATER VALVES	343.1	1.52%	\$ 474.24	\$ 125.76
1961		343	0.91%	\$ -	\$ -
1960	6" WATER VALVES	343.2	1.14%	\$ 3,900.44	\$ 2,435.56
1959		343	0.91%	\$ -	\$ -
1958		343	0.91%	\$ -	\$ -
1957		343	0.91%	\$ -	\$ -
1956		343	0.91%	\$ -	\$ -
1955	8" WATER VALVES	343.2	1.14%	\$ 4,573.68	\$ 2,226.32
1955	6" WATER VALVES	343.2	1.14%	\$ 7,317.89	\$ 3,562.11
1955	4" WATER VALVES	343.1	1.52%	\$ 1,372.10	\$ 157.90
1954		343	0.91%	\$ -	\$ -
1953		343	0.91%	\$ -	\$ -
1952		343	0.91%	\$ -	\$ -
1951		343	0.91%	\$ -	\$ -
1950		343	0.91%	\$ -	\$ -
1949		343	0.91%	\$ -	\$ -
1948		343	0.91%	\$ -	\$ -
1947		343	0.91%	\$ -	\$ -
1946		343	0.91%	\$ -	\$ -
1945	8" WATER VALVES	343.2	1.14%	\$ 1,514.21	\$ 410.80
1945	6" WATER VALVES	343.2	1.14%	\$ 2,907.27	\$ 788.73
1945	4" WATER VALVES	343.1	1.52%	\$ 630.00	\$ -
1944		343	0.91%	\$ -	\$ -
1943		343	0.91%	\$ -	\$ -
1942		343	0.91%	\$ -	\$ -
1941		343	0.91%	\$ -	\$ -

Schedule HAW-10D: Water Valves						
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD	
1940		343	0.91%	\$ -	\$ -	
1939		343	0.91%	\$ -	\$ -	
1938		343	0.91%	\$ -	\$ -	
1937		343	0.91%	\$ -	\$ -	
1936		343	0.91%	\$ -	\$ -	
1935	8" WATER VALVES	343.2	1.14%	\$ 450.30	\$ 49.70	
1935	6" WATER VALVES	343.2	1.14%	\$ 936.62	\$ 103.38	
1935	4" WATER VALVES	343.1	1.52%	\$ 750.00	\$ -	
1934		343	0.91%	\$ -	\$ -	
1933		343	0.91%	\$ -	\$ -	
1932		343	0.91%	\$ -	\$ -	
1931		343	0.91%	\$ -	\$ -	
1930		343	0.91%	\$ -	\$ -	
1929		343	0.91%	\$ -	\$ -	
1928		343	0.91%	\$ -	\$ -	
1927		343	0.91%	\$ -	\$ -	
1926		343	0.91%	\$ -	\$ -	
1925		343	0.91%	\$ -	\$ -	
1924		343	0.91%	\$ -	\$ -	
1923		343	0.91%	\$ -	\$ -	
1922		343	0.91%	\$ -	\$ -	
1921		343	0.91%	\$ -	\$ -	
1920		343	0.91%	\$ -	\$ -	
1919		343	0.91%	\$ -	\$ -	
1918		343	0.91%	\$ -	\$ -	
1917		343	0.91%	\$ -	\$ -	
1916		343	0.91%	\$ -	\$ -	
1915		343	0.91%	\$ -	\$ -	
1914		343	0.91%	\$ -	\$ -	
1913		343	0.91%	\$ -	\$ -	
1912		343	0.91%	\$ -	\$ -	
1911		343	0.91%	\$ -	\$ -	
1910		343	0.91%	\$ -	\$ -	
1909		343	0.91%	\$ -	\$ -	
1908		343	0.91%	\$ -	\$ -	
1907		343	0.91%	\$ -	\$ -	
1906		343	0.91%	\$ -	\$ -	
1905		343	0.91%	\$ -	\$ -	
1904		343	0.91%	\$ -	\$ -	
1903		343	0.91%	\$ -	\$ -	
1902		343	0.91%	\$ -	\$ -	
1901		343	0.91%	\$ -	\$ -	
1900	12" WATER VALVES	343.3	0.91%	\$ 200.00	\$ -	
				\$ 81,893.06	\$ 385,413.44	

Schedule HJW-10E: Fire Hydrants										
YEAR OF PURCHASE	ITEM	# OF HYDRANTS	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD	
2014	FIRE HYDRANT	6	0	75	\$ 5,000.00	\$ 30,000.00	-	\$ -	\$ 30,000.00	
2014	2014 UTILITY PROGRAM	3	0	75	\$ 6,000.00	\$ 18,000.00	-	\$ -	\$ 18,000.00	
2013	2013 UTILITY PROGRAM	7	1	75	\$ 6,500.00	\$ 45,500.00	0.01	\$ 86.67	\$ 44,893.33	
2012		5	2	75	\$ 3,500.00	\$ 17,500.00	0.03	\$ 93.33	\$ 17,033.33	
2012	CENTRE STREET	2	2	75	\$ 4,000.00	\$ 8,000.00	0.03	\$ 106.67	\$ 7,786.67	
2011		2	3	75	\$ 6,000.00	\$ 12,000.00	0.04	\$ 240.00	\$ 11,520.00	
2011	WOODLAND/TANNER	8	3	75	\$ 4,000.00	\$ 32,000.00	0.04	\$ 160.00	\$ 30,720.00	
2009		3	5	75	\$ 5,500.00	\$ 16,500.00	0.07	\$ 366.67	\$ 15,400.00	
2008	COLONIAL /LAKE	2	6	75	\$ 7,400.00	\$ 14,800.00	0.08	\$ 592.00	\$ 13,616.00	
2007	RHOADES AVE	3	7	75	\$ 7,500.00	\$ 22,500.00	0.09	\$ 700.00	\$ 20,400.00	
2007	WALNUT AVE	4	7	75	\$ 3,500.00	\$ 14,000.00	0.09	\$ 326.67	\$ 12,693.33	
2007	SYLVAN LAKE	1	7	75	\$ 3,500.00	\$ 3,500.00	0.09	\$ 326.67	\$ 3,173.33	
2006		6	8	75	\$ -	\$ -	0.11	\$ -	\$ -	
2005		0	9	75	\$ -	\$ -	0.12	\$ -	\$ -	
2004		0	10	75	\$ -	\$ -	0.13	\$ -	\$ -	
2003		0	11	75	\$ -	\$ -	0.15	\$ -	\$ -	
2002		6	12	75	\$ 5,000.00	\$ 30,000.00	0.16	\$ 800.00	\$ 25,200.00	
2001		5	13	75	\$ 6,000.00	\$ 30,000.00	0.17	\$ 1,040.00	\$ 24,800.00	
2000		5	14	75	\$ 5,820.00	\$ 29,100.00	0.19	\$ 1,086.40	\$ 23,668.00	
1999		3	15	75	\$ 5,640.00	\$ 16,920.00	0.20	\$ 1,128.00	\$ 13,536.00	
1998		5	16	75	\$ 5,460.00	\$ 27,300.00	0.21	\$ 1,164.80	\$ 21,476.00	
1997		5	17	75	\$ 5,280.00	\$ 26,400.00	0.23	\$ 1,196.80	\$ 20,416.00	
1996		5	18	75	\$ 4,500.00	\$ 22,500.00	0.24	\$ 1,080.00	\$ 17,100.00	
1995		5	19	75	\$ 4,380.00	\$ 21,900.00	0.25	\$ 1,109.60	\$ 16,352.00	
1994		6	20	75	\$ 4,320.00	\$ 25,920.00	0.27	\$ 1,152.00	\$ 19,008.00	
1993		7	21	75	\$ 4,260.00	\$ 29,820.00	0.28	\$ 1,192.80	\$ 21,470.00	
1992		15	22	75	\$ 4,200.00	\$ 63,000.00	0.29	\$ 1,232.00	\$ 44,520.00	
1991		3	23	75	\$ 4,140.00	\$ 12,420.00	0.31	\$ 1,269.60	\$ 8,611.20	
1990		5	24	75	\$ 4,020.00	\$ 20,100.00	0.32	\$ 1,286.40	\$ 13,668.00	
1989		6	25	75	\$ 3,840.00	\$ 23,040.00	0.33	\$ 1,280.00	\$ 15,360.00	

Schedule HJW-10E: Fire Hydrants										
YEAR OF PURCHASE	ITEM	# OF HYDRANTS	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD	
1988		6	26	75	\$ 3,540.00	\$ 21,240.00	0.35	\$ 1,227.20	\$ 13,876.80	
1987		6	27	75	\$ 3,420.00	\$ 20,520.00	0.36	\$ 1,231.20	\$ 13,132.80	
1936		6	28	75	\$ 3,300.00	\$ 19,800.00	0.37	\$ 1,232.00	\$ 12,408.00	
1985		3	29	75	\$ -	\$ -	0.39	\$ -	\$ -	
1984		2	30	75	\$ -	\$ -	0.40	\$ -	\$ -	
1984		6	30	75	\$ -	\$ -	0.40	\$ -	\$ -	
1983		3	31	75	\$ -	\$ -	0.41	\$ -	\$ -	
1982		0	32	75	\$ -	\$ -	0.43	\$ -	\$ -	
1981		0	33	75	\$ -	\$ -	0.44	\$ -	\$ -	
1980		0	34	75	\$ -	\$ -	0.45	\$ -	\$ -	
1979		0	35	75	\$ -	\$ -	0.47	\$ -	\$ -	
1978		0	36	75	\$ -	\$ -	0.48	\$ -	\$ -	
1977		3	37	75	\$ 1,860.00	\$ 5,580.00	0.49	\$ 917.60	\$ 2,827.20	
1976		3	38	75	\$ 1,740.00	\$ 5,220.00	0.51	\$ 881.60	\$ 2,575.20	
1975		0	39	75	\$ -	\$ -	0.52	\$ -	\$ -	
1974		4	40	75	\$ 1,140.00	\$ 4,560.00	0.53	\$ 608.00	\$ 2,128.00	
1973		0	41	75	\$ -	\$ -	0.55	\$ -	\$ -	
1972		0	42	75	\$ -	\$ -	0.56	\$ -	\$ -	
1971		0	43	75	\$ -	\$ -	0.57	\$ -	\$ -	
1970		0	44	75	\$ -	\$ -	0.59	\$ -	\$ -	
1969		0	45	75	\$ -	\$ -	0.60	\$ -	\$ -	
1968		0	46	75	\$ -	\$ -	0.61	\$ -	\$ -	
1967		0	47	75	\$ -	\$ -	0.63	\$ -	\$ -	
1966		0	48	75	\$ -	\$ -	0.64	\$ -	\$ -	
1996		10	49	75	\$ 660.00	\$ 6,600.00	0.65	\$ 431.20	\$ 2,288.00	
1964		0	50	75	\$ -	\$ -	0.67	\$ -	\$ -	
1963		0	51	75	\$ -	\$ -	0.68	\$ -	\$ -	
1962		15	52	75	\$ 642.00	\$ 9,630.00	0.69	\$ 445.12	\$ 2,953.20	
1961		0	53	75	\$ -	\$ -	0.71	\$ -	\$ -	
1960		20	54	75	\$ 600.00	\$ 12,000.00	0.72	\$ 432.00	\$ 3,360.00	
1959		0	55	75	\$ -	\$ -	0.73	\$ -	\$ -	
1958		0	56	75	\$ -	\$ -	0.75	\$ -	\$ -	

Schedule HJW-10E: Fire Hydrants										
YEAR OF PURCHASE	ITEM	# OF HYDRANTS	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD	
1957		0	57	75	\$ -	\$ -	0.76	\$ -	\$ -	
1956		0	58	75	\$ -	\$ -	0.77	\$ -	\$ -	
1955		35	59	75	\$ 480.00	\$ 16,800.00	0.79	\$ 377.60	\$ 3,584.00	
1954		0	60	75	\$ -	\$ -	0.80	\$ -	\$ -	
1953		10	61	75	\$ 480.00	\$ 4,800.00	0.81	\$ 390.40	\$ 896.00	
1952		0	62	75	\$ -	\$ -	0.83	\$ -	\$ -	
1951		0	63	75	\$ -	\$ -	0.84	\$ -	\$ -	
1950		0	64	75	\$ -	\$ -	0.85	\$ -	\$ -	
1949		0	65	75	\$ -	\$ -	0.87	\$ -	\$ -	
1948		5	66	75	\$ 360.00	\$ 1,800.00	0.88	\$ 316.80	\$ 216.00	
1947		0	67	75	\$ -	\$ -	0.89	\$ -	\$ -	
1946		0	68	75	\$ -	\$ -	0.91	\$ -	\$ -	
1945		20	69	75	\$ 360.00	\$ 7,200.00	0.92	\$ 331.20	\$ 576.00	
1944		0	70	75	\$ -	\$ -	0.93	\$ -	\$ -	
1943		0	71	75	\$ -	\$ -	0.95	\$ -	\$ -	
1942		0	72	75	\$ -	\$ -	0.96	\$ -	\$ -	
1941		0	73	75	\$ -	\$ -	0.97	\$ -	\$ -	
1940		10	74	75	\$ 300.00	\$ 3,000.00	0.99	\$ 296.00	\$ 40.00	
1939		0	75	75	\$ -	\$ -	1.00	\$ -	\$ -	
1938		D	76	75	\$ -	\$ -	1.00	\$ -	\$ -	
1937		D	77	75	\$ -	\$ -	1.00	\$ -	\$ -	
1936		0	78	75	\$ -	\$ -	1.00	\$ -	\$ -	
1935		7	79	75	\$ 240.00	\$ 1,680.00	1.00	\$ 240.00	\$ -	
1934		a	80	75	\$ -	\$ -	1.00	\$ -	\$ -	
1933		0	81	75	\$ -	\$ -	1.00	\$ -	\$ -	
1932		a	82	75	\$ -	\$ -	1.00	\$ -	\$ -	
1931		a	83	75	\$ -	\$ -	1.00	\$ -	\$ -	
1930		5	84	75	\$ -	\$ -	1.00	\$ -	\$ -	
1929		0	85	75	\$ -	\$ -	1.00	\$ -	\$ -	
1928		0	86	75	\$ -	\$ -	1.00	\$ -	\$ -	
1927		0	87	75	\$ -	\$ -	1.00	\$ -	\$ -	
1926		0	88	75	\$ -	\$ -	1.00	\$ -	\$ -	

Schedule HJW-10E: Fire Hydrants										
YEAR OF PURCHASE	ITEM	# OF HYDRANTS	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD	
1925		2	89	75	\$ -	\$ -	1.00	\$ -	\$ -	
1924		a	90	75	\$ -	\$ -	1.00	\$ -	\$ -	
1923		a	91	75	\$ -	\$ -	1.00	\$ -	\$ -	
1922		0	92	75	\$ -	\$ -	1.00	\$ -	\$ -	
1921		0	93	75	\$ -	\$ -	1.00	\$ -	\$ -	
1920		0	94	75	\$ -	\$ -	1.00	\$ -	\$ -	
1919		a	95	75	\$ -	\$ -	1.00	\$ -	\$ -	
1918		0	96	75	\$ -	\$ -	1.00	\$ -	\$ -	
1917		0	97	75	\$ -	\$ -	1.00	\$ -	\$ -	
1916		0	98	75	\$ -	\$ -	1.00	\$ -	\$ -	
1915		0	99	75	\$ -	\$ -	1.00	\$ -	\$ -	
1914		0	100	75	\$ -	\$ -	1.00	\$ -	\$ -	
1913		0	101	75	\$ -	\$ -	1.00	\$ -	\$ -	
1912		0	102	75	\$ -	\$ -	1.00	\$ -	\$ -	
1911		0	103	75	\$ -	\$ -	1.00	\$ -	\$ -	
1910		a	104	75	\$ -	\$ -	1.00	\$ -	\$ -	
1909		0	105	75	\$ -	\$ -	1.00	\$ -	\$ -	
1908		0	106	75	\$ -	\$ -	1.00	\$ -	\$ -	
1907		0	107	75	\$ -	\$ -	1.00	\$ -	\$ -	
1906		0	108	75	\$ -	\$ -	1.00	\$ -	\$ -	
1905		0	109	75	\$ -	\$ -	1.00	\$ -	\$ -	
1904		0	110	75	\$ -	\$ -	1.00	\$ -	\$ -	
1903		0	111	75	\$ -	\$ -	1.00	\$ -	\$ -	
1902		0	112	75	\$ -	\$ -	1.00	\$ -	\$ -	
1901		0	113	75	\$ -	\$ -	1.00	\$ -	\$ -	
1900		1	114	75	\$ 60.00	\$ 500.00	1.00	\$ 60.00	\$ -	
		315			\$ 753,650.00	\$ 182,367.20		\$ 182,367.20	\$ 571,282.80	

Schedule HJW-10E: Fire Hydrants										
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD					
2014	FIRE HYDRANT	348	2.03%	\$ -	\$ 30,000.00					
2014	2014 UTILITY PROGRAM	348	2.03%	\$ -	\$ 18,000.00					
2013	2013 UTILITY PROGRAM	348	2.03%	\$ 923.65	\$ 44,576.35					
2012		348	2.03%	\$ 710.50	\$ 16,789.50					
2012	CENTRE STREET	348	2.03%	\$ 324.80	\$ 7,675.20					
2011		348	2.03%	\$ 730.80	\$ 11,269.20					
2011	WOODLAND/TANN ER	348	2.03%	\$ 1,948.80	\$ 30,051.20					
2009		348	2.03%	\$ 1,674.75	\$ 14,825.25					
2008	COLONIAL /LAKE	348	2.03%	\$ 1,802.64	\$ 12,997.36					
2007	RHOADES AVE	348	2.03%	\$ 3,197.25	\$ 19,302.75					
2007	WALNUT AVE	348	2.03%	\$ 1,989.40	\$ 12,010.60					
2007	SYLVAN LAKE	348	2.03%	\$ 497.35	\$ 3,002.65					
2006		348	2.03%	\$ -	\$ -					
2005		348	2.03%	\$ -	\$ -					
2004		348	2.03%	\$ -	\$ -					
2003		348	2.03%	\$ -	\$ -					
2002		348	2.03%	\$ 7,308.00	\$ 22,692.00					
2001		348	2.03%	\$ 7,917.00	\$ 22,083.00					
2000		348	2.03%	\$ 8,270.22	\$ 20,829.78					
1999		348	2.03%	\$ 5,152.14	\$ 11,767.86					
1998		348	2.03%	\$ 8,867.04	\$ 18,432.96					
1997		348	2.03%	\$ 9,110.64	\$ 17,289.36					
1996		348	2.03%	\$ 8,221.50	\$ 14,278.50					
1995		348	2.03%	\$ 8,446.83	\$ 13,453.17					
1994		348	2.03%	\$ 10,523.52	\$ 15,396.48					
1993		348	2.03%	\$ 12,712.27	\$ 17,107.73					
1992		348	2.03%	\$ 28,135.80	\$ 34,864.20					
1991		348	2.03%	\$ 5,798.90	\$ 6,621.10					
1990		348	2.03%	\$ 9,792.72	\$ 10,307.28					
1989		348	2.03%	\$ 11,692.80	\$ 11,347.20					

Schedule HJW-10E: Fire Hydrants

YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD
1988		348	2.03%	\$ 11,210.47	\$ 10,029.53
1987		348	2.03%	\$ 11,247.01	\$ 9,272.99
1936		348	2.03%	\$ 11,254.32	\$ 8,545.68
1985		348	2.03%	\$ -	\$ -
1984		348	2.03%	\$ -	\$ -
1984		348	2.03%	\$ -	\$ -
1983		348	2.03%	\$ -	\$ -
1982		348	2.03%	\$ -	\$ -
1981		348	2.03%	\$ -	\$ -
1980		348	2.03%	\$ -	\$ -
1979		348	2.03%	\$ -	\$ -
1978		348	2.03%	\$ -	\$ -
1977		348	2.03%	\$ 4,191.14	\$ 1,388.86
1976		348	2.03%	\$ 4,026.71	\$ 1,193.29
1975		348	2.03%	\$ -	\$ -
1974		348	2.03%	\$ 3,702.72	\$ 857.28
1973		348	2.03%	\$ -	\$ -
1972		348	2.03%	\$ -	\$ -
1971		348	2.03%	\$ -	\$ -
1970		348	2.03%	\$ -	\$ -
1969		348	2.03%	\$ -	\$ -
1968		348	2.03%	\$ -	\$ -
1967		348	2.03%	\$ -	\$ -
1966		348	2.03%	\$ -	\$ -
1996		348	2.03%	\$ 6,565.02	\$ 34.98
1964		348	2.03%	\$ -	\$ -
1963		348	2.03%	\$ -	\$ -
1962		348	2.03%	\$ 9,630.00	\$ -
1961		348	2.03%	\$ -	\$ -
1960		348	2.03%	\$ 12,000.00	\$ -
1959		348	2.03%	\$ -	\$ -
1958		348	2.03%	\$ -	\$ -

Schedule HJW-10E: Fire Hydrants										
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD					
1957		348	2.03%	\$ -	\$ -					
1956		348	2.03%	\$ -	\$ -					
1955		348	2.03%	\$ 16,800.00	\$ -					
1954		348	2.03%	\$ -	\$ -					
1953		348	2.03%	\$ 4,800.00	\$ -					
1952		348	2.03%	\$ -	\$ -					
1951		348	2.03%	\$ -	\$ -					
1950		348	2.03%	\$ -	\$ -					
1949		348	2.03%	\$ -	\$ -					
1948		348	2.03%	\$ 1,800.00	\$ -					
1947		348	2.03%	\$ -	\$ -					
1946		348	2.03%	\$ -	\$ -					
1945		348	2.03%	\$ 7,200.00	\$ -					
1944		348	2.03%	\$ -	\$ -					
1943		348	2.03%	\$ -	\$ -					
1942		348	2.03%	\$ -	\$ -					
1941		348	2.03%	\$ -	\$ -					
1940		348	2.03%	\$ 3,000.00	\$ -					
1939		348	2.03%	\$ -	\$ -					
1938		348	2.03%	\$ -	\$ -					
1937		348	2.03%	\$ -	\$ -					
1936		348	2.03%	\$ -	\$ -					
1935		348	2.03%	\$ 1,680.00	\$ -					
1934		348	2.03%	\$ -	\$ -					
1933		348	2.03%	\$ -	\$ -					
1932		348	2.03%	\$ -	\$ -					
1931		348	2.03%	\$ -	\$ -					
1930		348	2.03%	\$ -	\$ -					
1929		348	2.03%	\$ -	\$ -					
1928		348	2.03%	\$ -	\$ -					
1927		348	2.03%	\$ -	\$ -					
1926		348	2.03%	\$ -	\$ -					

Schedule HJW-10E: Fire Hydrants					
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD
1925		348	2.03%	\$ -	\$ -
1924		348	2.03%	\$ -	\$ -
1923		348	2.03%	\$ -	\$ -
1922		348	2.03%	\$ -	\$ -
1921		348	2.03%	\$ -	\$ -
1920		348	2.03%	\$ -	\$ -
1919		348	2.03%	\$ -	\$ -
1918		348	2.03%	\$ -	\$ -
1917		348	2.03%	\$ -	\$ -
1916		348	2.03%	\$ -	\$ -
1915		348	2.03%	\$ -	\$ -
1914		348	2.03%	\$ -	\$ -
1913		348	2.03%	\$ -	\$ -
1912		348	2.03%	\$ -	\$ -
1911		348	2.03%	\$ -	\$ -
1910		348	2.03%	\$ -	\$ -
1909		348	2.03%	\$ -	\$ -
1908		348	2.03%	\$ -	\$ -
1907		348	2.03%	\$ -	\$ -
1906		348	2.03%	\$ -	\$ -
1905		348	2.03%	\$ -	\$ -
1904		348	2.03%	\$ -	\$ -
1903		348	2.03%	\$ -	\$ -
1902		348	2.03%	\$ -	\$ -
1901		348	2.03%	\$ -	\$ -
1900		348	2.03%	\$ 500.00	\$ -
				\$ 265,356.70	\$ 488,293.30

Schedule HJW-10F: Sewer Facilities									
SANITARY SYSTEM FACILITIES									
YEAR OF PURCHASE		AGE (YEARS)	ORIGINAL COST	LIFE	DEPRECIATION FACTOR	DEPRECIATION COST	OCCLD		
	GROVE STREET PUMP STATION								
1925	PUMP STATION BUILDING	89	\$ 8,000.00	100	0.89	\$ 7,120.00	\$ 880.00		
1925	WET WELL & EQUIPMENT	89	\$ 10,000.00	100	0.89	\$ 8,900.00	\$ 1,100.00		
1979	PUMP & CONTROLS	35	\$ 15,000.00	30	1.00	\$ 15,000.00	\$ -		
2012	ELECTRICAL UPGRADES	2	\$ 16,000.00	75	0.03	\$ 426.67	\$ 15,573.33		
2010	EMERGENCY BYPASS PUMPINSTALLATION	4	\$ 149,125.00	75	0.05	\$ 7,953.33	\$ 141,171.67		
	COLES MILL PUMP STATION								
1955	PUMP STATION BUILDING BUILDING	59	\$ 4,000.00	100	0.59	\$ 2,360.00	\$ 1,640.00		
1955	WET WELL & EQUIPMENT	59	\$ 10,500.00	100	0.59	\$ 6,195.00	\$ 4,305.00		
1955	PUMP & CONTROLS	59	\$ 8,000.00	30	1.00	\$ 8,000.00	\$ -		
2012	PUMP REPLACEMENT (1)	2	\$ 16,500.00	30	0.07	\$ 1,100.00	\$ 15,400.00		
	ELM STREET PUMP STATION								
1925	PUMP STATION BUILDING	89	\$ 8,000.00	100	0.89	\$ 7,120.00	\$ 880.00		
1925	WET WELL & EQUIPMENT	89	\$ 10,000.00	100	0.89	\$ 8,900.00	\$ 1,100.00		
1980	PUMPS & CONTROLS	34	\$ 15,000.00	30	1.00	\$ 15,000.00	\$ -		
2010	EMERGENCY BYPASS PUMP INSTALLATION	4	\$ 149,125.00	75	0.05	\$ 7,953.33	\$ 141,171.67		
	ROBERTS AVE PUMP STATION								
1924	PUMP STATION BUILDING	90	\$ 10,000.00	100	0.90	\$ 9,000.00	\$ 1,000.00		
1924	WET WELL & EQUIPMENT	90	\$ 4,000.00	100	0.90	\$ 3,600.00	\$ 400.00		
1976	PUMPS ANO CONTROLS	38	\$ 6,000.00	30	1.00	\$ 6,000.00	\$ -		
2010	PUMP REBUILD (1)	4	\$ 12,000.00	12	0.33	\$ 4,000.00	\$ 8,000.00		
	EUCLID AVE PUMP STATION								
1965	BELOW GRADE PUMP STATION, WET	49	\$ 110,000.00	100	0.49	\$ 53,900.00	\$ 56,100.00		
2008	FAIRBANKS MORSE PUMP REPLACEMENT	6	\$ 29,228.00	30	0.20	\$ 5,845.60	\$ 23,382.40		
2012	STRUCTURE IMPROVEMENTS, ELECTRICAL	2	\$ 320,000.00	100	0.02	\$ 6,400.00	\$ 313,600.00		
2012	PUMP REPLACEMENT (1), PIPING	2	\$ 42,000.00	30	0.07	\$ 2,800.00	\$ 39,200.00		
2012	EMERGENCY BYPASS PUMP INSTALLATION	2	\$ 125,000.00	75	0.03	\$ 3,333.33	\$ 121,666.67		
2011	PUMP REPLACEMENT (1) & VALVE	3	\$ 36,400.00	30	0.10	\$ 3,640.00	\$ 32,760.00		
2012	LANDSCAPING AND ACCESS IMPROVEMENTS	2	\$ 10,000.00	100	0.02	\$ 200.00	\$ 9,800.00		
	CENTRE STREET PUMP STATION								
2008	CONSTRUCTION OF NEW PUMP STATION	6	\$ 555,515.00	100	0.06	\$ 33,330.90	\$ 522,184.10		
			\$ 1,679,393.00			\$ 228,078.17	\$ 1,451,314.83		

Schedule HAW-10G: Sanitary Laterals										
YEAR OF PURCHASE	ITEM	# OF ITEMS	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD	
2014	SANITARY LATERALS - DEEP CUT - 2014 UTILITY PROGRAM	27	0	75	\$ 1,200.00	\$ 32,400.00	0	\$ -	\$ 32,400.00	
2014	SANITARY LATERALS- HOUSE CONNECTIONS- 2014 UTILITY PROGRAM	22	0	75	\$ 1,200.00	\$ 26,400.00	0	\$ -	\$ 26,400.00	
2014	SANITARY LATERAL -4" DEEP CUT - GROVE STREET	7	0	75	\$ 4,500.00	\$ 31,500.00	0	\$ -	\$ 31,500.00	
2014	SANITARY LATERAL - 6" DEEP CUT - GROVE STREET	1	0	75	\$ 6,500.00	\$ 6,500.00	0	\$ -	\$ 6,500.00	
2013	4" DEEP CUT LATERALS	64	1	75	\$ 1,000.00	\$ 64,000.00	0.01	\$ 13.33	\$ 63,146.67	
2013	4" HOUSE CONNECTIONS	24	1	75	\$ 800.00	\$ 19,200.00	0.01	\$ 10.67	\$ 18,944.00	
2013	6" HOUSE CONNECTION	1	1	75	\$ 900.00	\$ 900.00	0.01	\$ 12.00	\$ 888.00	
2012	RESIDENTIAL DEEP CONNECTION - SANITARY EXTENSION PHASE III	22	2	75	\$ 1,000.00	\$ 22,000.00	0.03	\$ 26.67	\$ 21,413.33	
2012	CENTRE STREET	9	2	75	\$ 1,400.00	\$ 12,600.00	0.03	\$ 37.33	\$ 12,264.00	
2012	RESIDENTIAL DEEP CONNECTION - SANITARY EXTENSION PHASE II	20	2	75	\$ 1,500.00	\$ 30,000.00	0.03	\$ 40.00	\$ 29,200.00	
2011	SANITARY LATERAL - STATION WOODLAND AVENUE	7	3	75	\$ 750.00	\$ 5,250.00	0.04	\$ 30.00	\$ 5,040.00	
2011	TANNER - 4"	9	3	75	\$ 1,100.00	\$ 9,900.00	0.04	\$ 44.00	\$ 9,504.00	
2011	TANNER -4" TO TCP	17	3	75	\$ 1,300.00	\$ 22,100.00	0.04	\$ 52.00	\$ 21,216.00	
2010	KINGS COURT	20	3	75	\$ 4,000.00	\$ 80,000.00	0.04	\$ 160.00	\$ 76,800.00	
2010	CHESTNUT / REDMAN	2	4	75	\$ 1,500.00	\$ 3,000.00	0.05	\$ 80.00	\$ 2,840.00	
2009	COLONIAL/LAKE	65	4	75	\$ 1,500.00	\$ 97,500.00	0.05	\$ 80.00	\$ 92,300.00	
2008	WESTMINSTER	63	5	75	\$ 1,150.00	\$ 72,450.00	0.07	\$ 76.67	\$ 67,620.00	
2007	SYLVAN LAKE	25	6	75	\$ 1,350.00	\$ 33,750.00	0.08	\$ 108.00	\$ 31,050.00	
2007	RHOADES AVE	2	7	75	\$ 2,000.00	\$ 4,000.00	0.09	\$ 186.67	\$ 3,626.67	
2006		53	7	75	\$ 950.00	\$ 50,350.00	0.09	\$ 88.67	\$ 45,650.67	
2005		15	8	75	\$ 1,500.00	\$ 22,500.00	0.11	\$ 160.00	\$ 20,100.00	
2004		45	9	75	\$ 1,400.00	\$ 63,000.00	0.12	\$ 168.00	\$ 55,440.00	
2003		45	10	75	\$ 1,400.00	\$ 63,000.00	0.13	\$ 186.67	\$ 54,600.00	
2002		67	11	75	\$ 1,400.00	\$ 93,800.00	0.15	\$ 205.33	\$ 80,042.67	
2001		60	12	75	\$ 1,400.00	\$ 84,000.00	0.16	\$ 224.00	\$ 70,560.00	
2000		60	13	75	\$ 1,400.00	\$ 84,000.00	0.17	\$ 242.67	\$ 69,440.00	
1999		60	14	75	\$ 1,372.00	\$ 82,320.00	0.19	\$ 256.11	\$ 66,953.60	
1998		30	15	75	\$ 1,340.92	\$ 40,227.60	0.20	\$ 268.18	\$ 32,182.08	
1997		30	16	75	\$ 1,311.10	\$ 39,333.00	0.21	\$ 279.70	\$ 30,941.96	
1996		30	17	75	\$ 1,281.98	\$ 38,459.40	0.23	\$ 290.58	\$ 29,741.94	
1995		30	18	75	\$ 1,257.06	\$ 37,711.80	0.24	\$ 301.69	\$ 28,660.97	
1994		35	19	75	\$ 1,208.90	\$ 42,311.50	0.25	\$ 306.25	\$ 31,592.59	
1993		35	20	75	\$ 1,190.28	\$ 41,659.80	0.27	\$ 317.41	\$ 30,550.52	
1992		32	21	75	\$ 1,162.14	\$ 37,188.48	0.28	\$ 325.40	\$ 26,775.71	
1992		43	22	75	\$ 1,107.12	\$ 47,606.16	0.29	\$ 324.76	\$ 33,641.69	

Schedule HAW-10G: Sanitary Laterals

YEAR OF PURCHASE	ITEM	# OF ITEMS	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
1991		45	23	75	\$ 1,070.02	\$ 48,150.90	0.31	\$ 328.14	\$ 33,384.62
1990		75	24	75	\$ 1,045.52	\$ 78,414.00	0.32	\$ 334.57	\$ 53,321.52
1989		43	25	75	\$ 1,026.20	\$ 44,126.60	0.33	\$ 342.07	\$ 29,417.73
1988		43	26	75	\$ 1,026.20	\$ 44,126.60	0.35	\$ 355.75	\$ 28,829.38
1987		44	27	75	\$ 994.00	\$ 43,736.00	0.36	\$ 357.84	\$ 27,991.04
1986		43	28	75	\$ 980.00	\$ 42,140.00	0.37	\$ 365.87	\$ 26,407.73
1985		50	29	75	\$ 952.28	\$ 47,614.00	0.39	\$ 368.21	\$ 29,203.25
1984		43	30	75	\$ 924.28	\$ 39,744.04	0.40	\$ 369.71	\$ 23,846.42
1983		43	31	75	\$ 910.00	\$ 39,130.00	0.41	\$ 376.13	\$ 22,956.27
1982		32	32	75	\$ 906.92	\$ 29,021.44	0.43	\$ 386.95	\$ 16,638.96
1981		43	33	75	\$ 864.50	\$ 37,173.50	0.44	\$ 380.38	\$ 20,817.16
1980		30	34	75	\$ 728.00	\$ 21,840.00	0.45	\$ 330.03	\$ 11,939.20
1979		30	35	75	\$ 686.00	\$ 20,580.00	0.47	\$ 320.13	\$ 10,976.00
1978		30	36	75	\$ 686.00	\$ 20,580.00	0.48	\$ 329.28	\$ 10,701.60
1977		30	37	75	\$ 672.00	\$ 20,160.00	0.49	\$ 331.52	\$ 10,214.40
1976		30	38	75	\$ 672.00	\$ 20,160.00	0.51	\$ 340.48	\$ 9,945.60
1975		30	39	75	\$ 484.12	\$ 14,523.60	0.52	\$ 251.74	\$ 6,971.33
1974		30	40	75	\$ 462.00	\$ 13,860.00	0.53	\$ 246.40	\$ 6,468.00
1973		0	41	75			0.55	\$ -	\$ -
1972		0	42	75			0.56	\$ -	\$ -
1971		0	43	75			0.57	\$ -	\$ -
1970		0	44	75			0.59	\$ -	\$ -
1969		0	45	75			0.60	\$ -	\$ -
1968		0	46	75			0.61	\$ -	\$ -
1967		0	47	75			0.63	\$ -	\$ -
1966		5	48	75	\$ 224.00	\$ 1,120.00	0.64	\$ 143.36	\$ 403.20
1965		0	49	75			0.65	\$ -	\$ -
1964		0	50	75			0.67	\$ -	\$ -
1963		5	51	75	\$ 196.00	\$ 980.00	0.68	\$ 133.28	\$ 313.60
1962		0	52	75			0.69	\$ -	\$ -
1961		0	53	75			0.71	\$ -	\$ -
1960		90	54	75			0.72	\$ -	\$ -
1959		0	55	75			0.73	\$ -	\$ -
1958		0	56	75			0.75	\$ -	\$ -
1957		0	57	75			0.76	\$ -	\$ -
1956		588	58	75	\$ 144.48	\$ 84,954.24	0.77	\$ 111.73	\$ 19,256.29
1955		0	59	75			0.79	\$ -	\$ -
1954		0	60	75			0.80	\$ -	\$ -
1953		0	61	75			0.81	\$ -	\$ -
1952		0	62	75			0.83	\$ -	\$ -
1951		0	63	75			0.84	\$ -	\$ -
1950		0	64	75			0.85	\$ -	\$ -
1949		0	65	75			0.87	\$ -	\$ -
1948		0	66	75			0.88	\$ -	\$ -

Schedule HAW-10G: Sanitary Laterals

YEAR OF PURCHASE	ITEM	# OF ITEMS	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
1947		0	67	75	\$	\$	0.89	\$	\$
1946		755	68	75	\$ 140.00	\$ 105,700.00	0.91	\$ 126.93	\$ 9,865.33
1945		0	69	75	\$	\$	0.92	\$	\$
1944		0	70	75	\$	\$	0.93	\$	\$
1943		0	71	75	\$	\$	0.95	\$	\$
1942		0	72	75	\$	\$	0.96	\$	\$
1941		0	73	75	\$	\$	0.97	\$	\$
1940		0	74	75	\$	\$	0.99	\$	\$
1939		0	75	75	\$	\$	1.00	\$	\$
1938		0	76	75	\$	\$	1.00	\$	\$
1937		0	77	75	\$	\$	1.00	\$	\$
1936		1271	78	75	\$ 42.00	\$ 53,382.00	1.00	\$ 42.00	\$
1935		0	79	75	\$	\$	1.00	\$	\$
1934		0	80	75	\$	\$	1.00	\$	\$
1933		0	81	75	\$	\$	1.00	\$	\$
1932		0	82	75	\$	\$	1.00	\$	\$
1931		0	83	75	\$	\$	1.00	\$	\$
1930		0	84	75	\$	\$	1.00	\$	\$
1929		0	85	75	\$	\$	1.00	\$	\$
1928		0	86	75	\$	\$	1.00	\$	\$
1927		0	87	75	\$	\$	1.00	\$	\$
1926		0	88	75	\$	\$	1.00	\$	\$
1925		0	89	75	\$	\$	1.00	\$	\$
1924		0	90	75	\$	\$	1.00	\$	\$
1923		0	91	75	\$	\$	1.00	\$	\$
1922		0	92	75	\$	\$	1.00	\$	\$
1921		0	93	75	\$	\$	1.00	\$	\$
1920		0	94	75	\$	\$	1.00	\$	\$
1919		0	95	75	\$	\$	1.00	\$	\$
1918		0	96	75	\$	\$	1.00	\$	\$
1917		0	97	75	\$	\$	1.00	\$	\$
1916		0	98	75	\$	\$	1.00	\$	\$
1915		0	99	75	\$	\$	1.00	\$	\$
1914		0	100	75	\$	\$	1.00	\$	\$
1913		0	101	75	\$	\$	1.00	\$	\$
1912		0	102	75	\$	\$	1.00	\$	\$
1911		0	103	75	\$	\$	1.00	\$	\$
1910		0	104	75	\$	\$	1.00	\$	\$
1909		0	105	75	\$	\$	1.00	\$	\$
1908		0	106	75	\$	\$	1.00	\$	\$
1907		0	107	75	\$	\$	1.00	\$	\$
1906		0	108	75	\$	\$	1.00	\$	\$
1905		0	109	75	\$	\$	1.00	\$	\$
1904		0	110	75	\$	\$	1.00	\$	\$
1903		0	111	75	\$	\$	1.00	\$	\$
1902		0	112	75	\$	\$	1.00	\$	\$
1901		0	113	75	\$	\$	1.00	\$	\$
		4505			\$ 2,312,134.66	\$ 642,738.97		\$ 1,669,395.69	

Schedule HJW-10C: Sanitary Laterals						
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD	
2014	SANITARY LATERALS - DEEP CUT - 2014 UTILITY PROGRAM	320	2.60%	\$ -	\$ 32,400.00	
2014	SANITARY LATERALS- HOUSE CONNECTIONS- 2014 UTILITY PROGRAM	320	2.60%	\$ -	\$ 26,400.00	
2014	SANITARY LATERAL -4" DEEP CUT - GROVE STREET	320	2.60%	\$ -	\$ 31,500.00	
2014	SANITARY LATERAL - 6" DEEP CUT - GROVE STREET	320	2.60%	\$ -	\$ 6,500.00	
2013	4" DEEP CUT LATERALS	320	2.60%	\$ 1,664.00	\$ 62,336.00	
2013	4" HOUSE CONNECTIONS	320	2.60%	\$ 499.20	\$ 18,700.80	
2013	6" HOUSE CONNECTION	320	2.60%	\$ 23.40	\$ 876.60	
2012	RESIDENTIAL DEEP CONNECTION - SANITARY EXTENSION PHASE III	320	2.60%	\$ 1,144.00	\$ 20,856.00	
2012	CENTRE STREET	320	2.60%	\$ 655.20	\$ 11,944.80	
2012	RESIDENTIAL DEEP CONNECTION - SANITARY EXTENSION PHASE II	320	2.60%	\$ 1,560.00	\$ 28,440.00	
2011	SANITARY LATERAL - STATION	320	2.60%	\$ 409.50	\$ 4,840.50	
2011	WOODLAND AVENUE	320	2.60%	\$ 772.20	\$ 9,127.80	
2011	TANNER - 4"	320	2.60%	\$ 1,723.80	\$ 20,376.20	
2011	TANNER - 4" TO TCP	320	2.60%	\$ 6,240.00	\$ 73,760.00	
2010	KINGS COURT	320	2.60%	\$ 312.00	\$ 2,688.00	
2010	CHESTNUT / REDMAN	320	2.60%	\$ 10,140.00	\$ 87,360.00	
2009	COLONIAL/LAKE	320	2.60%	\$ 9,418.50	\$ 63,031.50	
2008	WESTMINSTER	320	2.60%	\$ 5,265.00	\$ 28,485.00	
2007	SYLVAN LAKE	320	2.60%	\$ 728.00	\$ 3,272.00	
2007	RHOADES AVE	320	2.60%	\$ 9,163.70	\$ 41,186.30	
2006		320	2.60%	\$ 4,680.00	\$ 17,820.00	
2005		320	2.60%	\$ 14,742.00	\$ 48,258.00	
2004		320	2.60%	\$ 16,380.00	\$ 46,620.00	
2003		320	2.60%	\$ 26,826.80	\$ 66,973.20	
2002		320	2.60%	\$ 26,208.00	\$ 57,792.00	
2001		320	2.60%	\$ 28,392.00	\$ 55,608.00	
2000		320	2.60%	\$ 29,964.48	\$ 52,355.52	
1999		320	2.60%	\$ 15,688.76	\$ 24,538.84	
1998		320	2.60%	\$ 16,362.53	\$ 22,970.47	
1997		320	2.60%	\$ 16,999.05	\$ 21,460.35	
1996		320	2.60%	\$ 17,649.12	\$ 20,062.68	
1995		320	2.60%	\$ 20,901.88	\$ 21,409.62	
1994		320	2.60%	\$ 21,663.10	\$ 19,996.70	
1993		320	2.60%	\$ 20,304.91	\$ 16,883.57	
1992		320	2.60%	\$ 27,230.72	\$ 20,375.44	

Schedule HW-10C: Sanitary Laterals

YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD
1991		320	2.60%	\$ 28,794.24	\$ 19,356.66
1990		320	2.60%	\$ 48,930.34	\$ 29,483.66
1989		320	2.60%	\$ 28,682.29	\$ 15,444.31
1988		320	2.60%	\$ 29,829.58	\$ 14,297.02
1987		320	2.60%	\$ 30,702.67	\$ 13,033.33
1986		320	2.60%	\$ 30,677.92	\$ 11,462.08
1985		320	2.60%	\$ 35,900.96	\$ 11,713.04
1984		320	2.60%	\$ 31,000.35	\$ 8,743.69
1983		320	2.60%	\$ 31,538.78	\$ 7,591.22
1982		320	2.60%	\$ 24,145.84	\$ 4,875.60
1981		320	2.60%	\$ 31,894.86	\$ 5,278.64
1980		320	2.60%	\$ 19,306.56	\$ 2,533.44
1979		320	2.60%	\$ 18,727.80	\$ 1,852.20
1978		320	2.60%	\$ 19,262.88	\$ 1,317.12
1977		320	2.60%	\$ 19,393.92	\$ 766.08
1976		320	2.60%	\$ 19,918.08	\$ 241.92
1975		320	2.60%	\$ 14,523.60	\$ -
1974		320	2.60%	\$ 13,860.00	\$ -
1973		320	2.60%	\$ -	\$ -
1972		320	2.60%	\$ -	\$ -
1971		320	2.60%	\$ -	\$ -
1970		320	2.60%	\$ -	\$ -
1969		320	2.60%	\$ -	\$ -
1968		320	2.60%	\$ -	\$ -
1967		320	2.60%	\$ -	\$ -
1966		320	2.60%	\$ 1,120.00	\$ -
1965		320	2.60%	\$ -	\$ -
1964		320	2.60%	\$ -	\$ -
1963		320	2.60%	\$ 980.00	\$ -
1962		320	2.60%	\$ -	\$ -
1961		320	2.60%	\$ -	\$ -
1960		320	2.60%	\$ -	\$ -
1959		320	2.60%	\$ -	\$ -
1958		320	2.60%	\$ -	\$ -
1957		320	2.60%	\$ -	\$ -
1956		320	2.60%	\$ 84,954.24	\$ -
1955		320	2.60%	\$ -	\$ -
1954		320	2.60%	\$ -	\$ -
1953		320	2.60%	\$ -	\$ -
1952		320	2.60%	\$ -	\$ -
1951		320	2.60%	\$ -	\$ -
1950		320	2.60%	\$ -	\$ -
1949		320	2.60%	\$ -	\$ -
1948		320	2.60%	\$ -	\$ -

Schedule HW-10C: Sanitary Laterals						
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD	
1947		320	2.60%	\$ -	\$ -	\$ -
1946		320	2.60%	\$ 105,700.00	\$ -	\$ -
1945		320	2.60%	\$ -	\$ -	\$ -
1944		320	2.60%	\$ -	\$ -	\$ -
1943		320	2.60%	\$ -	\$ -	\$ -
1942		320	2.60%	\$ -	\$ -	\$ -
1941		320	2.60%	\$ -	\$ -	\$ -
1940		320	2.60%	\$ -	\$ -	\$ -
1939		320	2.60%	\$ -	\$ -	\$ -
1938		320	2.60%	\$ -	\$ -	\$ -
1937		320	2.60%	\$ -	\$ -	\$ -
1936		320	2.60%	\$ 53,382.00	\$ -	\$ -
1935		320	2.60%	\$ -	\$ -	\$ -
1934		320	2.60%	\$ -	\$ -	\$ -
1933		320	2.60%	\$ -	\$ -	\$ -
1932		320	2.60%	\$ -	\$ -	\$ -
1931		320	2.60%	\$ -	\$ -	\$ -
1930		320	2.60%	\$ -	\$ -	\$ -
1929		320	2.60%	\$ -	\$ -	\$ -
1928		320	2.60%	\$ -	\$ -	\$ -
1927		320	2.60%	\$ -	\$ -	\$ -
1926		320	2.60%	\$ -	\$ -	\$ -
1925		320	2.60%	\$ -	\$ -	\$ -
1924		320	2.60%	\$ -	\$ -	\$ -
1923		320	2.60%	\$ -	\$ -	\$ -
1922		320	2.60%	\$ -	\$ -	\$ -
1921		320	2.60%	\$ -	\$ -	\$ -
1920		320	2.60%	\$ -	\$ -	\$ -
1919		320	2.60%	\$ -	\$ -	\$ -
1918		320	2.60%	\$ -	\$ -	\$ -
1917		320	2.60%	\$ -	\$ -	\$ -
1916		320	2.60%	\$ -	\$ -	\$ -
1915		320	2.60%	\$ -	\$ -	\$ -
1914		320	2.60%	\$ -	\$ -	\$ -
1913		320	2.60%	\$ -	\$ -	\$ -
1912		320	2.60%	\$ -	\$ -	\$ -
1911		320	2.60%	\$ -	\$ -	\$ -
1910		320	2.60%	\$ -	\$ -	\$ -
1909		320	2.60%	\$ -	\$ -	\$ -
1908		320	2.60%	\$ -	\$ -	\$ -
1907		320	2.60%	\$ -	\$ -	\$ -
1906		320	2.60%	\$ -	\$ -	\$ -
1905		320	2.60%	\$ -	\$ -	\$ -
1904		320	2.60%	\$ -	\$ -	\$ -
1903		320	2.60%	\$ -	\$ -	\$ -
1902		320	2.60%	\$ -	\$ -	\$ -
1901		320	2.60%	\$ 1,076,938.77	\$ 1,235,195.89	\$ -

Schedule HAW-10H: Sanitary Gravity Mains

YEAR OF PURCHASE	ITEM	LINEAR FEET OF PIPE	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
2014	8" PVC SANITARY MAIN-0-6' DEEP UNLESS NOTED - 2014 UTILITY PROGRAM	2200	0	100	\$ 121.00	\$ 266,200.00	0	\$ -	\$ 266,200.00
2014	8" - GROVE STREET	369	0	100	\$ 202.00	\$ 74,538.00	0	\$ -	\$ 74,538.00
2014	8" - SDOR 26 GROVE STREET	10	0	100	\$ 240.00	\$ 2,400.00	0	\$ -	\$ 2,400.00
2014	SANITARY MAIN -21" , 18-20' DEEP - GROVE STREET	40	0	100	\$ 380.00	\$ 15,200.00	0	\$ -	\$ 15,200.00
2014	MODIFICATIONS TO 8" NARBERTH CROSSING	150	0	100	\$ 53,112.00	\$ 53,112.00	0.00	\$ -	\$ 53,112.00
2013	8" SANITARY MAIN	2464	1	100	\$ 130.00	\$ 320,320.00	0.01	\$ 1.30	\$ 317,116.80
2012	SANITARY MAIN ,8" DIP, 10-20' DEEP, SANITARY EXTENSION PHASE III	380	2	100	\$ 348.00	\$ 132,240.00	0.02	\$ 6.96	\$ 129,595.20
2012	SANITARY MAIN 8" SOR 26, 6-10' DEEP, SANITARY EXTENSION PHASE III	980	2	100	\$ 324.00	\$ 317,520.00	0.02	\$ 6.48	\$ 311,169.60
2012	10" PVC - SANITARY EXTENSION PHASE II	180	2	100	\$ 430.00	\$ 77,400.00	0.02	\$ 8.60	\$ 75,852.00
2012	8" PVC - SANITARY EXTENSION PHASE II	800	2	100	\$ 420.00	\$ 336,000.00	0.02	\$ 8.40	\$ 329,280.00
2012	DUCTILE IRON SANITARY MAIN - SANITARY EXTENSION PHASE II	0	2	100	\$ 420.00	\$ -	0.02	\$ 8.40	\$ -
2011	8" NARBERTH CROSSING REPAIR	150	3	100	\$ 1,481.81	\$ 148,181.00	0.03	\$ 4,445.43	\$ 143,735.57
2011	12" PVC - TANNER	683	3	100	\$ 155.00	\$ 105,865.00	0.03	\$ 4.65	\$ 102,689.05
2011	8" PVC - TANNER	188	3	100	\$ 140.00	\$ 26,320.00	0.03	\$ 4.20	\$ 25,530.40
2011	5" PVC - WOODLAND	86	3	100	\$ 125.00	\$ 10,750.00	0.03	\$ 3.75	\$ 10,427.50
2011	4" PVC - WOODLAND	219	3	100	\$ 50.00	\$ 10,950.00	0.03	\$ 1.50	\$ 10,621.50
2011	8" PVC - STATION AVENUE	460	3	100	\$ 70.00	\$ 34,500.00	0.03	\$ 2.25	\$ 33,465.00
2010	12" STEEL PIPE BRIDGE CROSSING - SANITARY EXTENSION PHASE I	1	4	100	\$ 30,000.00	\$ 30,000.00	0.04	\$ 1,200.00	\$ 28,800.00
2010	10" PVC SEWER PIPE - SANITARY EXTENSION PHASE I	120	4	100	\$ 150.00	\$ 18,000.00	0.04	\$ 6.00	\$ 17,280.00
2010	10" DUCTILE IRON SEWER- SANITARY EXTENSION PHASE I	190	4	100	\$ 180.00	\$ 34,200.00	0.04	\$ 7.20	\$ 32,832.00
2010	12" PVC SANITARY SEWER	345	4	100	\$ 160.00	\$ 55,200.00	0.04	\$ 6.40	\$ 52,992.00
2010	12" DUCTILE IRON SANITARY	270	4	100	\$ 186.00	\$ 50,220.00	0.04	\$ 7.44	\$ 48,211.20
2011	WOODLAND/TANNER	3800	3	100	\$ 135.00	\$ 513,000.00	0.03	\$ 4.05	\$ 497,610.00
2010	KINGS COURT	323	4	100	\$ 130.00	\$ 41,990.00	0.04	\$ 5.20	\$ 40,310.40
2010		200	4	100	\$ 120.00	\$ 24,000.00	0.04	\$ 4.80	\$ 23,040.00
2009		1250	5	100	\$ 120.00	\$ 150,000.00	0.05	\$ 6.00	\$ 142,500.00
2008		1800	6	100	\$ 120.00	\$ 216,000.00	0.06	\$ 7.20	\$ 203,040.00
2007	RHOADES	1369	7	100	\$ 55.00	\$ 75,295.00	0.07	\$ 3.85	\$ 70,024.35
2007	WESTMINSTER	1200	7	100	\$ 110.00	\$ 132,000.00	0.07	\$ 7.70	\$ 122,760.00
2006		100	8	100	\$ 110.00	\$ 11,000.00	0.08	\$ 8.80	\$ 10,120.00
2005		100	9	100	\$ 110.00	\$ 11,000.00	0.09	\$ 9.90	\$ 10,010.00
2004		100	10	100	\$ 110.00	\$ 11,000.00	0.10	\$ 11.00	\$ 9,900.00
2003		0	11	100	\$ -	\$ -	0.11	\$ -	\$ -
2002		0	12	100	\$ -	\$ -	0.12	\$ -	\$ -
2001		0	13	100	\$ -	\$ -	0.13	\$ -	\$ -

Schedule HAW-10H- Sanitary Gravity Mains

YEAR OF PURCHASE	ITEM	LINEAR FEET OF PIPE	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
2000		800	14	100	\$ 120.00	\$ 96,000.00	0.14	\$ 16.80	\$ 82,560.00
1999		500	15	100	\$ 111.60	\$ 55,800.00	0.15	\$ 16.74	\$ 47,430.00
1998			16	100	\$ -	\$ -	0.16	\$ -	\$ -
1997		3200	17	100	\$ 108.00	\$ 345,600.00	0.17	\$ 18.36	\$ 286,848.00
1996			18	100	\$ -	\$ -	0.18	\$ -	\$ -
1995			19	100	\$ -	\$ -	0.19	\$ -	\$ -
1994			20	100	\$ -	\$ -	0.20	\$ -	\$ -
1993	0-6' DEEP	1000	21	100	\$ 93.60	\$ 93,600.00	0.21	\$ 19.66	\$ 73,944.00
1992			22	100	\$ -	\$ -	0.22	\$ -	\$ -
1991	6-10' DEEP	3500	23	100	\$ 249.48	\$ 873,180.00	0.23	\$ 57.38	\$ 672,348.60
1990	10-15' DEEP	3000	24	100	\$ 257.52	\$ 772,560.00	0.24	\$ 61.80	\$ 587,145.60
1989		0	25	100	\$ -	\$ -	0.25	\$ -	\$ -
1988		0	26	100	\$ -	\$ -	0.26	\$ -	\$ -
1987	6-10' DEEP	2000	27	100	\$ 213.84	\$ 427,680.00	0.27	\$ 57.74	\$ 312,206.40
1986			28	100	\$ -	\$ -	0.28	\$ -	\$ -
1985	0-6' DEEP	3000	29	100	\$ 79.20	\$ 237,600.00	0.29	\$ 22.97	\$ 168,696.00
1984			30	100	\$ -	\$ -	0.30	\$ -	\$ -
1983			31	100	\$ -	\$ -	0.31	\$ -	\$ -
1982			32	100	\$ -	\$ -	0.32	\$ -	\$ -
1981	0-6' DEEP	10000	33	100	\$ 61.20	\$ 612,000.00	0.33	\$ 20.20	\$ 410,040.00
1980			34	100	\$ -	\$ -	0.34	\$ -	\$ -
1979			35	100	\$ -	\$ -	0.35	\$ -	\$ -
1978	0-6' DEEP	10000	36	100	\$ 54.00	\$ 540,000.00	0.36	\$ 19.44	\$ 345,600.00
1977			37	100	\$ -	\$ -	0.37	\$ -	\$ -
1976			38	100	\$ -	\$ -	0.38	\$ -	\$ -
1975	0-6' DEEP	10000	39	100	\$ 43.20	\$ 432,000.00	0.39	\$ 16.85	\$ 263,520.00
1974			40	100	\$ -	\$ -	0.40	\$ -	\$ -
1973			41	100	\$ -	\$ -	0.41	\$ -	\$ -
1972	0-6' DEEP	3870	42	100	\$ 36.00	\$ 139,320.00	0.42	\$ 15.12	\$ 80,805.60
1971			43	100	\$ -	\$ -	0.43	\$ -	\$ -
1970			44	100	\$ -	\$ -	0.44	\$ -	\$ -
1969	6-10' DEEP	6000	45	100	\$ 64.80	\$ 388,800.00	0.45	\$ 29.16	\$ 213,840.00
1968			46	100	\$ -	\$ -	0.46	\$ -	\$ -
1967			47	100	\$ -	\$ -	0.47	\$ -	\$ -
1966		6000	48	100	\$ 80.00	\$ 480,000.00	0.48	\$ 38.40	\$ 249,600.00
1965			49	100	\$ -	\$ -	0.49	\$ -	\$ -
1964			50	100	\$ -	\$ -	0.50	\$ -	\$ -
1963	0-6' DEEP	2650	51	100	\$ 16.80	\$ 44,520.00	0.51	\$ 8.57	\$ 21,814.80
1962			52	100	\$ -	\$ -	0.52	\$ -	\$ -
1961	0-6' DEEP	7650	53	100	\$ 15.60	\$ 119,340.00	0.53	\$ 8.27	\$ 56,089.80
1960			54	100	\$ -	\$ -	0.54	\$ -	\$ -
1959			55	100	\$ -	\$ -	0.55	\$ -	\$ -
1958			56	100	\$ -	\$ -	0.56	\$ -	\$ -
1957			57	100	\$ -	\$ -	0.57	\$ -	\$ -
1955	0-6' DEEP	28360	59	100	\$ 12.00	\$ 340,320.00	0.59	\$ 7.08	\$ 139,531.20
1955	6-10' DEEP	2450	59	100	\$ 32.40	\$ 79,380.00	0.59	\$ 19.12	\$ 32,545.80
1956	10-14' DEEP	500	58	100	\$ 34.80	\$ 17,400.00	0.58	\$ 20.18	\$ 7,308.00
1955			59	100	\$ -	\$ -	0.59	\$ -	\$ -
1954			60	100	\$ -	\$ -	0.60	\$ -	\$ -

Schedule HAW-10H- Sanitary Gravity Mains

YEAR OF PURCHASE	ITEM	LINEAR FEET OF PIPE	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
1953			61	100	\$ -	\$ -	0.61	\$ -	\$ -
1952	6-10" DEEP	3000	62	100	\$ 32.40	\$ 97,200.00	0.62	\$ 20.09	\$ 36,936.00
1951			63	100	\$ -	\$ -	0.63	\$ -	\$ -
1950			64	100	\$ -	\$ -	0.64	\$ -	\$ -
1949			65	100	\$ -	\$ -	0.65	\$ -	\$ -
1948			66	100	\$ -	\$ -	0.66	\$ -	\$ -
1947			67	100	\$ -	\$ -	0.67	\$ -	\$ -
1946	0-6" DEEP	10000	68	100	\$ 12.00	\$ 120,000.00	0.68	\$ 8.16	\$ 38,400.00
1945			69	100	\$ -	\$ -	0.69	\$ -	\$ -
1944	6-10" DEEP	3000	70	100	\$ 32.40	\$ 97,200.00	0.70	\$ 22.68	\$ 29,160.00
1943	6-10" DEEP	5000	71	100	\$ 32.40	\$ 162,000.00	0.71	\$ 23.00	\$ 46,980.00
1942	0-6" DEEP	3000	72	100	\$ 12.00	\$ 36,000.00	0.72	\$ 8.64	\$ 10,080.00
1941	0-6" DEEP	1000	73	100	\$ 12.00	\$ 12,000.00	0.73	\$ 8.76	\$ 3,240.00
1940	6-10" DEEP	1000	74	100	\$ 32.40	\$ 32,400.00	0.74	\$ 23.98	\$ 8,424.00
1939		5400	75	100	\$ -	\$ -	0.75	\$ -	\$ -
1938			76	100	\$ -	\$ -	0.76	\$ -	\$ -
1935	15" 0-6" DEEP	170	79	100	\$ 10.00	\$ 1,700.00	0.79	\$ 7.90	\$ 357.00
1935	15" 6-10" DEEP	1000	79	100	\$ 11.25	\$ 11,250.00	0.79	\$ 8.89	\$ 2,362.50
1935	15" 10-14" DEEP	1550	79	100	\$ 15.00	\$ 23,250.00	0.79	\$ 11.85	\$ 4,882.50
1935	15" 14-18" DEEP	700	79	100	\$ 17.50	\$ 12,250.00	0.79	\$ 13.83	\$ 2,572.50
1935	21" 14-18" DEEP	400	79	100	\$ 22.50	\$ 9,000.00	0.79	\$ 17.78	\$ 1,890.00
1935	21" 18-22" DEEP	600	79	100	\$ 25.00	\$ 15,000.00	0.79	\$ 19.75	\$ 3,150.00
1934			80	100	\$ -	\$ -	0.80	\$ -	\$ -
1933			81	100	\$ -	\$ -	0.81	\$ -	\$ -
1932			82	100	\$ -	\$ -	0.82	\$ -	\$ -
1931			83	100	\$ -	\$ -	0.83	\$ -	\$ -
1930			84	100	\$ -	\$ -	0.84	\$ -	\$ -
1929	8" 0-6" DEEP	15000	85	100	\$ 3.85	\$ 57,750.00	0.85	\$ 3.27	\$ 8,662.50
1928			86	100	\$ -	\$ -	0.86	\$ -	\$ -
1927			87	100	\$ -	\$ -	0.87	\$ -	\$ -
1925	8" 0-6" DEEP	14510	89	100	\$ 3.95	\$ 57,459.60	0.89	\$ 3.52	\$ 6,320.55
1925	8" 6-10" DEEP	2100	89	100	\$ 10.69	\$ 22,453.20	0.89	\$ 9.52	\$ 2,469.85
1925	8" 10-14" DEEP	1313	89	100	\$ 11.48	\$ 15,078.49	0.89	\$ 10.22	\$ 1,658.63
1925	8" 14-18" DEEP	300	89	100	\$ 12.54	\$ 3,762.00	0.89	\$ 11.16	\$ 413.82
1925	8" 18-22" DEEP	150	89	100	\$ 14.03	\$ 2,103.75	0.89	\$ 12.48	\$ 231.41
1924			90	100	\$ -	\$ -	0.90	\$ -	\$ -
1923			91	100	\$ -	\$ -	0.91	\$ -	\$ -
1922	6-10" DEEP	5000	92	100	\$ 8.10	\$ 40,500.00	0.92	\$ 7.45	\$ 3,240.00
1921			93	100	\$ -	\$ -	0.93	\$ -	\$ -
1920			94	100	\$ -	\$ -	0.94	\$ -	\$ -
1919	0-6" DEEP	10000	95	100	\$ 2.20	\$ 22,000.00	0.95	\$ 2.09	\$ 1,100.00
1918			96	100	\$ -	\$ -	0.96	\$ -	\$ -
1917			97	100	\$ -	\$ -	0.97	\$ -	\$ -
1916			98	100	\$ -	\$ -	0.98	\$ -	\$ -
1915	0-6" DEEP	10000	99	100	\$ 2.20	\$ 22,000.00	0.99	\$ 2.18	\$ 220.00
1914			100	100	\$ -	\$ -	1.00	\$ -	\$ -
1913			101	100	\$ -	\$ -	1.00	\$ -	\$ -
1909	10-14" DEEP	3000	105	100	\$ 4.94	\$ 14,824.80	1.00	\$ 4.94	\$ -
1909	0-6" DEEP	5000	105	100	\$ 1.56	\$ 7,810.00	1.00	\$ 1.56	\$ -

Schedule HAW-10H: Sanitary Gravity Mains

YEAR OF PURCHASE	ITEM	LINEAR FEET OF PIPE	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
1909	6-10 DEEP	3000	105	100	\$ 4.60	\$ 13,802.40	1.00	\$ 4.60	\$ -
1909	0-6 DEEP	60200	105	100	\$ 1.56	\$ 94,032.40	1.00	\$ 1.56	\$ -
1908			106	100	\$ -	\$ -	1.00	\$ -	\$ -
1907			107	100	\$ -	\$ -	1.00	\$ -	\$ -
1905			108	100	\$ -	\$ -	1.00	\$ -	\$ -
1905			109	100	\$ -	\$ -	1.00	\$ -	\$ -
1904			110	100	\$ -	\$ -	1.00	\$ -	\$ -
1903			111	100	\$ -	\$ -	1.00	\$ -	\$ -
1902			112	100	\$ -	\$ -	1.00	\$ -	\$ -
1901			113	100	\$ -	\$ -	1.00	\$ -	\$ -
1900			114	100	\$ -	\$ -	1.00	\$ -	\$ -
		290400				\$10,402,327.64		\$ 2,927,340.00	\$ 7,474,987.64

Schedule HJW-10H: Sanitary Gravity Mains						
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD	
2014	8" PVC SANITARY MAIN-0-6' DEEP UNLESS NOTED - 2014 UTILITY PROGRAM	321	2.01%	\$ -	\$ 266,200.00	
2014	8" - GROVE STREET	321	2.01%	\$ -	\$ 74,538.00	
2014	8" - SDOR 26 GROVE STREET	321	2.01%	\$ -	\$ 2,400.00	
2014	SANITARY MAIN 21", 18-20' DEEP - GROVE STREET	321	2.01%	\$ -	\$ 15,200.00	
2014	MODIFICATIONS TO 8" NARBERTH CROSSING	321	2.01%	\$ -	\$ 53,112.00	
2013	8" SANITARY MAIN	321	2.01%	\$ 6,438.43	\$ 313,881.57	
2012	SANITARY MAIN, 8" DIP, 10-20' DEEP, SANITARY EXTENSION PHASE III	321	2.01%	\$ 5,316.05	\$ 126,923.95	
2012	SANITARY MAIN 8" SOR 26, 6'-III	321	2.01%	\$ 12,764.30	\$ 304,755.70	
2012	10" PVC - SANITARY EXTENSION PHASE II	321	2.01%	\$ 3,111.48	\$ 74,288.52	
2012	8" PVC - SANITARY EXTENSION PHASE II	321	2.01%	\$ 13,507.20	\$ 322,492.80	
2012	DUCTILE IRON SANITARY MAIN - SANITARY EXTENSION PHASE II	321	2.01%	\$ -	\$ -	
2011	8" NARBERTH CROSSING REPAIR	321	2.01%	\$ 8,935.31	\$ 139,245.69	
2011	12" PVC - TANNER	321	2.01%	\$ 6,383.66	\$ 99,481.34	
2011	8" PVC - TANNER	321	2.01%	\$ 1,587.10	\$ 24,732.90	
2011	8" PVC - WOODLAND	321	2.01%	\$ 648.23	\$ 10,101.78	
2011	4" PVC - WOODLAND	321	2.01%	\$ 660.29	\$ 10,289.72	
2011	8" PVC - STATION AVENUE	321	2.01%	\$ 2,080.35	\$ 32,419.65	
2010	12" STEEL PIPE BRIDGE CROSSING - SANITARY EXTENSION PHASE I	321	2.01%	\$ 2,412.00	\$ 27,588.00	
2010	10" PVC SEWER PIPE - SANITARY EXTENSION PHASE I	321	2.01%	\$ 1,447.20	\$ 16,552.80	
2010	10" DUCTILE IRON SEWER - SANITARY EXTENSION PHASE I	321	2.01%	\$ 2,749.68	\$ 31,450.32	
2010	12" PVC SANITARY SEWER	321	2.01%	\$ 4,438.08	\$ 50,761.92	
2010	12" DUCTILE IRON SANITARY WOODLAND/TANNER	321	2.01%	\$ 4,037.69	\$ 46,182.31	
2010	12" DUCTILE IRON SANITARY WOODLAND/TANNER	321	2.01%	\$ 30,933.90	\$ 482,066.10	
2010	KINGS COURT	321	2.01%	\$ 3,376.00	\$ 38,614.00	
2010		321	2.01%	\$ 1,929.60	\$ 22,070.40	
2009		321	2.01%	\$ 15,075.00	\$ 134,925.00	
2008		321	2.01%	\$ 26,049.60	\$ 189,950.40	
2007	RHOADES	321	2.01%	\$ 10,594.01	\$ 64,700.99	
2007	WESTMINSTER	321	2.01%	\$ 18,572.40	\$ 113,427.60	
2006		321	2.01%	\$ 1,768.80	\$ 9,231.20	
2005		321	2.01%	\$ 1,989.90	\$ 9,010.10	
2004		321	2.01%	\$ 2,211.00	\$ 8,789.00	
2003		321	2.01%	\$ -	\$ -	
2002		321	2.01%	\$ -	\$ -	
2001		321	2.01%	\$ -	\$ -	

Schedule HJW-10H: Sanitary Gravity Mains

YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD
2000		321	2.01%	\$ 27,014.40	\$ 68,985.60
1999		321	2.01%	\$ 16,823.70	\$ 38,976.30
1998		321	2.01%	\$ -	\$ -
1997		321	2.01%	\$ 118,091.52	\$ 227,508.48
1996		321	2.01%	\$ -	\$ -
1995		321	2.01%	\$ -	\$ -
1994		321	2.01%	\$ -	\$ -
1993	0-6' DEEP	321	2.01%	\$ 39,508.56	\$ 54,091.44
1992		321	2.01%	\$ -	\$ -
1991	6-10' DEEP	321	2.01%	\$ 403,671.11	\$ 469,508.89
1990	10-15' DEEP	321	2.01%	\$ 372,682.94	\$ 399,877.06
1989		321	2.01%	\$ -	\$ -
1988		321	2.01%	\$ -	\$ -
1987	6-10' DEEP	321	2.01%	\$ 232,101.94	\$ 195,578.06
1986		321	2.01%	\$ -	\$ -
1985	0-6' DEEP	321	2.01%	\$ 138,497.04	\$ 99,102.96
1984		321	2.01%	\$ -	\$ -
1983		321	2.01%	\$ -	\$ -
1982		321	2.01%	\$ -	\$ -
1981	0-6' DEEP	321	2.01%	\$ 405,939.60	\$ 206,060.40
1980		321	2.01%	\$ -	\$ -
1979		321	2.01%	\$ -	\$ -
1978	0-6' DEEP	321	2.01%	\$ 390,744.00	\$ 149,256.00
1977		321	2.01%	\$ -	\$ -
1976		321	2.01%	\$ -	\$ -
1975	0-6' DEEP	321	2.01%	\$ 338,644.80	\$ 93,355.20
1974		321	2.01%	\$ -	\$ -
1973		321	2.01%	\$ -	\$ -
1972	0-6' DEEP	321	2.01%	\$ 117,613.94	\$ 21,706.06
1971		321	2.01%	\$ -	\$ -
1970		321	2.01%	\$ -	\$ -
1969	6-10 DEEP	321	2.01%	\$ 351,669.60	\$ 37,130.40
1968		321	2.01%	\$ -	\$ -
1967		321	2.01%	\$ -	\$ -
1966		321	2.01%	\$ 463,104.00	\$ 16,896.00
1965		321	2.01%	\$ -	\$ -
1964		321	2.01%	\$ -	\$ -
1963	0-6' DEEP	321	2.01%	\$ 44,520.00	\$ -
1962		321	2.01%	\$ -	\$ -
1961	0-6' DEEP	321	2.01%	\$ 119,340.00	\$ -
1960		321	2.01%	\$ -	\$ -
1959		321	2.01%	\$ -	\$ -
1958		321	2.01%	\$ -	\$ -
1957		321	2.01%	\$ -	\$ -
1955	0-6' DEEP	321	2.01%	\$ 340,320.00	\$ -
1955	6-10 ' DEEP	321	2.01%	\$ 79,380.00	\$ -
1956	10-14' DEEP	321	2.01%	\$ 17,400.00	\$ -
1955		321	2.01%	\$ -	\$ -
1954		321	2.01%	\$ -	\$ -

Schedule HJW-10H: Sanitary Gravity Mains

YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD
1953		321	2.01%	\$ -	\$ -
1952	6-10' DEEP	321	2.01%	\$ 97,200.00	\$ -
1951		321	2.01%	\$ -	\$ -
1950		321	2.01%	\$ -	\$ -
1949		321	2.01%	\$ -	\$ -
1948		321	2.01%	\$ -	\$ -
1947		321	2.01%	\$ -	\$ -
1946	0-6' DEEP	321	2.01%	\$ 120,000.00	\$ -
1945		321	2.01%	\$ -	\$ -
1944	6-10' DEEP	321	2.01%	\$ 97,200.00	\$ -
1943	6-10' DEEP	321	2.01%	\$ 162,000.00	\$ -
1942	0-6' DEEP	321	2.01%	\$ 36,000.00	\$ -
1941	0-6' DEEP	321	2.01%	\$ 12,000.00	\$ -
1940	6-10' DEEP	321	2.01%	\$ 32,400.00	\$ -
1939		321	2.01%	\$ -	\$ -
1938		321	2.01%	\$ -	\$ -
1935	15"0-6' DEEP	321	2.01%	\$ 1,700.00	\$ -
1935	15"6-10' DEEP	321	2.01%	\$ 11,250.00	\$ -
1935	15"10-14' DEEP	321	2.01%	\$ 23,250.00	\$ -
1935	15"14-18' DEEP	321	2.01%	\$ 12,250.00	\$ -
1935	21"14-18' DEEP	321	2.01%	\$ 9,000.00	\$ -
1935	21"18-22' DEEP	321	2.01%	\$ 15,000.00	\$ -
1934		321	2.01%	\$ -	\$ -
1933		321	2.01%	\$ -	\$ -
1932		321	2.01%	\$ -	\$ -
1931		321	2.01%	\$ -	\$ -
1930		321	2.01%	\$ -	\$ -
1929	8" 0-6' DEEP	321	2.01%	\$ 57,750.00	\$ -
1928		321	2.01%	\$ -	\$ -
1927		321	2.01%	\$ -	\$ -
1925	8" 0-6' DEEP	321	2.01%	\$ 57,459.60	\$ -
1925	8" 6-10' DEEP	321	2.01%	\$ 22,453.20	\$ -
1925	8" 10-14' DEEP	321	2.01%	\$ 15,078.49	\$ -
1925	8" 14-18' DEEP	321	2.01%	\$ 3,762.00	\$ -
1925	8" 18-22' DEEP	321	2.01%	\$ 2,103.75	\$ -
1924		321	2.01%	\$ -	\$ -
1923		321	2.01%	\$ -	\$ -
1922	6-10' DEEP	321	2.01%	\$ 40,500.00	\$ -
1921		321	2.01%	\$ -	\$ -
1920		321	2.01%	\$ -	\$ -
1919	0-6' DEEP	321	2.01%	\$ 22,000.00	\$ -
1918		321	2.01%	\$ -	\$ -
1917		321	2.01%	\$ -	\$ -
1916		321	2.01%	\$ -	\$ -
1915	0-6' DEEP	321	2.01%	\$ 22,000.00	\$ -
1914		321	2.01%	\$ -	\$ -
1913		321	2.01%	\$ -	\$ -
1909	10-14' DEEP	321	2.01%	\$ 14,824.80	\$ -
1909	0-6' DEEP	321	2.01%	\$ 7,810.00	\$ -

Schedule HJW-10H: Sanitary Gravity Mains						
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD	
1909	6-10 DEEP	321	2.01%	\$ 13,802.40	\$ -	
1909	0-6 DEEP	321	2.01%	\$ 94,032.40	\$ -	
1908		321	2.01%	\$ -	\$ -	
1907		321	2.01%	\$ -	\$ -	
1905		321	2.01%	\$ -	\$ -	
1905		321	2.01%	\$ -	\$ -	
1904		321	2.01%	\$ -	\$ -	
1903		321	2.01%	\$ -	\$ -	
1902		321	2.01%	\$ -	\$ -	
1901		321	2.01%	\$ -	\$ -	
1900		321	2.01%	\$ -	\$ -	
				\$5,208,911.04	\$5,193,416.60	

Schedule HW-101: Sanitary Manholes									
YEAR OF PURCHASE	ITEM	# OF MANHOLES	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
2014	NEW SANITARY MANHOLES, 0-10' DEEP - GROVE STREET	2	0	100	\$ 21,600.00	\$ 43,200.00	0	\$ -	\$ 43,200.00
2014	RECONSTRUCT EXISTING, 18' 20' DEEP - GROVE STREET	1	0	100	\$ 21,600.00	\$ 21,600.00	0	\$ -	\$ 21,600.00
2014	NEW WITH 2 INTERIOR DROPS 16-20' DEEP - GROVE STREET	1	0	100	\$ 93,600.00	\$ 93,600.00	0	\$ -	\$ 93,600.00
2014	NEW 5' DIA, 16-20' DEEP - GROVE STREET	1	0	100	\$ 21,600.00	\$ 21,600.00	0	\$ -	\$ 21,600.00
2014	SANITARY VAULT - GROVE STREET	1	0	100	\$ 40,000.00	\$ 40,000.00	0	\$ -	\$ 40,000.00
2014	NEW 4' DIA, 0-10' DEEP - GROVE STREET	1	0	100	\$ 4,000.00	\$ 4,000.00	0	\$ -	\$ 4,000.00
2014	RECONSTRUCT EXISTING, 0-10 DEEP - GROVE STREET	2	0	100	\$ 8,375.00	\$ 16,750.00	0	\$ -	\$ 16,750.00
2014	INSTALL FLOW THRU CHANNEL IN MANHOLE - GROVE STREET	1	0	100	\$ 5,180.00	\$ 5,180.00	0	\$ -	\$ 5,180.00
2014	NEW SANITARY MANHOLES, 2014 UTILITY PROGRAM	9	0	100	\$ 5,000.00	\$ 45,000.00	0	\$ -	\$ 45,000.00
2014	RECONNECT NEW PIPE TO EXISTING MANHOLE - 2014 UTILITY PROGRAM	1	0	100	\$ 1,185.00	\$ 1,185.00	0	\$ -	\$ 1,185.00
2013	CJ-10' DEEP	9	1	100	\$ 6,000.00	\$ 54,000.00	0.01	\$ 60.00	\$ 53,460.00
2012	INTERIOR DROP, 19-22'DEEP, SANITARY EXTENSION, PHASE III	3	2	100	\$ 11,000.00	\$ 33,000.00	0.02	\$ 220.00	\$ 32,340.00
2012	SANITARY MANHOLE, 0-10', SANITARY EXTENSION PHASE III	4	2	100	\$ 8,000.00	\$ 32,000.00	0.02	\$ 160.00	\$ 31,360.00
2012	MANHOLE, 16-19'DEEP, SANITARY EXTENSION, PHASE III	1	2	100	\$ 9,000.00	\$ 9,000.00	0.02	\$ 180.00	\$ 8,820.00
2012	MANHOLE, 19-22'DEEP, SANITARY EXTENSION, PHASE III	2	2	100	\$ 10,000.00	\$ 20,000.00	0.02	\$ 200.00	\$ 19,600.00
2012	SANITARY MANHOLE, 0-10', 5' DIA., SANITARY EXTENSION PHASE II	1	2	100	\$ 6,000.00	\$ 6,000.00	0.02	\$ 120.00	\$ 5,880.00
2012	SANITARY MANHOLE, 0-10', SANITARY EXTENSION PHASE II	1	2	100	\$ 4,000.00	\$ 4,000.00	0.02	\$ 80.00	\$ 3,920.00
2012	SANITARY MANHOLE, 13-16', SANITARY EXTENSION PHASE II	2	2	100	\$ 4,500.00	\$ 9,000.00	0.02	\$ 90.00	\$ 8,820.00
2012	SANITARY MANHOLE, 16-19', SANITARY EXTENSION PHASE II	2	2	100	\$ 5,000.00	\$ 10,000.00	0.02	\$ 100.00	\$ 9,800.00
2011	RECONNECTION OF NEW PIPE TO EXISTING MANHOLE - STATION AVENUE	3	3	100	\$ 700.00	\$ 2,100.00	0.03	\$ 21.00	\$ 2,037.00
2010	SANITARY MANHOLES - SANITARY EXTENSION PHASE I	5	4	100	\$ 5,500.00	\$ 27,500.00	0.04	\$ 220.00	\$ 26,400.00
2010	FLOW METER VAULT - SANITARY EXTENSION PHASE I	1	4	100	\$ 15,000.00	\$ 15,000.00	0.04	\$ 600.00	\$ 14,400.00

Schedule HW-101: Sanitary Manholes

YEAR OF PURCHASE	ITEM	# OF MANHOLES	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
2010	TAP CONNECTION CCMUA INTERCEPTOR - SANITARY EXTENSION PHASE I	1	4	100	\$ 25,000.00	\$ 25,000.00	0.04	\$ 1,000.00	\$ 24,000.00
2010	SANITARY MANHOLE OUTSIDE DROP NO. 2 - SANITARY EXTENSION PHASE I	1	4	100	\$ 6,500.00	\$ 6,500.00	0.04	\$ 260.00	\$ 6,240.00
2011	TANNER	7	3	100	\$ 3,500.00	\$ 24,500.00	0.03	\$ 105.00	\$ 23,765.00
2011	WOODLAND	1	3	100	\$ 7,000.00	\$ 7,000.00	0.03	\$ 210.00	\$ 6,790.00
2010	KINGS COURT- DROP MANHOLE	1	4	100	\$ 12,000.00	\$ 12,000.00	0.04	\$ 480.00	\$ 11,520.00
2010	KINGS COURT	1	4	100	\$ 7,500.00	\$ 7,500.00	0.04	\$ 300.00	\$ 7,200.00
2010		5	4	100	\$ 5,000.00	\$ 25,000.00	0.04	\$ 200.00	\$ 24,000.00
2009		5	5	100	\$ 5,000.00	\$ 25,000.00	0.05	\$ 250.00	\$ 23,750.00
2008		4	6	100	\$ 5,000.00	\$ 20,000.00	0.06	\$ 300.00	\$ 18,800.00
2007	RHOADES	1	7	100	\$ 4,000.00	\$ 4,000.00	0.07	\$ 280.00	\$ 3,720.00
2007	WESTMINSTER	4	7	100	\$ 3,500.00	\$ 14,000.00	0.07	\$ 245.00	\$ 13,020.00
2006		2	8	100	\$ 5,000.00	\$ 10,000.00	0.08	\$ 400.00	\$ 9,200.00
2005		2	9	100	\$ 5,000.00	\$ 10,000.00	0.09	\$ 450.00	\$ 9,100.00
2004		4	10	100	\$ -	\$ -	0.10	\$ -	\$ -
2003		1	11	100	\$ 5,000.00	\$ 5,000.00	0.11	\$ 550.00	\$ 4,450.00
2002		3	12	100	\$ 5,000.00	\$ 15,000.00	0.12	\$ 600.00	\$ 13,200.00
2001			13	100	\$ -	\$ -	0.13	\$ -	\$ -
2000		2	14	100	\$ 4,950.00	\$ 9,900.00	0.14	\$ 693.00	\$ 8,514.00
1999		4	15	100	\$ 5,390.00	\$ 21,560.00	0.15	\$ 808.50	\$ 18,326.00
1998		1	16	100	\$ 5,225.00	\$ 5,225.00	0.16	\$ 836.00	\$ 4,389.00
1997		6	17	100	\$ 4,950.00	\$ 29,700.00	0.17	\$ 841.50	\$ 24,651.00
1996		2	18	100	\$ 4,785.00	\$ 9,570.00	0.18	\$ 861.30	\$ 7,847.40
1995			19	100	\$ -	\$ -	0.19	\$ -	\$ -
1994		1	20	100	\$ -	\$ -	0.20	\$ -	\$ -
1993		6	21	100	\$ 4,400.00	\$ 26,400.00	0.21	\$ 924.00	\$ 20,856.00
1992		1	22	100	\$ 4,350.50	\$ 4,350.50	0.22	\$ 957.11	\$ 3,393.39
1991		6	23	100	\$ 4,290.00	\$ 25,740.00	0.23	\$ 986.70	\$ 19,819.80
1990		6	24	100	\$ 4,108.50	\$ 24,651.00	0.24	\$ 986.04	\$ 18,734.76
1989		0	25	100	\$ -	\$ -	0.25	\$ -	\$ -
1988		0	26	100	\$ -	\$ -	0.26	\$ -	\$ -
1987		5	27	100	\$ 4,070.00	\$ 20,350.00	0.27	\$ 1,098.90	\$ 14,855.50
1986		1	28	100	\$ 4,070.00	\$ 4,070.00	0.28	\$ 1,139.60	\$ 2,930.40
1985		5	29	100	\$ 4,070.00	\$ 20,350.00	0.29	\$ 1,180.30	\$ 14,448.50
1984			30	100	\$ -	\$ -	0.30	\$ -	\$ -
1983			31	100	\$ -	\$ -	0.31	\$ -	\$ -
1982			32	100	\$ -	\$ -	0.32	\$ -	\$ -
1981		5	33	100	\$ 3,300.00	\$ 16,500.00	0.33	\$ 1,089.00	\$ 11,055.00
1980			34	100	\$ -	\$ -	0.34	\$ -	\$ -
1979		20	35	100	\$ 3,300.00	\$ 66,000.00	0.35	\$ 1,155.00	\$ 42,900.00
1978			36	100	\$ -	\$ -	0.36	\$ -	\$ -
1977			37	100	\$ -	\$ -	0.37	\$ -	\$ -
1976			38	100	\$ -	\$ -	0.38	\$ -	\$ -
1975		20	39	100	\$ 3,190.00	\$ 63,800.00	0.39	\$ 1,244.10	\$ 38,918.00
1974			40	100	\$ -	\$ -	0.40	\$ -	\$ -

Schedule HJW-101: Sanitary Manholes

YEAR OF PURCHASE	ITEM	# OF MANHOLES	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
1973			41	100	\$ -	\$ -	0.41	\$ -	\$ -
1972		20	42	100	\$ 2,640.00	\$ 52,800.00	0.42	\$ 1,108.80	\$ 30,624.00
1971			43	100	\$ -	\$ -	0.43	\$ -	\$ -
1970			44	100	\$ -	\$ -	0.44	\$ -	\$ -
1969		40	45	100	\$ 2,475.00	\$ 99,000.00	0.45	\$ 1,113.75	\$ 54,450.00
1968			46	100	\$ -	\$ -	0.46	\$ -	\$ -
1967			47	100	\$ -	\$ -	0.47	\$ -	\$ -
1966		40	48	100	\$ 2,035.00	\$ 81,400.00	0.48	\$ 976.80	\$ 42,328.00
1965			49	100	\$ -	\$ -	0.49	\$ -	\$ -
1964			50	100	\$ -	\$ -	0.50	\$ -	\$ -
1963		10	51	100	\$ 1,650.00	\$ 16,500.00	0.51	\$ 841.50	\$ 8,085.00
1962			52	100	\$ -	\$ -	0.52	\$ -	\$ -
1961		40	53	100	\$ -	\$ -	0.53	\$ -	\$ -
1960			54	100	\$ -	\$ -	0.54	\$ -	\$ -
1959		10	55	100	\$ 748.00	\$ 7,480.00	0.55	\$ 411.40	\$ 3,366.00
1958			56	100	\$ -	\$ -	0.56	\$ -	\$ -
1957			57	100	\$ -	\$ -	0.57	\$ -	\$ -
1956		80	58	100	\$ -	\$ -	0.58	\$ -	\$ -
1955			59	100	\$ -	\$ -	0.59	\$ -	\$ -
1954			60	100	\$ -	\$ -	0.60	\$ -	\$ -
1953		10	61	100	\$ 566.50	\$ 5,665.00	0.61	\$ 345.57	\$ 2,209.35
1952			62	100	\$ -	\$ -	0.62	\$ -	\$ -
1951			63	100	\$ -	\$ -	0.63	\$ -	\$ -
1950		10	64	100	\$ 440.00	\$ 4,400.00	0.64	\$ 281.60	\$ 1,584.00
1949			65	100	\$ -	\$ -	0.65	\$ -	\$ -
1948		2	66	100	\$ 440.00	\$ 880.00	0.66	\$ 290.40	\$ 299.20
1947			67	100	\$ -	\$ -	0.67	\$ -	\$ -
1946		40	68	100	\$ 440.00	\$ 17,600.00	0.68	\$ 299.20	\$ 5,632.00
1945			69	100	\$ -	\$ -	0.69	\$ -	\$ -
1944			70	100	\$ -	\$ -	0.70	\$ -	\$ -
1943		3	71	100	\$ 319.00	\$ 957.00	0.71	\$ 226.49	\$ 277.53
1942			72	100	\$ -	\$ -	0.72	\$ -	\$ -
1941			73	100	\$ -	\$ -	0.73	\$ -	\$ -
1940		31	74	100	\$ 198.00	\$ 6,138.00	0.74	\$ 146.52	\$ 1,595.88
1939		30	75	100	\$ 198.00	\$ 5,940.00	0.75	\$ 148.50	\$ 1,485.00
1938			76	100	\$ -	\$ -	0.76	\$ -	\$ -
1937		10	77	100	\$ 198.00	\$ 1,980.00	0.77	\$ 152.46	\$ 455.40
1936			78	100	\$ -	\$ -	0.78	\$ -	\$ -
1935			79	100	\$ -	\$ -	0.79	\$ -	\$ -
1934		10	80	100	\$ 181.50	\$ 1,815.00	0.80	\$ 145.20	\$ 363.00
1933			81	100	\$ -	\$ -	0.81	\$ -	\$ -
1932		10	82	100	\$ 181.50	\$ 1,815.00	0.82	\$ 148.83	\$ 326.70
1931			83	100	\$ -	\$ -	0.83	\$ -	\$ -
1930		30	84	100	\$ 181.50	\$ 5,445.00	0.84	\$ 152.46	\$ 871.20
1929			85	100	\$ -	\$ -	0.85	\$ -	\$ -
1928			86	100	\$ -	\$ -	0.86	\$ -	\$ -
1927			87	100	\$ -	\$ -	0.87	\$ -	\$ -
1926		30	88	100	\$ 176.00	\$ 5,280.00	0.88	\$ 154.88	\$ 633.60

Schedule HJW-101: Sanitary Manholes										
YEAR OF PURCHASE	ITEM	# OF MANHOLES	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company	OC/LD
1925			89	100	\$ -	\$ -	0.89	\$ -		\$ -
1924		20	90	100	\$ 187.00	\$ 3,740.00	0.90	\$ 168.30		\$ 374.00
1923			91	100	\$ -	\$ -	0.91	\$ -		\$ -
1922		10	92	100	\$ 187.00	\$ 1,870.00	0.92	\$ 172.04		\$ 149.60
1921			93	100	\$ -	\$ -	0.93	\$ -		\$ -
1920		10	94	100	\$ 214.50	\$ 2,145.00	0.94	\$ 201.63		\$ 128.70
1919			95	100	\$ -	\$ -	0.95	\$ -		\$ -
1918			96	100	\$ -	\$ -	0.96	\$ -		\$ -
1917			97	100	\$ -	\$ -	0.97	\$ -		\$ -
1916		33	98	100	\$ 165.00	\$ 5,445.00	0.98	\$ 161.70		\$ 108.90
1915			99	100	\$ -	\$ -	0.99	\$ -		\$ -
1914			100	100	\$ -	\$ -	1.00	\$ -		\$ -
1913			101	100	\$ -	\$ -	1.00	\$ -		\$ -
1912			102	100	\$ -	\$ -	1.00	\$ -		\$ -
1911			103	100	\$ -	\$ -	1.00	\$ -		\$ -
1910		103	104	100	\$ 77.00	\$ 7,931.00	1.00	\$ 77.00		\$ -
1909			105	100	\$ -	\$ -	1.00	\$ -		\$ -
1908			106	100	\$ -	\$ -	1.00	\$ -		\$ -
1907			107	100	\$ -	\$ -	1.00	\$ -		\$ -
1906			108	100	\$ -	\$ -	1.00	\$ -		\$ -
1905			109	100	\$ -	\$ -	1.00	\$ -		\$ -
1904			110	100	\$ -	\$ -	1.00	\$ -		\$ -
1903			111	100	\$ -	\$ -	1.00	\$ -		\$ -
1902			112	100	\$ -	\$ -	1.00	\$ -		\$ -
1901			113	100	\$ -	\$ -	1.00	\$ -		\$ -
		820				\$ 1,408,607.50		\$ 293,914.69		\$ 1,114,692.81

Schedule HJW-101: Sanitary Manholes						
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD	
2014	NEW SANITARY MANHOLES, 0-10' DEEP - GROVE STREET	321	2.01%	\$ -	\$ 43,200.00	
2014	RECONSTRUCT EXISTING 18' 20' DEEP - GROVE STREET	321	2.01%	\$ -	\$ 21,600.00	
2014	NEW WITH 2 INTERIOR DROPS 16-20' DEEP - GROVE STREET	321	2.01%	\$ -	\$ 93,600.00	
2014	NEW 5' DIA, 16-20' DEEP - GROVE STREET	321	2.01%	\$ -	\$ 21,600.00	
2014	SANITARY VAULT - GROVE STREET	321	2.01%	\$ -	\$ 40,000.00	
2014	NEW 4' DIA, 0-10' DEEP GROVE STREET	321	2.01%	\$ -	\$ 4,000.00	
2014	RECONSTRUCT EXISTING, 0-10 DEEP - GROVE STREET	321	2.01%	\$ -	\$ 16,750.00	
2014	INSTALL FLOW THRU CHANNEL IN MANHOLE - GROVE STREET	321	2.01%	\$ -	\$ 5,180.00	
2014	NEW SANITARY MANHOLES, 2014 UTILITY PROGRAM	321	2.01%	\$ -	\$ 45,000.00	
2014	RECONNECT NEW PIPE TO EXISTING MANHOLE • 2014 UTILITY PROGRAM	321	2.01%	\$ -	\$ 1,185.00	
2013	CJ-10' DEEP	321	2.01%	\$ 1,085.40	\$ 52,914.60	
2012	INTERIOR DROP, 19-22'DEEP, SANITARY EXTENSION, PHASE III	321	2.01%	\$ 1,326.60	\$ 31,673.40	
2012	SANITARY MANHOLE 0-10', SANITARY EXTENSION PHASE III	321	2.01%	\$ 1,286.40	\$ 30,713.60	
2012	MANHOLE, 16-19'DEEP, SANITARY EXTENSION, PHASE III	321	2.01%	\$ 361.80	\$ 8,638.20	
2012	MANHOLE 19-22'DEEP, SANITARY EXTENSION, PHASE III	321	2.01%	\$ 804.00	\$ 19,196.00	
2012	SANITARY MANHOLE, 0-10', 5' DIA., SANITARY EXTENSION PHASE II	321	2.01%	\$ 241.20	\$ 5,758.80	
2012	SANITARY MANHOLE, 0-10', SANITARY EXTENSION PHASE II	321	2.01%	\$ 160.80	\$ 3,839.20	
2012	SANITARY MANHOLE, 13-16', SANITARY EXTENSION PHASE II	321	2.01%	\$ 361.80	\$ 8,638.20	
2012	SANITARY MANHOLE, 16-19', SANITARY EXTENSION PHASE II	321	2.01%	\$ 402.00	\$ 9,598.00	
2011	RECONNECTION OF NEW PIPE TO EXISTING MANHOLE - STATION AVENUE	321	2.01%	\$ 126.63	\$ 1,973.37	
2010	SANITARY MANHOLES - SANITARY EXTENSION PHASE I	321	2.01%	\$ 2,211.00	\$ 25,289.00	
2010	FLOW METER VAULT - SANITARY EXTENSION PHASE I	321	2.01%	\$ 1,206.00	\$ 13,794.00	

Schedule HJW-101: Sanitary Manholes

YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD
2010	TAP CONNECTION CCMUA INTERCEPTOR - SANITARY EXTENSION PHASE I	321	2.01%	\$ 2,010.00	\$ 22,990.00
2010	SANITARY MANHOLE OUTSIDE DROP NO. 2 - SANITARY EXTENSION PHASE I	321	2.01%	\$ 522.60	\$ 5,977.40
2011	TANNER	321	2.01%	\$ 1,477.35	\$ 23,022.65
2011	WOODLAND	321	2.01%	\$ 422.10	\$ 6,577.90
2010	KINGS COURT- DROP MANHOLE	321	2.01%	\$ 964.80	\$ 11,035.20
2010	KINGS COURT	321	2.01%	\$ 603.00	\$ 6,897.00
2010		321	2.01%	\$ 2,010.00	\$ 22,990.00
2009		321	2.01%	\$ 2,512.50	\$ 22,487.50
2008		321	2.01%	\$ 2,412.00	\$ 17,588.00
2007	RHOADES	321	2.01%	\$ 562.80	\$ 3,437.20
2007	WESTMINSTER	321	2.01%	\$ 1,969.80	\$ 12,030.20
2006		321	2.01%	\$ 1,608.00	\$ 8,392.00
2005		321	2.01%	\$ 1,809.00	\$ 8,191.00
2004		321	2.01%	\$ -	\$ -
2003		321	2.01%	\$ 1,105.50	\$ 3,894.50
2002		321	2.01%	\$ 3,618.00	\$ 11,382.00
2001		321	2.01%	\$ -	\$ -
2000		321	2.01%	\$ 2,785.86	\$ 7,114.14
1999		321	2.01%	\$ 6,500.34	\$ 15,059.66
1998		321	2.01%	\$ 1,680.36	\$ 3,544.64
1997		321	2.01%	\$ 10,148.49	\$ 19,551.51
1996		321	2.01%	\$ 3,462.43	\$ 6,107.57
1995		321	2.01%	\$ -	\$ -
1994		321	2.01%	\$ -	\$ -
1993		321	2.01%	\$ 11,143.44	\$ 15,256.56
1992		321	2.01%	\$ 1,923.79	\$ 2,426.71
1991		321	2.01%	\$ 11,899.60	\$ 13,840.40
1990		321	2.01%	\$ 11,891.64	\$ 12,759.36
1989		321	2.01%	\$ -	\$ -
1988		321	2.01%	\$ -	\$ -
1987		321	2.01%	\$ 11,043.95	\$ 9,306.06
1986		321	2.01%	\$ 2,290.60	\$ 1,779.40
1985		321	2.01%	\$ 11,862.02	\$ 8,487.99
1984		321	2.01%	\$ -	\$ -
1983		321	2.01%	\$ -	\$ -
1982		321	2.01%	\$ -	\$ -
1981		321	2.01%	\$ 10,944.45	\$ 5,555.55
1980		321	2.01%	\$ -	\$ -
1979		321	2.01%	\$ 46,431.00	\$ 19,569.00
1978		321	2.01%	\$ -	\$ -
1977		321	2.01%	\$ -	\$ -
1976		321	2.01%	\$ -	\$ -
1975		321	2.01%	\$ 50,012.82	\$ 13,787.18
1974		321	2.01%	\$ -	\$ -

Schedule HJW-101: Sanitary Manholes

YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD
1973		321	2.01%	\$ -	\$ -
1972		321	2.01%	\$ 44,573.76	\$ 8,226.24
1971		321	2.01%	\$ -	\$ -
1970		321	2.01%	\$ -	\$ -
1969		321	2.01%	\$ 89,545.50	\$ 9,454.50
1968		321	2.01%	\$ -	\$ -
1967		321	2.01%	\$ -	\$ -
1966		321	2.01%	\$ 78,534.72	\$ 2,865.28
1965		321	2.01%	\$ -	\$ -
1964		321	2.01%	\$ -	\$ -
1963		321	2.01%	\$ 16,500.00	\$ -
1962		321	2.01%	\$ -	\$ -
1961		321	2.01%	\$ -	\$ -
1960		321	2.01%	\$ -	\$ -
1959		321	2.01%	\$ 7,480.00	\$ -
1958		321	2.01%	\$ -	\$ -
1957		321	2.01%	\$ -	\$ -
1956		321	2.01%	\$ -	\$ -
1955		321	2.01%	\$ -	\$ -
1954		321	2.01%	\$ -	\$ -
1953		321	2.01%	\$ 5,665.00	\$ -
1952		321	2.01%	\$ -	\$ -
1951		321	2.01%	\$ -	\$ -
1950		321	2.01%	\$ 4,400.00	\$ -
1949		321	2.01%	\$ -	\$ -
1948		321	2.01%	\$ 880.00	\$ -
1947		321	2.01%	\$ -	\$ -
1946		321	2.01%	\$ 17,600.00	\$ -
1945		321	2.01%	\$ -	\$ -
1944		321	2.01%	\$ -	\$ -
1943		321	2.01%	\$ 957.00	\$ -
1942		321	2.01%	\$ -	\$ -
1941		321	2.01%	\$ -	\$ -
1940		321	2.01%	\$ 6,138.00	\$ -
1939		321	2.01%	\$ 5,940.00	\$ -
1938		321	2.01%	\$ -	\$ -
1937		321	2.01%	\$ 1,980.00	\$ -
1936		321	2.01%	\$ -	\$ -
1935		321	2.01%	\$ -	\$ -
1934		321	2.01%	\$ 1,815.00	\$ -
1933		321	2.01%	\$ -	\$ -
1932		321	2.01%	\$ 1,815.00	\$ -
1931		321	2.01%	\$ -	\$ -
1930		321	2.01%	\$ 5,445.00	\$ -
1929		321	2.01%	\$ -	\$ -
1928		321	2.01%	\$ -	\$ -
1927		321	2.01%	\$ -	\$ -
1926		321	2.01%	\$ 5,280.00	\$ -

Schedule HJW-101: Sanitary Manholes						
YEAR OF PURCHASE	ITEM	Account	NJWC Rate	Accumulated Depreciation	Rate Counsel OCLD	
1925		321	2.01%	\$ -	\$ -	\$ -
1924		321	2.01%	\$ 3,740.00	\$ -	\$ -
1923		321	2.01%	\$ -	\$ -	\$ -
1922		321	2.01%	\$ 1,870.00	\$ -	\$ -
1921		321	2.01%	\$ -	\$ -	\$ -
1920		321	2.01%	\$ 2,145.00	\$ -	\$ -
1919		321	2.01%	\$ -	\$ -	\$ -
1918		321	2.01%	\$ -	\$ -	\$ -
1917		321	2.01%	\$ -	\$ -	\$ -
1916		321	2.01%	\$ 5,445.00	\$ -	\$ -
1915		321	2.01%	\$ -	\$ -	\$ -
1914		321	2.01%	\$ -	\$ -	\$ -
1913		321	2.01%	\$ -	\$ -	\$ -
1912		321	2.01%	\$ -	\$ -	\$ -
1911		321	2.01%	\$ -	\$ -	\$ -
1910		321	2.01%	\$ 7,931.00	\$ -	\$ -
1909		321	2.01%	\$ -	\$ -	\$ -
1908		321	2.01%	\$ -	\$ -	\$ -
1907		321	2.01%	\$ -	\$ -	\$ -
1906		321	2.01%	\$ -	\$ -	\$ -
1905		321	2.01%	\$ -	\$ -	\$ -
1904		321	2.01%	\$ -	\$ -	\$ -
1903		321	2.01%	\$ -	\$ -	\$ -
1902		321	2.01%	\$ -	\$ -	\$ -
1901		321	2.01%	\$ 542,881.84	\$ -	\$ 865,725.66

Schedule HJW-10J: Sanitary Force Main

YEAR OF PURCHASE	ITEM	LINER FEET OF PIPE	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
2014	SANITARY 8' FORCE MAIN - GROVE STREET PROJECT	70	0	100	\$ 168.00	\$ 11,760.00	0	\$ -	\$ 11,760.00
2013			1	100	\$ -	\$ -	0.01	\$ -	\$ -
2012			2	100	\$ -	\$ -	0.02	\$ -	\$ -
2011			3	100	\$ -	\$ -	0.03	\$ -	\$ -
2010			4	100	\$ -	\$ -	0.04	\$ -	\$ -
2009			5	100	\$ -	\$ -	0.05	\$ -	\$ -
2008			6	100	\$ -	\$ -	0.06	\$ -	\$ -
2007			7	100	\$ -	\$ -	0.07	\$ -	\$ -
2006			8	100	\$ -	\$ -	0.08	\$ -	\$ -
2005			9	100	\$ -	\$ -	0.09	\$ -	\$ -
2004			10	100	\$ -	\$ -	0.10	\$ -	\$ -
2003			11	100	\$ -	\$ -	0.11	\$ -	\$ -
2002			12	100	\$ -	\$ -	0.12	\$ -	\$ -
2001			13	100	\$ -	\$ -	0.13	\$ -	\$ -
2000			14	100	\$ -	\$ -	0.14	\$ -	\$ -
1999			15	100	\$ -	\$ -	0.15	\$ -	\$ -
1998			16	100	\$ -	\$ -	0.16	\$ -	\$ -
1997			17	100	\$ -	\$ -	0.17	\$ -	\$ -
1996			18	100	\$ -	\$ -	0.18	\$ -	\$ -
1995			19	100	\$ -	\$ -	0.19	\$ -	\$ -
1994			20	100	\$ -	\$ -	0.20	\$ -	\$ -
1993			21	100	\$ -	\$ -	0.21	\$ -	\$ -
1992			22	100	\$ -	\$ -	0.22	\$ -	\$ -
1991			23	100	\$ -	\$ -	0.23	\$ -	\$ -
1990			24	100	\$ -	\$ -	0.24	\$ -	\$ -
1989			25	100	\$ -	\$ -	0.25	\$ -	\$ -
1988			26	100	\$ -	\$ -	0.26	\$ -	\$ -
1987			27	100	\$ -	\$ -	0.27	\$ -	\$ -
1986			28	100	\$ -	\$ -	0.28	\$ -	\$ -
1985	8" PVC	2340	29	100	\$ 171.60	\$ 401,544.00	0.29	\$ 49.76	\$ 285,096.24
1984			30	100	\$ -	\$ -	0.30	\$ -	\$ -
1983			31	100	\$ -	\$ -	0.31	\$ -	\$ -

Schedule HJW-10J: Sanitary Force Main

YEAR OF PURCHASE	ITEM	LINER FEET OF PIPE	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
1982			32	100	\$ -	\$ -	0.32	\$ -	\$ -
1981			33	100	\$ -	\$ -	0.33	\$ -	\$ -
1980			34	100	\$ -	\$ -	0.34	\$ -	\$ -
1979			35	100	\$ -	\$ -	0.35	\$ -	\$ -
1978			36	100	\$ -	\$ -	0.36	\$ -	\$ -
1977			37	100	\$ -	\$ -	0.37	\$ -	\$ -
1976			38	100	\$ -	\$ -	0.38	\$ -	\$ -
1975			39	100	\$ -	\$ -	0.39	\$ -	\$ -
1974			40	100	\$ -	\$ -	0.40	\$ -	\$ -
1973			41	100	\$ -	\$ -	0.41	\$ -	\$ -
1972			42	100	\$ -	\$ -	0.42	\$ -	\$ -
1971			43	100	\$ -	\$ -	0.43	\$ -	\$ -
1970			44	100	\$ -	\$ -	0.44	\$ -	\$ -
1969			45	100	\$ -	\$ -	0.45	\$ -	\$ -
1968			46	100	\$ -	\$ -	0.46	\$ -	\$ -
1967			47	100	\$ -	\$ -	0.47	\$ -	\$ -
1966			48	100	\$ -	\$ -	0.48	\$ -	\$ -
1965			49	100	\$ -	\$ -	0.49	\$ -	\$ -
1964			50	100	\$ -	\$ -	0.50	\$ -	\$ -
1963			51	100	\$ -	\$ -	0.51	\$ -	\$ -
1962			52	100	\$ -	\$ -	0.52	\$ -	\$ -
1961			53	100	\$ -	\$ -	0.53	\$ -	\$ -
1960	6"	800	54	100	\$ 23.40	\$ 18,720.00	0.54	\$ 12.64	\$ 8,611.20
1959			55	100	\$ -	\$ -	0.55	\$ -	\$ -
1958			56	100	\$ -	\$ -	0.56	\$ -	\$ -
1957			57	100	\$ -	\$ -	0.57	\$ -	\$ -
1956			58	100	\$ -	\$ -	0.58	\$ -	\$ -
1955	6"	1800	59	100	\$ 18.58	\$ 33,436.80	0.59	\$ 10.96	\$ 13,709.09
1955	4"	220	59	100	\$ 17.54	\$ 3,859.68	0.59	\$ 10.35	\$ 1,582.47
1955			59	100	\$ -	\$ -	0.59	\$ -	\$ -
1954			60	100	\$ -	\$ -	0.60	\$ -	\$ -
1953			61	100	\$ -	\$ -	0.61	\$ -	\$ -
1952			62	100	\$ -	\$ -	0.62	\$ -	\$ -

Schedule HJW-10J: Sanitary Force Main

YEAR OF PURCHASE	ITEM	LINER FEET OF PIPE	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
1951			63	100	\$ -	\$ -	0.63	\$ -	\$ -
1950	4"	500	64	100	\$ 14.40	\$ 7,200.00	0.64	\$ 9.22	\$ 2,592.00
1950	6"	500	64	100	\$ 14.40	\$ 7,200.00	0.64	\$ 9.22	\$ 2,592.00
1949			65	100	\$ -	\$ -	0.65	\$ -	\$ -
1948			66	100	\$ -	\$ -	0.66	\$ -	\$ -
1947			67	100	\$ -	\$ -	0.67	\$ -	\$ -
1946			68	100	\$ -	\$ -	0.68	\$ -	\$ -
1945			69	100	\$ -	\$ -	0.69	\$ -	\$ -
1944			70	100	\$ -	\$ -	0.70	\$ -	\$ -
1943			71	100	\$ -	\$ -	0.71	\$ -	\$ -
1942			72	100	\$ -	\$ -	0.72	\$ -	\$ -
1941			73	100	\$ -	\$ -	0.73	\$ -	\$ -
1940			74	100	\$ -	\$ -	0.74	\$ -	\$ -
1939			75	100	\$ -	\$ -	0.75	\$ -	\$ -
1938			76	100	\$ -	\$ -	0.76	\$ -	\$ -
1937			77	100	\$ -	\$ -	0.77	\$ -	\$ -
1936			78	100	\$ -	\$ -	0.78	\$ -	\$ -
1935			79	100	\$ -	\$ -	0.79	\$ -	\$ -
1934			80	100	\$ -	\$ -	0.80	\$ -	\$ -
1935			79	100	\$ -	\$ -	0.79	\$ -	\$ -
1935			79	100	\$ -	\$ -	0.79	\$ -	\$ -
1935			79	100	\$ -	\$ -	0.79	\$ -	\$ -
1935			79	100	\$ -	\$ -	0.79	\$ -	\$ -
1933			81	100	\$ -	\$ -	0.81	\$ -	\$ -
1932	8"	1010	82	100	\$ 7.20	\$ 7,272.00	0.82	\$ 5.90	\$ 1,308.96
1931	6"	250	83	100	\$ 7.20	\$ 1,800.00	0.83	\$ 5.98	\$ 306.00
1930	4"	3070	84	100	\$ 7.20	\$ 22,104.00	0.84	\$ 6.05	\$ 3,536.64
1929			85	100	\$ -	\$ -	0.85	\$ -	\$ -
1928			86	100	\$ -	\$ -	0.86	\$ -	\$ -
1927			87	100	\$ -	\$ -	0.87	\$ -	\$ -
1926			88	100	\$ -	\$ -	0.88	\$ -	\$ -
1925			89	100	\$ -	\$ -	0.89	\$ -	\$ -
1925			89	100	\$ -	\$ -	0.89	\$ -	\$ -

Schedule HJW-10J: Sanitary Force Main

YEAR OF PURCHASE	ITEM	LINER FEET OF PIPE	AGE (YEARS)	LIFE	ORIGINAL UNIT COST	ORIGINAL COST	DEPRECIATION FACTOR	DEPRECIATION COST/UNIT	Company OCLD
1925			89	100	\$ -	\$ -	0.89	\$ -	\$ -
1925			89	100	\$ -	\$ -	0.89	\$ -	\$ -
1924			90	100	\$ -	\$ -	0.90	\$ -	\$ -
1923			91	100	\$ -	\$ -	0.91	\$ -	\$ -
1922			92	100	\$ -	\$ -	0.92	\$ -	\$ -
1921			93	100	\$ -	\$ -	0.93	\$ -	\$ -
1920			94	100	\$ -	\$ -	0.94	\$ -	\$ -
1919			95	100	\$ -	\$ -	0.95	\$ -	\$ -
1918			96	100	\$ -	\$ -	0.96	\$ -	\$ -
1917			97	100	\$ -	\$ -	0.97	\$ -	\$ -
1916			98	100	\$ -	\$ -	0.98	\$ -	\$ -
1915			99	100	\$ -	\$ -	0.99	\$ -	\$ -
1914			100	100	\$ -	\$ -	1.00	\$ -	\$ -
1913			101	100	\$ -	\$ -	1.01	\$ -	\$ -
1912			102	100	\$ -	\$ -	1.00	\$ -	\$ -
1911			103	100	\$ -	\$ -	1.00	\$ -	\$ -
1910			104	100	\$ -	\$ -	1.00	\$ -	\$ -
1909			105	100	\$ -	\$ -	1.00	\$ -	\$ -
1908			106	100	\$ -	\$ -	1.00	\$ -	\$ -
1907			107	100	\$ -	\$ -	1.00	\$ -	\$ -
1906			108	100	\$ -	\$ -	1.00	\$ -	\$ -
1905			109	100	\$ -	\$ -	1.00	\$ -	\$ -
1904			110	100	\$ -	\$ -	1.00	\$ -	\$ -
1903			111	100	\$ -	\$ -	1.00	\$ -	\$ -
1902			112	100	\$ -	\$ -	1.00	\$ -	\$ -
1901			113	100	\$ -	\$ -	1.00	\$ -	\$ -
1900			114	100	\$ -	\$ -	1.00	\$ -	\$ -
1899			115	100	\$ -	\$ -	1.00	\$ -	\$ -
		10560				\$514,896.48		\$ 183,801.88	\$ 331,094.60

Schedule HJW-10J: Sanitary Force Main						
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD	
2014	SANITARY 8' FORCE MAIN - GROVE STREET PROJECT	323	2.28%	\$ -	\$ 11,760.00	
2013		323	2.28%	\$ -	\$ -	
2012		323	2.28%	\$ -	\$ -	
2011		323	2.28%	\$ -	\$ -	
2010		323	2.28%	\$ -	\$ -	
2009		323	2.28%	\$ -	\$ -	
2008		323	2.28%	\$ -	\$ -	
2007		323	2.28%	\$ -	\$ -	
2006		323	2.28%	\$ -	\$ -	
2005		323	2.28%	\$ -	\$ -	
2004		323	2.28%	\$ -	\$ -	
2003		323	2.28%	\$ -	\$ -	
2002		323	2.28%	\$ -	\$ -	
2001		323	2.28%	\$ -	\$ -	
2000		323	2.28%	\$ -	\$ -	
1999		323	2.28%	\$ -	\$ -	
1998		323	2.28%	\$ -	\$ -	
1997		323	2.28%	\$ -	\$ -	
1996		323	2.28%	\$ -	\$ -	
1995		323	2.28%	\$ -	\$ -	
1994		323	2.28%	\$ -	\$ -	
1993		323	2.28%	\$ -	\$ -	
1992		323	2.28%	\$ -	\$ -	
1991		323	2.28%	\$ -	\$ -	
1990		323	2.28%	\$ -	\$ -	
1989		323	2.28%	\$ -	\$ -	
1988		323	2.28%	\$ -	\$ -	
1987		323	2.28%	\$ -	\$ -	
1986		323	2.28%	\$ -	\$ -	
1985	8" PVC	323	2.28%	\$ 265,500.89	\$ 136,043.11	
1984		323	2.28%	\$ -	\$ -	
1983		323	2.28%	\$ -	\$ -	

Schedule HJW-10J: Sanitary Force Main						
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD	
1982		323	2.28%	\$ -	\$ -	
1981		323	2.28%	\$ -	\$ -	
1980		323	2.28%	\$ -	\$ -	
1979		323	2.28%	\$ -	\$ -	
1978		323	2.28%	\$ -	\$ -	
1977		323	2.28%	\$ -	\$ -	
1976		323	2.28%	\$ -	\$ -	
1975		323	2.28%	\$ -	\$ -	
1974		323	2.28%	\$ -	\$ -	
1973		323	2.28%	\$ -	\$ -	
1972		323	2.28%	\$ -	\$ -	
1971		323	2.28%	\$ -	\$ -	
1970		323	2.28%	\$ -	\$ -	
1969		323	2.28%	\$ -	\$ -	
1968		323	2.28%	\$ -	\$ -	
1967		323	2.28%	\$ -	\$ -	
1966		323	2.28%	\$ -	\$ -	
1965		323	2.28%	\$ -	\$ -	
1964		323	2.28%	\$ -	\$ -	
1963		323	2.28%	\$ -	\$ -	
1962		323	2.28%	\$ -	\$ -	
1961		323	2.28%	\$ -	\$ -	
1960	6"	323	2.28%	\$ 18,720.00	\$ -	
1959		323	2.28%	\$ -	\$ -	
1958		323	2.28%	\$ -	\$ -	
1957		323	2.28%	\$ -	\$ -	
1956		323	2.28%	\$ -	\$ -	
1955	6"	323	2.28%	\$ 33,436.80	\$ -	
1955	4"	323	2.28%	\$ 3,859.68	\$ -	
1955		323	2.28%	\$ -	\$ -	
1954		323	2.28%	\$ -	\$ -	
1953		323	2.28%	\$ -	\$ -	
1952		323	2.28%	\$ -	\$ -	

Schedule HJW-10J: Sanitary Force Main						
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD	
1951		323	2.28%	\$ -	\$ -	
1950	4"	323	2.28%	\$ 7,200.00	\$ -	
1950	6"	323	2.28%	\$ 7,200.00	\$ -	
1949		323	2.28%	\$ -	\$ -	
1948		323	2.28%	\$ -	\$ -	
1947		323	2.28%	\$ -	\$ -	
1946		323	2.28%	\$ -	\$ -	
1945		323	2.28%	\$ -	\$ -	
1944		323	2.28%	\$ -	\$ -	
1943		323	2.28%	\$ -	\$ -	
1942		323	2.28%	\$ -	\$ -	
1941		323	2.28%	\$ -	\$ -	
1940		323	2.28%	\$ -	\$ -	
1939		323	2.28%	\$ -	\$ -	
1938		323	2.28%	\$ -	\$ -	
1937		323	2.28%	\$ -	\$ -	
1936		323	2.28%	\$ -	\$ -	
1935		323	2.28%	\$ -	\$ -	
1934		323	2.28%	\$ -	\$ -	
1935		323	2.28%	\$ -	\$ -	
1935		323	2.28%	\$ -	\$ -	
1935		323	2.28%	\$ -	\$ -	
1935		323	2.28%	\$ -	\$ -	
1935		323	2.28%	\$ -	\$ -	
1933		323	2.28%	\$ -	\$ -	
1932	8"	323	2.28%	\$ 7,272.00	\$ -	
1931	6"	323	2.28%	\$ 1,800.00	\$ -	
1930	4"	323	2.28%	\$ 22,104.00	\$ -	
1929		323	2.28%	\$ -	\$ -	
1928		323	2.28%	\$ -	\$ -	
1927		323	2.28%	\$ -	\$ -	
1926		323	2.28%	\$ -	\$ -	
1925		323	2.28%	\$ -	\$ -	
1925		323	2.28%	\$ -	\$ -	

Schedule HJW-10J: Sanitary Force Main						
YEAR OF PURCHASE	ITEM	Account	NJAWC Rate	Accumulated Depreciation	Rate Counsel OCLD	
1925		323	2.28%	\$ -	\$ -	
1925		323	2.28%	\$ -	\$ -	
1924		323	2.28%	\$ -	\$ -	
1923		323	2.28%	\$ -	\$ -	
1922		323	2.28%	\$ -	\$ -	
1921		323	2.28%	\$ -	\$ -	
1920		323	2.28%	\$ -	\$ -	
1919		323	2.28%	\$ -	\$ -	
1918		323	2.28%	\$ -	\$ -	
1917		323	2.28%	\$ -	\$ -	
1916		323	2.28%	\$ -	\$ -	
1915		323	2.28%	\$ -	\$ -	
1914		323	2.28%	\$ -	\$ -	
1913		323	2.28%	\$ -	\$ -	
1912		323	2.28%	\$ -	\$ -	
1911		323	2.28%	\$ -	\$ -	
1910		323	2.28%	\$ -	\$ -	
1909		323	2.28%	\$ -	\$ -	
1908		323	2.28%	\$ -	\$ -	
1907		323	2.28%	\$ -	\$ -	
1906		323	2.28%	\$ -	\$ -	
1905		323	2.28%	\$ -	\$ -	
1904		323	2.28%	\$ -	\$ -	
1903		323	2.28%	\$ -	\$ -	
1902		323	2.28%	\$ -	\$ -	
1901		323	2.28%	\$ -	\$ -	
1900		323	2.28%	\$ -	\$ -	
1899		323	2.28%	\$ -	\$ -	
				\$367,093.37	\$147,803.11	

Schedule HJW-11: Privately-Owned Lead Services

UPIS Additions April 2017 through September 2018

Services & Laterals Replaced \$ 16,005,168

Customer-Owned Lead Service Replacements
Balance Deferred to Account 186 \$ 440,000

**Rate Counsel Recommended Amount to be
Excluded from UPIS and Retained in Acct
186 \$ 440,000**

Number of Privately-Owned lead service
lines replaced through March 31, 2018 115

\$ 3,826.09

Average Cost per Privately-owned Service

Potential Number of Privately-owned lead
services - low estimate 8,000

Potential Number of Privately-owned lead
services - high estimate 10,000

Potential Cost of Privately-owned lead service
replacements - low \$ 30,600,000

Potential Cost of Privately-owned lead service
replacements - high \$ 38,300,000