KANE BOROUGH AUTHORITY

WASTEWATER SYSTEM ASSETS

FAIR MARKET VALUE APPRAISAL

AT

JUNE 30, 2019

Prepared by:

GANNETT FLEMING

VALUATION AND RATE CONSULTANTS, LLC

Valley Forge, Pennsylvania

Gannett Fleming

Excellence Delivered ***As Promised***

November 12, 2019

E-Mail to lori@kaneboro.com

Mr. Donald E. Payne
Borough Manager
Kane Borough Authority
112 Bayard Street
Kane, PA 16735

Dear Mr. Payne:

Fair Market Value Appraisal
Under Pennsylvania Act 12 of 2016

In accordance with your request, we have prepared a fair market value appraisal of Kane Borough Authority's wastewater system assets ("Wastewater System") as of June 30, 2019.

Fair market value is defined as "the price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm's length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts."

Based on our analysis, as described in the attached appraisal report, the estimate of the fair market value of the Wastewater System as of June 30, 2019 is $22,885,000 (rounded).

Our appraisal was developed consistent with the Uniform Standards of Professional Appraisal Practices. Our fair market value appraisal of the Wastewater System was based on the Cost, Market and Income Approaches to valuation. We used six methods under the Cost, Market and Income Approaches to valuation: Original Cost Method, Replacement Cost Method, Capitalization of Earnings Method, DCF Method (market multiple discounted cash flow method and the capitalization discounted cash flow method), Market Multiples Method, and the Selected Transactions Method.

The attached narrative appraisal, present our findings and conclusions regarding the fair market value of the Wastewater System's assets of June 30, 2019. The report describes the valuation methodologies employed and the Exhibits that present the valuation results.

Gannett Fleming Valuation and Rate Consultants, LLC

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The results of the analyses and calculations completed for each applicable approach are detailed throughout the report and the Exhibits and are summarized as follows:

Valuation Approach	Indicated Value
Cost Approach	$33,693,500
Income Approach	15,125,204
Market Approach	19,926,962

We thank Kane Borough Authority for this opportunity to provide valuation services in connection with the fair market value appraisal of the Wastewater System's assets.

Respectfully Submitted,

GANNETT FLEMING VALUATION
AND RATE CONSULTANTS, LLC

HAROLD WALKER, III
Manager, Financial Studies

HW: mle

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INTRODUCTION

Introduction and Summary. The following narrative report present our findings and conclusions regarding the fair market value of the wastewater system assets of Kane Borough Authority as of June 30, 2019. The report describes the valuation methodologies employed and the Exhibits that present the valuation results. Based upon the analyses, we believe the fair market value of the wastewater system assets of Kane Borough Authority is $22.9 million. This conclusion is based upon the values suggested by the Cost, Income and Market approaches. During our analysis we found indications of value that ranged from $15.1 million to $33.7 million. However, most of the appropriate indicated values approximated $22.9 million.

Description of the Assignment. Gannett Fleming Valuation and Rate Consultants, LLC was retained by Kane Borough Authority ("Authority") to estimate the fair market value of Kane Borough Authority's wastewater system assets ("Wastewater System") as of June 30, 2019.

Standard and Premise of Value. The fair market value appraisal of the Wastewater System complies with the Uniform Standards of Professional Appraisal Practices, employing the cost, market and income approaches. Fair market value is defined as "the price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm's length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts."[1]

As stated, the standard of value for this engagement is fair market value. The premise of value is going concern. The going concern premise of business value assumes that the business

1 The International Glossary of Business Valuation Standards

will continue running normally using all of its assets to produce income and will continue operating beyond the valuation date.

We valued the Wastewater System's assets as a group under the premise that the assets collectively comprise an ongoing operating business enterprise. Additionally, in accordance with 66 Pa. C.S. Section 1329 the original source of funding for any part of the Wastewater System's assets was not relevant to the determination of the value of said assets.

Intended Use of the Valuation. The intended use of the valuation is to comply with 66 Pa. C.S. Section 1329, Valuation of Acquired Water and Sewer System and conduct a fair market value appraisal of the Wastewater System in compliance with the Uniform Standards of Professional Appraisal Practices, employing the cost, market and income approaches.

Client and Users. The client is Kane Borough Authority. The intended users of the valuation are Kane Borough Authority, Pennsylvania American Water Company, Inc. and the Pennsylvania Public Utility Commission.

Extraordinary Assumptions. There were no extraordinary assumptions required for this appraisal.

Hypothetical Conditions. There were no hypothetical conditions assumed for this appraisal.

Limiting Conditions. We accepted all information and data provided by Kane Borough Authority as it pertains to this assignment "as is" after a limited review. That is, we neither audited nor verified any data, engineering assessment, financial record or operating data provided for this assignment. We assumed all title to all assets included in the appraisal is good and marketable, no hidden defects in the property or soil and no hazardous conditions or materials exist which could affect the assets.

Site Inspection. Wastewater engineers from our affiliated company viewed or observed the Wastewater System's facilities on December 21, 2017, January 31, 2018 and February 15, 2018. We also relied on engineering assessment of the Wastewater System's facilities report, to confirm the condition of the Wastewater System's property and equipment.

Sources of Information. The following sources of information were reviewed during the assignment:

Gannett Fleming Inc.'s report, the Kane Borough Authority "Wastewater System Original Cost of Inventory/Assets" engineering assessment and original cost report dated September 19, 2019;

Gannett Fleming Inc.'s Engineering Assessment related files (PDF and Excel);

Kane Borough Authority provided electronic files (PDF and TIFF);

Wastewater System's Customer data;

Borough of Kane Authority, A Component Unit of the Borough of Kane, Pennsylvania and Borough of Kane Sewer Fund Combined Financial Statements for the Year Ended March 31, 2017, March 31, 2018 and March 31, 2019;

Borough of Kane's Kinzua Road Wastewater Treatment Plant Chapter 94 Report, 2016;

Borough of Kane's Pine Street Wastewater Treatment Plant Chapter 94 Report, 2016;

Borough of Kane's Act 537 Plan;

Wetmore Township's Act 537 Plan;

The "Asset Purchase Agreement Between Borough of Kane Authority, Together with Borough of Kane and Wetmore Township and Pennsylvania-American Water Company" dated November 4, 2019;

Pennsylvania State Data Center for the Center for Rural Pennsylvania, Pennsylvania Population Projections 2010-2040;

Blue Chip Financial Forecasts;

US Census Bureau, various data files;

Value Line Investment Survey; and

S&P Research Insight.

Description of the Borough of Kane. The Borough of Kane ("Borough") is about 1.6 square miles and is located in McKean County in a rural area of northwestern Pennsylvania, 94 miles east by south of the City of Erie. The Borough is surrounded by Wetmore Township.

The Borough has the second smallest land mass of McKean County's 22 townships and boroughs but was the 4th most populous with 3,610 people (2015). The Borough's population has been contracting since peaking in the 1920s. The majority of McKean County's 22 townships' and boroughs' populations have similarly contracted. According to U.S. Census figures, the Borough's population growth grew -9.6% from 2000 to 2010, while population in Pennsylvania grew 3.4% and -5.4% in McKean County.

Description of Wetmore Township. Wetmore Township ("Township") is 76 square miles and is located along the eastern side of the 500,000-acre Allegheny National Forest, the only national forest in Pennsylvania, in McKean County, Pennsylvania. The Township has the 15th largest land mass of McKean County's 22 townships and boroughs and was the eighth most populous with 1,614 people (2015). Nearby communities include Hamilton, Hamlin, Highland, Lafayette, Sergeant Townships in McKean County, and Jones Township in Elk County and Sheffield Township in Warren County.

According to U.S. Census figures, Township population grew -4.1% from 2000 to 2010, while population in Pennsylvania grew 3.4% and -5.4% in McKean County.

Description of the Wastewater System. The Authority owns the Wastewater System and the Borough operates and maintains the Wastewater System under a management agreement. The Authority is a legal entity organized and existing under the laws of the Commonwealth of Pennsylvania, pursuant to the Municipality Authorities Act of 1945, approved May 2, 1945, P. L. 382, as amended, organized by the Borough in 1963. The articles of incorporation of the Authority were amended in 1994 to include by application for joinder the Township.

The Wastewater System is a sewage collection and transmission system and has two wastewater treatment facilities. The Wastewater System provides service in the Borough and portions of the Township. The Wastewater System consists of gravity separate and combined sewers within the Borough, gravity separate sewers and low-pressure sewers in contiguous Township, eight collection system lift stations (West Wind, Pond Street, Jo Jo Road Grinder Pump, Route 321 South, Route 6, Route 66, West Kane and Willow Run) and two wastewater treatment plants ("WWTP"), the Pine Street WWTP and Kinzua Road WWTP. The eight pump stations used in the Wastewater System are all located in the Township. Six pump stations convey sewage to the Pine Street WWTP and two to the Kinzua Road WWTP.

The Wastewater System currently provides service to 2,026 customers and about 2,507 Equivalent Dwelling Units ("EDU"): 1,244 EDUs through the Pine Street WWTP; and 1,263 EDUs through the Kinzua Road WWTP. There are no significant industries within the watershed for either WWTP in the Wastewater System's service area.

The Wastewater System collection system is divided into two major drainage basins: the Hubert Run Drainage Basin serviced by the Kinzua Road WWTP; and the West Run Drainage

Basin serviced by the Pine Street WWTP. The Hubert Run Drainage Basin collection system consists of approximately 52,100 linear feet of vitrified clay pipe, ductile iron pipe, and PVC pipe ranging from 8" to 36" in diameter. The West Run Drainage Basin collection system consists of approximately 65,400 linear feet of vitrified clay pipe, ductile iron pipe, and PVC pipe ranging from 8" to 36" in diameter.

The Kinzua Road WWTP and the Pine Street WWTP use identical treatment methods and both NPDES Permits allow for an average monthly flow of 1.50 MGD. In 2016 Kinzua Road WWTP had an average monthly flow of 0.516 MGD and the Pine Street WWTP had an average monthly flow of 0.449 MGD. The Kinzua Road WWTP employs biological and chemical treatment processes to attain an effluent quality which consistently meets NPDES Permit requirements. The wastewater process facilities at the Kinzua Road WWTP consists of preliminary treatment works, which includes a mechanically cleaned bar screen and a grit removal system, an activated sludge secondary treatment system (four tank sequencing batch reactor activated sludge process), two chlorine contact tanks, sodium bisulfite dechlorination system and an effluent water tank. Treated effluent from the Kinzua Road WWTP is discharged to Hubert Run.

The Pine Street WWTP employs biological and chemical treatment processes to attain an effluent quality which consistently meets NPDES permit requirements. The wastewater process facilities at the Pine Street WWTP consists of preliminary treatment works which includes a mechanically cleaned bar screen and a grit removal system, an activated sludge secondary treatment system (four tank sequencing batch reactor activated sludge process), two chlorine contact tanks, sodium bisulfite dechlorination, system and an effluent water tank. Treated effluent from the Pine Street WWTP is discharged to West Run.

Sludge produced at both WWTPs is dewatered at the Kinzua Road WWTP. In addition, the Borough receives and processes sludge from the Kane Pennsylvania American Water Company plant. Sludge is disposed of at the Casella Landfill in Chautauqua County New York. In 2016 approximately 191.31 wet tons of sludge was removed from the Kinzua Road WWTP.

The Authority is a component unit of the Borough.[2] The Borough accounts for its operation of the Wastewater System as a "Sewer Fund." The Authority and the Borough account for the operations of the Wastewater System as enterprise funds. The Sewer Fund provides for the day-to-day operations of the Wastewater System. The combined Authority's and Sewer Fund's audited financial statements for the year ended March 31, 2019 show (Exhibit 1) the Wastewater System had operating revenues of $1.434 million and was capitalized with $10.809 million of capital: including $4.415 million of long-term debt (including current maturities); and $6.394 million of fund equity. At the same point in time, the Wastewater System reported total assets of $11.935 million, including $8.898 total net utility plant.

The Wastewater System is exempt from Pennsylvania Public Utility Commission ("PUC") regulation as a municipal utility. The Wastewater System's rate requirements are established by the needed funds to run the system. Most municipalities, including Wastewater System, use a Government Accounting Standards Board ("GASB") process of accounting or the PA Department of Community and Economic Development ("DCED") versus Financial Accounting Standards Board ("FASB") method of accounting used by investor owned utilities ("IOU"). Municipalities are not typically concerned with the return on and the return of their investments of their utility systems since they deem they are providing a public service to their taxpayers. Municipalities

2 A governmental component unit is a legally separate organization for which the elected officials of the primary government are financially accountable.

typically expense (i.e., maintenance expense) minor collection, renewals replacement, and customer collection services capital expenditures and they do not typically fully account for the replacement of all capital assets which are all typically capitalized (i.e., construction of capital asset, construction expenditure, etc.) and "booked" at original cost by IOUs. For these reasons, we do not believe Wastewater System's financial statements should be fully relied upon without recognizing their limitations.

As shown on Exhibit 2, the Wastewater System provides service to 2,026 customers, has flows of 395.551 million gallons and serviced approximately 2,507 EDUs. EDUs are estimated to increase by 20 EDUs per year through 2021.

The Wastewater System's business does not require large amounts of working capital. The Wastewater System is not dependent on industrial customers.

Demographics and Growth for the Wastewater System. As shown on Exhibit 3, Table 3.1, according to U.S. Census figures, the U.S. population grew 9.7% from 2000 to 2010, and the population in Pennsylvania grew 3.4%. During this same time period, McKean County's population grew -5.4%, the Borough's and Township's population grew -9.6% and -4.1% respectively (Exhibit 3, Table 3.2). The Borough's and Township's population growth were ranked 2,223 and 1,735, respectively of the 2,572 municipalities in Pennsylvania. We were not able to find any population projections for future time periods for either the Borough or the Township.

The Census Bureau and planning agencies provide population projections for future time periods. Population projections are a primary indicator of expected future growth, and they help determine predictable demand for utility services, housing, roads, business services and facilities. The Center for Rural Pennsylvania publishes population projections for Pennsylvania and its 67

counties for 2010 to 2040. As shown on Exhibit 3, Table 3.3, McKean County's population growth is projected to be about 12% of the growth rate projected for Pennsylvania from 2015 through 2040. The McKean County's project population growth is ranked 45 of the 67 counties in Pennsylvania. We were not able to find any population projections for future time periods for the Borough or Township. Given the facts that Wastewater System's service area comprises 11% of McKean County's population, it is reasonable to conclude the Wastewater System service area's population will grow similarly to McKean County's population growth.

In 2019, the Borough's and Township's total population being served by the Wastewater System was approximately 4,645 people (Exhibit 2).[3] There are 2,477 housing units in the Borough and the Township, and the ratio of people to housing units is 1.88 persons per housing unit. The combined housing unit vacancy is about 20% in the Borough and the Township.

The Wastewater System's service area density is 2.3 people per customer based on an estimated population of 4,645 and 2,026 customers. The Wastewater System's service area density is equal to about 64% of the 3.6 per customer density of water and wastewater systems (see Table 2 in this report). The Borough's and Township's lower than average population growth suggests lower growth for the Wastewater System.

HISTORY AND NATURE OF THE BUSINESS

Economic Outlook. In the valuation of any company, the general economic outlook as of the valuation date is important since it influences how investors perceive alternative investment opportunities at that point in time. As part of our analysis, we considered the forecasts for the U.S. economy that prevailed as of June 30, 2019. In particular, we focused on the forecasts and

3 Including 60% of Township's population and housing units. According to Township's 1993 Act 537 Plan, 60% of Township is served by Wastewater System.

economic commentary presented in Blue Chip Financial Forecasts in the June 1, 2019 edition. Some of these economic forecasts are presented in Table 1.

Economic Indicators

	Latest Qtr	Consensus Forecasts	
	Q1 2019	2Q 2019	3Q 2019
Key Assumptions			
Real GDP	3.2	2.7	2.4
GDP Price Index	0.9	2.2	2.0
Consumer Price Index	0.9	3.0	2.2
Interest Rates			
3-mo. Treasury Bills	2.44	2.4	2.4
10 Year Notes	2.65	2.5	2.5
30 Year Notes	3.01	2.9	3.0
Aaa Corporate Bond Yield	4.01	3.8	3.8
Baa Corporate Bond Yield	4.87	4.7	4.8
State & Local Bonds	3.61	3.6	3.6
Home Mortgage Rate	4.37	4.2	4.3

Table 1

Industry Review. A review of the industry in which the company operates is important in determining value. The trends and stability of the specific economic environment affecting operations need to be reviewed to gain further insight regarding the prospects and risks associated with the industry and each company.

The wastewater utility industry has a Standard Industrial Classification ("SIC") code of 4952 (Sewerage Systems), has sewer utilities, and includes establishments primarily engaged in the collection and disposal of wastes conducted through a sewer system, including such treatment

processes as may be provided. There are currently 2,214 U.S. Businesses with a SIC code of 4952.

The wastewater utility industry is a fragmented industry, although not as fragmented as the water supply industry. According to the U.S. Environmental Protection Agency's ("EPA") most recent survey of publicly-owned wastewater treatment facilities in 2012, there are approximately 15,000 such facilities in the nation, serving approximately 76% of the U.S. population. Eighty percent of domestic wastewater systems are government owned rather than IOUs. Currently, there are no wastewater utility companies that have actively traded stock.

A comparative industry to the wastewater utility industry is the water supply industry. The water supply industry has a SIC code of 4941 (Water Supply), has water utilities, and includes establishments primarily engaged in distributing water for sale for residential, commercial, and industrial uses. Government controlled establishments such as municipal service districts and public utilities dominate the industry. Private companies or IOUs are active in the construction and improvement of water supply facilities and infrastructure. There are currently 11,049 U.S. Businesses with a SIC code of 4941.

The water supply industry is the most fragmented of the major utility industries with more than 53,000 community water systems in the U.S. (82% of which serve less than 3,300 customers). The nation's water systems range in size from large municipally owned systems, such as the New York City water system that serves approximately 9 million people, to small systems, where a few customers share a common well.

An estimated 14% of all water supplies are managed or owned by IOUs. IOUs consist of companies with common stock that is either actively traded or inactively traded, as well as companies that are closely held, or not publicly traded. Currently (June 30, 2019), there are only

about 10 investor owned water utility companies with publicly traded stock in the U.S.

The wastewater utility industry and water utility industry's increased compliance with state and federal water purity levels and large infrastructure replacements are driving consolidation of the wastewater utility and water utility industries. Because many wastewater utility and water utility operations do not have the means to finance the significant capital expenditures needed to comply with these requirements, many have been selling their operations to larger, financially stronger operations.

The larger IOUs have been following an aggressive acquisition program to expand their operations by acquiring smaller wastewater and water systems. Generally, they enter a new market by acquiring one or several wastewater or water utilities. After their initial entry into a new market, the larger investor-owned water utility companies continually seek to expand their market share and services through the acquisition of wastewater and water utility businesses and operations that can be integrated with their existing operations. Such acquisitions may allow a company to expand market share and increase asset utilization by eliminating duplicate management, administrative, and operational functions.

Acquisitions of small, independent utilities can often add earning assets without necessarily incurring the costs associated with the Safe Drinking Water Act ("SDWA") if such acquisitions are contiguous to the potential purchaser.

In summary, the result of increased capital spending, to meet the SDWA requirements[4] and the replacement of the aging infrastructure of many systems, has moved the wastewater and water industries toward consolidation. Moreover, Federal and State regulations and controls concerning water quality are still in the process of being developed and it is not possible to predict the scope or the enforceability of regulations or standards which may be established in the future, or the cost and effect of existing and potential regulations and legislation upon the sewer and water systems. However, as a medium to small sewer system, the Wastewater System faces the cost of compliance with significantly limited financial resources when compared to larger IOU water utilities.

QUANTITATIVE AND QUALITATIVE ANALYSIS

Comparison Review. The comparison review considers the financial and operating statistics for the Wastewater System, and a group of companies ("Comparable Group") that operate in the same basic or similar industry as the Wastewater System. Since no marketplace exists for the common stock of the Wastewater System, an alternative to estimate the value of the Wastewater System is to analyze the price investors are willing to pay for the publicly traded common stock of companies that are similar to the Wastewater System. We list the Comparable Group chosen for study in Table 2.

The Comparable Group were selected based upon: (1) the availability of financial information; (2) a June 30, 2019 market value of common stock, the product of multiplying the

4 The SDWA, or Safe Drinking Water Act, is the principal federal law in the United States intended to ensure safe drinking water for the public. Pursuant to the act, the EPA is required to set standards for drinking water quality and oversee all states, localities, and water suppliers who implement these standards. The CWA, or Clean Water Act, is the primary federal law in the United States governing water pollution. The CWA's objective is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution. sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

closing stock price by the number of common shares outstanding, greater than $75.0 million; (3) inclusion in the Standard and Poor's Research Insight database; (4) were not the subject of a known acquisition at June 30, 2019; and (5) with a Global Industry Classification Standard ("GICS") of 55104010 (i.e., Water Utility). The eight companies ("Comparable Group") that met the criteria for selection are listed in Table 2.

Acquisition Date Size Statistics

	Revenues (Mill. $)	Customers	Population	Customer Density
Kane Borough Authority Wastewater System Assets	$1.434	2,026	4,645	2.3
Comparable Group				
American States Water Co	$436.816	284,272	1,000,000	3.5
American Water Works Co Inc	3,440.000	3,382,000	14,000,000	4.1
Aqua America Inc	838.091	1,005,590	3,000,000	3.0
Artesian Resources -CL A	80.411	90,440	300,000	3.3
California Water Service Gp	698.196	517,500	2,000,000	3.9
Middlesex Water Co	138.077	113,300	400,000	3.5
SJW Corp	397.699	247,267	1,114,200	4.5
York Water Co	48.437	70,263	199,000	2.8
Median	$417.258	265,770	1,057,100	3.6

Table 2

We believe that similar economic, industry and business risks have affected the Comparable Group as those faced by the Wastewater System. However, consideration must be given to the fact that no two companies are exactly alike. Table 2 presents comparative statistics regarding total revenues, customers, population of the area served, and customer density

(population ÷ customers). On average, the Comparable Group are much larger than the Wastewater System. The relative size difference between the group and the Wastewater System suggests that the risk of the Wastewater System is greater than the Comparable Group. We will discuss the difference in risk resulting from size later in this report.

Financial Review. We conducted a financial review that considered the financial and operating statistics for the Wastewater System and the Comparable Group for the three-year period, 2016 to 2018.[5] It is our opinion that the economic, industry and business risks affecting the Comparable Group selected are similar to those faced by the Wastewater System. However, consideration must be given to the fact that no two companies are exactly alike.

The determination of reasonable water rates and sewer rates for the Comparable Group is subject to rate regulation. For the Comparable Group, rate regulation serves as a substitute for competition in the marketplace since utility companies are precluded from exercising complete control over the price to be charged their customers. Under rate regulation, a cost of service formula is used to set the price for service charged to customers. The cost of service formula equates revenues to the sum of annual operating expenses, taxes other than income, depreciation expense, income taxes, and the product of the rate base times a fair rate of return.

It is the responsibility of the utility seeking changes in rates to present sufficient evidence to their regulators in support of their request. Historically, the Wastewater System's rates have not considered a fair rate of return nor taxes. That is, the Wastewater System's rates would have been higher and their financial results would have been healthier if they included a provision for a

5 The financial information for the Wastewater System is reported on a March fiscal year end. For analysis purposes we assumed data for fiscal year end March was representative of the prior calendar year end information since all data for the Comparable Group is reported on a calendar year end basis. For example, data for the year ended 3/31/19 was assumed to be 2018 data.

fair rate of return and taxes. Therefore, the results of the Wastewater System's historical financial performance shown on Exhibits 4 and 6 should be viewed with this knowledge.

Financial Benchmark Analysis. To gain insight into the risk differences between the Wastewater System and the Comparable Group, we reviewed financial ratios and coverages. Unfortunately, there is no single measure that best indicates investment risk from a common stockholder's perspective. However, from a creditor's viewpoint, the best measure of investment risk is debt rating. The debt rating process generally provides a good measure of investment risk for common stockholders because the factors considered in the debt rating process are usually relevant factors that a common stock investor would consider in assessing the risk of an investment.

The types of financial benchmarks applied by credit rating agencies such as Standard and Poor's ("S&P") for rating IOU public utility debt are broader than the traditional measure of financial risk, leverage. Besides reviewing the amounts of leverage employed (i.e., percentage of debt used in the capital structure), S&P also focuses on earnings protection and cash flow adequacy. During the period 2016-2018, the Wastewater System's financial benchmark ratios show (Exhibit 4) higher investment risk than the Comparable Group based on coverage and cash flow.

Risk Analysis. From an operations standpoint, the Wastewater System and the Comparable Group are indistinguishable. Both are required to meet SDWA and CWA requirements and are also required to provide safe and reliable services to their customers.

A basic premise of finance is the tradeoff between risk and return. That is, the higher the perceived risk, the higher the required return. Conversely, the lower the perceived risk, the lower the required return.

As mentioned previously, size is a determinant of risk. Based on size, the Wastewater System's risk is higher than the Comparable Group given Wastewater System's relatively small size. Table 2 details the large size difference between the Wastewater System and the Comparable Group. As shown on Table 2, the Wastewater System is many times smaller than the Comparable Group.

Size is a determinant of risk because the loss of a large customer impacts a small company much more than a large company because a large customer of a small company usually accounts for a larger percentage of the small company's sales. Further, a larger company has much more diversification in customer mix, economic conditions, source of supplies, weather, demographic, and financing than the Wastewater System. Because the larger Comparable Group has a more diverse geographic operation than the Wastewater System, it enables them to sustain earnings fluctuations caused by adverse weather conditions in one portion of its service territory. Further, the larger Comparable Group has a more diverse customer base and is less susceptible to local downturns associated with regional economic conditions than the Wastewater System.

Exhibit 5, Table 5.1, provides an illustration which shows company size has been inversely related to returns and the volatility of their common stock. Specifically, Ibbotson Associates sorted 3,113 publicly traded common stocks based on size of market value (market price multiples by the number of shares) and placed them into four different portfolios (quartiles). The common stock quartile return and the resultant size premium, column B, increased at an increasing rate as you move from a larger stock quartile to a smaller stock quartile. Similarly, the total risk, or standard deviation of annual returns (a measure of risk), also increased with decreasing company size (column C).

The Comparable Group's market value on June 30, 2019 ranged from $342 million to $20,940 million as shown on Table 5.2 of Exhibit 5. Based on their market value, the Comparable Group's median market quartile was 3. Wastewater System's market value would place them in quartile 4 based upon Wastewater System's financial statements and since the largest company in quartile 4 had a market value of $728 million.

The change in risk adjusted common stock return rate between quartile 3 and quartile 4 (column J) is 84 basis points. The results of the illustration shown on Exhibit 5 suggests the Wastewater System's common equity cost rate could be about 84 basis points higher than the Comparable Group. The history of common stock returns indicates small company stocks are riskier than large company stocks because as one moves from the larger to smaller quartiles, the standard deviation (a measure of risk) of returns increases. Historically, common stock investors have been compensated for taking on this additional risk by the higher returns provided by small company stocks.

In general, it is reasonable to expect small companies to be more risky than large ones. Exhibit 5 shows small company stocks have been riskier over a long period of time than larger company stocks. This makes sense due to the various advantages that larger companies have over smaller companies. For example, small capitalized firms generally have less access to capital and, overall, not as many financial resources. Further, small capitalized stocks have lower trading liquidity than larger ones.

The bond market, particularly the corporate bond market, also differentiates between large and small bond issues, where many large institutional investors such as pension funds and insurance companies require large blocks of bonds for liquidity and performance. Because of

this size preference, smaller bond issuers often pay a cost rate premium when compared to larger bond issuers.

A higher return requirement for companies the size of Wastewater System translates into a higher capitalization rate. All else being equal, a higher capitalization rate will produce a lower value. However, all things are seldom equal as shown by the array of market multiples for the companies that comprise the Comparable Group (Exhibit 15, page 2). As shown on Exhibit 15, the Comparable Group's current market multiples do not suggest a higher capitalization rate due to size as there are numerous other risks affecting the Comparable Group's market values.

Property Plant and Equipment Analysis. The Wastewater System can best be characterized as a wastewater collection and treatment system. The Wastewater System does not have the number of large treatment facilities that the Comparable Group has. The Wastewater System's gross property, plant and equipment is in relatively good condition given its age (Exhibit 6, Table 6.1) with 64% of their gross property, plant and equipment remaining undepreciated while 76% of the Comparable Group's gross property, plant and equipment remained undepreciated.

Property Plant and Equipment Analysis for Contributions. Most regulatory commissions determine rates for utilities based on a cost of service formula reflective of gross plant, property and equipment less accumulated depreciation (i.e., net property, plant and equipment) being roughly equal to investor provided capital (i.e., debt and equity capital) plus "cost free" capital such as customer contributions. Under 66 Pa. C.S. Section 1329 (Valuation of Acquired Water and Wastewater System'), the original source of funding for any part of the assets of a selling utility is not relevant to determining the value of a selling utility's assets.

We found a 25% (100% - 75%) differences between the Comparable Group's net property, plant and equipment and the Comparable Group's investor provided capital on the valuation date

(Exhibit 6, page 1, Table 6.2). The difference between the Comparable Group's net property, plant and equipment and the Comparable Group's investor provided capital is comprised of "cost free" capital such as customer contributions.[6] This is evidenced by the 25% difference in the Comparable Group's net property, plant and equipment and the Comparable Group's investor provided capital (Exhibit 6, page 1, Table 6.2). Additionally, we verified 96% (25% ÷ 26%) of known components of the Comparable Group's "cost free" capital by reviewing their individual balance sheets (Exhibit 6, page 1, Table 6.2).

We did not analyze the Wastewater System's property, plant and equipment for "cost free" capital, or customer contributions, because the original source of funding for any part of the assets of a selling utility is irrelevant to the valuation process under 66 Pa. C.S. Section 1329.

Capital Expenditures Analysis. The level of capital expenditures required for business purposes is an indicator of risk. The capital expenditures required over the next four years (2019-2022) for the Wastewater System was not available. Over the last four years, the Comparable Group had annual capital expenditures of about 8% of net plant (Exhibit 6, page 2, Table 6.3). During this same time, 2015-18, the Wastewater System had annual capital expenditures that averaged about 1% of net plant (based upon reported net plant). Therefore, the Wastewater System historical capital spending was substantially less than the Comparable Group's average.

Growth Rate Analyses. Higher growth rates are an indication of less risk. A review of the growth rates in revenue, operating income plus depreciation and operating income, reveal that the Wastewater System's revenues have been growing slower than the Comparable Group (Exhibit 6, page 4, Table 6.4) over the last three years as have operating income plus depreciation and

6 Under rate regulation "cost free" capital, such as customer contributions, is subtracted from plant assets in determining the dollar amount of property on which a utility may earn a "fair rate of return" and therefore, "cost free" capital has no economic value to investors.

operating income. Prospectively, the Comparable Group may be able to enhance their growth rates through the continued acquisition of water and sewer systems outside their existing service territory.

Profit Margin Analyses. Higher profit margins are an indication of less risk. We compared earnings before interest and taxes ("EBIT') to revenues to see how successful the Wastewater System's management has been at generating income from the operation of the business. We also compared operating profitability or earnings before interest, tax, depreciation and amortization ("EBITDA") divided by total revenue to gain a clearer view of the Wastewater System's core profitability. The Wastewater System's EBITDA profit margins are higher than the Comparable Group's indicating less risk but the EBIT profit margins are also lower than the Comparable Group's indicating more risk (Exhibit 6, page 5, Table 6.5).

VALUATION

The purpose of this valuation is to comply with 66 Pa. C.S. Section 1329 (Valuation of Acquired Water and Wastewater System') and conduct a fair market value appraisal of the Wastewater System's assets as of June 30, 2019 in compliance with the Uniform Standards of Professional Appraisal Practices, employing the cost, market and income approaches. Consequently, three basic valuation approaches were considered in this analysis: the cost approach, the income approach and the market approach.

The Cost Approach. In general terms, the cost approach measure value by determining the amount of money required to replace the future service capability of an asset. The cost approach is based on the premise that an informed purchaser will not pay more for a property than

the cost of constructing an equally desirable substitute property, minus applicable depreciation, and assuming no undue delay.

The cost approach can include the use of the: original cost method; trended original cost method; reproduction cost method; and replacement cost method. From these cost bases, the calculated accrued depreciation (accumulated depreciation) is subtracted.

The original cost method begins with determining the original cost new ("OCN") measure of the cost of the assets when first constructed. The OCN is based on (1) a review and summary of the utility's accounting records, contractors' invoices and bid tabulations to determine the most appropriate data sources of each type of asset; (2) and the "pricing out" of assets using unit costs for each vintage year that property was placed in service.

Under the trended cost method, the trended original cost ("TOC") measures the reproduction cost by multiplying the OCN by specific cost indices. The TOC is based on (1) a review and summary of the OCN at each location to determine those elements that would be replaced-in-kind, those that would be replaced with current methods and technologies and those that would not be replaced; (2) the selection of cost indexes and the calculation of trended original cost for those elements that would be replaced-in-kind; and (3) the estimation of the cost to purchase or construct those elements that would be replaced with current methods and technologies. The TOC is a procedure for estimating reproduction cost new of property and is sometimes used as a substitute for reproduction cost method and may be considered a form of the reproduction cost method, though not as precise.

The reproduction cost method begins with determining the reproduction cost new ("RPCN") by determining the current cost of constructing identical new property. The replacement cost method begins with estimating the replacement cost new ("RCN") based on

approximating the current cost of replacing service of existing property with similar new property having the nearest equivalent utility to the property being valued (as defined by the *International Glossary of Business Valuation Terms*).

The RPCN and the RCN method include the research and verification of the inventory of a company's tangible personal property. Upon verification of the inventory, current material costs, current construction costs, engineering costs, administration costs, interest during construction, and entrepreneurial profit[7] are applied to the inventory listing in order to determine the RPCN and to determine the RCN.

The RPCN method assumes the assets would be recreated under the conditions existing at the date certain or valuation date, using the exact materials, standards, design, layout, and quality of workmanship used to create the original assets. The RCN assumes the assets would be recreated under the conditions existing at the date certain or valuation date, using similar materials, current standards, under current conditions with similarly functional property.

From these cost bases (i.e., OCN, TOC, RPCN and RCN), the calculated accrued depreciation (accumulated depreciation) is subtracted ("LD"). The calculated accrued depreciation is based on the assets' attained ages, and the service life of the assets. The cost bases of depreciable assets are reduced annually by the accumulated depreciation to reflect the loss in the service value of the assets since being constructed.

Depreciation represents the loss in property value from: physical deterioration; functional obsolescence; and external obsolescence. The accrued depreciation represents the sum of the annual depreciation amounts that would have been charged for depreciation at a point in time.

7 The administration costs and entrepreneurial profit are those of the contractors and engineers. The cost of overhead of the entity having the assets constructed can also be included. Generally overhead costs are allocated as part of an asset's cost, and usually represent 5% to 15% of infrastructure asset total costs.

Accrued depreciation is a calculated amount that would be in the book reserve account at a point in time using the current depreciation parameters (i.e., average service life). The average service lives of depreciable assets are based on the materials used for construction and how long the depreciable assets are likely to meet service demands.

The range of survivor characteristics usually experienced by utility and industrial properties is encompassed by a system of generalized "survivor curves" known as the Iowa type curves. The accrued depreciation ratio from a survivor curve is a concept that is used to estimate the consumed service capacity of plant at a point in time. The survivor curve is used to find the applicable accrued depreciation factors of the assets to result in the total accumulated depreciation.

The Original Cost Method. For this report, the Authority provided us a copy of the Kane Borough Authority "Wastewater System Original Cost of Inventory/Assets" engineering assessment and original cost report and related files prepared by Gannett Fleming Inc. ("Engineering Assessment"). We utilized the Engineering Assessment and calculated the Original Cost and Related Accrued Depreciation of the Wastewater System as of June 30, 2019 ("OCNLD Study") shown on Exhibit 7.

Page 1 of Exhibit 7 summarizes the original cost and related accrued depreciation by account for the Wastewater System as of June 30, 2019. The original cost was brought forward from page 2 of Exhibit 7 and the accrued depreciation from page 3 of Exhibit 7.

The original cost of the Wastewater System was determined from the Engineering Assessment and is summarized on page 2 of Exhibit 7. A summarizing analysis of the original cost of the Wastewater System by account and vintage year is shown on Exhibit 10.

The accrued depreciation calculation, shown on page 3 of Exhibit 7, was based on recognized methods using estimated survivor characteristics and the straight-line depreciation

method. The estimated survivor curves are those used by other Pennsylvania wastewater companies and the age of the assets. The average service life procedure was used to apply the methods of depreciation to group properties for which a survivor curve was used to recognize the existence of life dispersion. The detailed calculations of accrued depreciation applicable to original cost by account and vintage are included in in Exhibit 8.

The results of the OCNLD Study established that the OCN of the Wastewater System's utility plant in service as of June 30, 2019 was not less than $21.0 million ($21,023,527 rounded). The OCNLD Study also determined a theoretical calculated accrued depreciation reserve of the utility plant in service of $7.5 million ($7,519,626 rounded) as of June 30, 2019. After factoring in the OCNLD Study's accrued depreciation reserve, the OCNLD of Wastewater System's utility plant in service as of June 30, 2019 was determined to be $13.5 million ($21,023,527 - $7,519,626 = $13,503,901).

The Replacement Cost Method. We utilized the OCN to calculate the trended original cost (TOC) measures, or the replacement cost of the depreciable assets (RCN), by multiplying the OCN by specific transition factors.[8] The result of this analysis is shown in the Replacement Cost and Related Accrued Depreciation of the Wastewater System as of June 30, 2019 ("RCNLD Study") shown on Exhibit 9.

Page 1 of Exhibit 9 summarizes the replacement cost new and related accrued depreciation by account for the Wastewater System as of June 30, 2019. The replacement cost new was brought forward from page 2 of Exhibit 9 and the accrued depreciation from page 3 of Exhibit 9.

The replacement cost new of the Wastewater System (see Exhibit 10) was calculated by

8 We used the TOC method because the mandated use of the Engineering Assessment's original cost essentially dictates the use of TOC over the reproduction cost or the replacement cost methods.

trending the original cost measures by multiplying the OCN by Handy-Whitman indices and obsolescence factors. A summarizing analysis of the replacement cost new of the Wastewater System by account and vintage year and related transition factors is shown on Exhibit 10.[9]

The accrued depreciation calculation, shown on page 3 of Exhibit 9, was based on recognized methods using estimated survivor characteristics and the straight-line depreciation method. The estimated survivor curves are those used in the OCNLD Study. The average service life procedure was used to apply the methods of depreciation to group properties for which a survivor curve was used to recognize the existence of life dispersion. The detailed calculations of accrued depreciation applicable to replacement cost new by account and vintage are included in Exhibit 11.

The results of the RCNLD Study established that the RCN of the Wastewater System's utility plant in service as of June 30, 2019 was not less than $57.7 million ($57,678,743 rounded). The RCNLD Study also determined a theoretical calculated accrued depreciation reserve of the utility plant in service of $24.0 million ($23,985,243 rounded) as of June 30, 2019. After factoring in the RCNLD Study's accrued depreciation reserve, the RCNLD of Wastewater System's utility plant in service as of June 30, 2019 was determined to be $33.7 million ($57,678,743 - $23,985,243 = $33,693,500).

The results of the OCNLD and RCNLD Cost Approaches show a range of value for the Wastewater System of $13.5 million to $33.7 million and collectively, indicated value of $33.7 million ($33,693,500 rounded) for the Wastewater System based on the results of the RCNLD.

Benchmark Metrics. Besides providing an indication of value based upon a cost method,

9 All land and land rights were valued at original cost.

the OCN and OCNLD can also provide a meaningful metric to evaluate the reasonableness of other indications of value produced by other valuation methods. For example, the Comparable Group's market value of common equity plus minority interest, preferred stock, and total debt net of cash and cash equivalents ("Enterprise Value") is currently 1.83-times (Exhibit 15, page 2) their OCNLD or net property, plant and equipment. Similarly, the Comparable Group's Enterprise Value is currently 1.40-times (Exhibit 15, page 2) their OCN or gross property, plant and equipment.

The above-mentioned property, plant and equipment "multiples" understate the multiple applicable to the Wastewater System because some of the Comparable Group's property, plant and equipment includes assets that were originally financed with "cost free" capital such as customer contributions.[10] Subtracting customer contributions ("CIAC") from the Comparable Group's property, plant and equipment (Exhibit 15, page 3) results in CIAC adjusted multiples of 2.38-times OCNLD and 1.82-times OCN for the Comparable Group.

Multiplying the Wastewater System's OCN of $21.0 million by the Comparable Group's 1.40-times OCN multiple or the 1.82-times contributions adjusted OCN multiple indicates a range of market value of $29.4 million to $38.2 million for the Wastewater System, similar to the RCNLD of $33.7 million. Further, multiplying the Wastewater System's OCNLD of $13.5 million by the Comparable Group's 1.83-times OCNLD multiple or the 2.38-times contributions adjusted OCNLD multiple indicates a range of market value of $24.7 million to $32.1 million for the Wastewater System, similar to the RCNLD of $33.7 million. The aforementioned range of market value for the Wastewater System are not a substitute for an appraisal. However, the

10 Under rate regulation "cost free" capital, such as customer contributions, is subtracted from plant assets in determining the dollar amount of property on which a utility may earn a "fair rate of return" and therefore, "cost free" capital has no economic value to investors.

referenced range of market value for the Wastewater System can be a meaningful metric to evaluate the reasonableness of other indication of value produced by other valuation methods.

Comparing the results of the OCNLD method and RCNLD method to the benchmark metrics indicates the value indicated by the OCNLD method of $13.5 million to be inconsistent with the benchmark metrics. Therefore, the results of the $33.7 million RCNLD method form the basis for our Cost Approach conclusion of $33.7 million ($33,693,500 rounded) and is used as the Cost Approach as part of our fair market value determination for the Wastewater System.

The Income Approach. Capitalizing or discounting a future income stream to a present value provides an indication of the value of a business. The capitalization or discount rate reflects future growth, business risk, economic factors, financial risk and industry risk of the assets. The theory behind the income approach is that the value of a business is the future economic benefit that ownership will provide.

The two most common methods of the income approach to valuation are the capitalization of earning or cash flow method and the discounted cash flow method ("DCF"). The capitalization of earning method converts a single base economic income number to a value by dividing it by a capitalization rate. The capitalization of earnings is best suited when the future earnings, or cash flow, can be predicted. The implicit assumption in the capitalization of earning method is that the cash flow is a perpetuity and the capitalization rate is a constant.

The DCF method uses estimates of future free cash flow and discounts them to arrive at a present value or price of the cash flows. Generally, the DCF analysis begins with an estimate of the Debt Free Net Cash Flow over the next five to twenty years along with a terminal value. In each year, the Debt Free Net Cash Flow is comprised of projected EBIT, minus income taxes, plus projected depreciation and amortization, plus or minus projected changes in net cash working

capital, less projected capital expenditures. The second element of the DCF analysis is the determination of an appropriate discount rate.

The capitalization rate used in the capitalization of earnings method and the discount rate used in the DCF method are related. The discount rate is the opportunity cost rate related to the risk of the cash flows. For the Wastewater System, the appropriate discount rate is the current municipal revenue bond yield on June 30, 2019 of 3.62%. The appropriate IOU discount rate is the current net of tax overall cost of capital (weighted average cost of capital) on June 30, 2019 and ranges from 6.41% to 7.70%.[11] The capitalization rate is simply the discount rate minus the expected growth rate. If no growth is assumed, the capitalization rate is equal to the discount rate.

The capitalization of earnings method is generally a reasonable approach for valuing the Wastewater System as it is currently owned (i.e., non-IOU) and operated. However, change in ownership of the Wastewater System to a large regional municipal authority ("MUNI") or IOU produces a myriad of problems for both the capitalization of earnings method and the DCF Method because any future cash flow estimates would be hypothetical or estimated due to the uncertain nature that would accompany new ownership including future rates, future expenses, future capital expenditures, taxes, and regulation.

For a MUNI, the appropriate discount rate is the current municipal revenue bond, 3.62%, because debt is the only major source of capital available to finance an acquisition (Exhibit 18, pages 2-5. Although a MUNI likely carries equity on their books (balance sheet), all existing equity is already invested in other assets and therefore, cannot be used to finance an acquisition.[12]

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11 Both the American Society of Appraisers, ASA Business Valuation Standards, 2009, and the National Association of Certified Valuation Analysts, Professional Standards, 2007, use the same definition: "Weighted Average Cost of Capital (WACC). The cost of capital (discount rate) determined by the weighted average, at market values, of the cost of all financing sources in the business enterprise's capital structure."

12 For example, when a municipal or government entity, such as the Commonwealth of Pennsylvania, finance

For valuation purposes, an embedded cost of debt, or the historical cost of all debt issuances outstanding is not used because this capital is already invested in assets. Whereas the marginal cost of debt, 3.62%, at the valuation date is used in accordance with accepted valuation practice and used for market valuation purposes.

As discussed previously, for an IOU, the appropriate discount rate is the net of tax overall cost of capital (weighted average cost of capital), 6.41% to 7.70% (Exhibit 18, pages 2-7). In this instance, the net of tax overall cost of capital (weighted average cost of capital) is based on the Comparable Group's market value capital structure of 19.9% debt and 80.1% equity, a market cost of debt of 3.63% and a range of market cost of equity of 7.36% to 8.96%.[13] The Comparable Group's net of tax overall cost of capital (weighted average cost of capital) is used as a proxy to conform to the "hypothetical buyer" or "hypothetical seller" of fair market valuation. Use of the buyer's net of tax overall cost of capital (weighted average cost of capital) would produce an investment valuation, not a fair market valuation.[14]

We began the Income Approach for the Wastewater System by first determining the Debt Free Net Cash Flow to be capitalized or discounted. The Debt Free Net Cash Flow is comprised of EBIT, minus income taxes, plus depreciation and amortization, plus or minus projected changes in net cash working capital, less projected capital expenditures. The development of Wastewater

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construction of a road or bridge, they only consider the marginal debt cost despite having "equity" reflected on their books (balance sheet).

13 For example, see http://www.investinganswers.com/financial-dictionary/financial-statement-analysis/weighted-average-cost-capital-wacc-2905. Also see http://www.wallstreetmojo.com/weighted-average-cost-capital-wacc/ , or http://accountingexplained.com/misc/corporate-finance/wacc .

14 We did not use the 6.81% Comparable Group's DSIC (distribution system improvement charge) related net of tax overall cost of capital in our valuation because a "hypothetical buyer" cannot finance an acquisition at such a rate and therefore, its use would provide a meaningless result. Where the 6.81% DSIC related cost was determined based the Comparable Group's book value capital structure of 42.8% debt and 57.2% equity, a cost of debt of 3.63% and a DSIC cost of equity of 9.95%.

System's Debt Free Net Cash Flow begins on Exhibit 1 and ends on Exhibits 12 through 14.

Differences in accounting practices exist between GASB, DCED and FASB because there are differences in their purpose. That is, the GASB's and DCED's motivations are to make sure government entities are accountable for the money they receive from the public or taxpayers, while the FASB's focus is to help investors and creditors make decisions. These differences in accounting objectives between GASB, DCED and FASB can present a problem when it comes to comparing the financial statements of entities that are either publicly or privately owned, such as the Wastewater System and the Comparable Group.

Exhibit 1 presents the Wastewater System's financial information contained in their financial statements, so it is more consistent with the Comparable Group and more practical for valuation purposes. The information on Exhibit 1 was used to develop Exhibits 12 through 14. As stated previously, 2018 or 3/31/19 is the most recent year that audited financial statements are available for the Wastewater System. On Exhibit 12 we estimated the financial results for the line items for 2019 as being the same as the 2018, to produce the 2019 results.

As noted previously, the Wastewater System's financial statements and their rates did not include taxes nor a fair rate of return. Accordingly, on Exhibits 13 and 14 we adjusted the Wastewater System's post-2019 financial information for pro forma expenses and returns to be reflective of a MUNI or IOU ownership.

The Capitalization of Earnings Method. The capitalization of earnings method begins with an estimate of the income or cash flow producing capabilities of the business (Exhibit 12) for a recent time period and assumes current ownership and operations. We began the capitalization of earning method for the Wastewater System by first determining the Debt Free Net Cash Flow to be capitalized. The Debt Free Net Cash Flow is comprised of current EBIT, minus income

taxes, plus current depreciation and amortization, plus or minus projected changes in net cash working capital, less projected capital expenditures. Specifically, our capitalization of earnings method capitalizes Wastewater System's current (2019) Debt Free Net Cash Flow. The second element of the capitalization of earnings method is the determination of an appropriate capitalization rate. Our analysis uses the current municipal revenue bond yield on June 30, 2019 of 3.62% (Exhibit 12, line 24) as a capitalization rate. We computed the Wastewater System's indicated value based on the capitalization of earnings method by dividing the projected Debt Free Net Cash Flow by the capitalization factor. The capitalization factor is equal to the discount rate minus assumed growth in projected Debt Free Net Cash Flow.

We adjusted the Wastewater System's Debt Free Net Cash Flow (Exhibit 12, line 24) to account (subtract) for the average projected capital expenditures of $55,983 if system is not sold.[15] Exhibit 12 shows the results of the capitalization of earnings method. For the Wastewater System, the capitalization of earnings method using a 3.62% capitalization rate indicates a value of $17.6 million and $17.3 million on pro forma 2019 results. For Wastewater System, we believe the pro forma 2019 results is the most probable result based on current ownership and operations and therefore, the capitalization of earnings method suggests a value of $17.3 million based on pro forma 2019 results.

The DCF Method. For the Wastewater System, the DCF method considers two types of discounted cash flow analyses, the EBIT and EBITDA terminal value model ("Market Multiple DCF") and the capitalization of terminal value model ("Capitalization DCF"). We show the results of these models on Exhibits 13 and 14.

15 The capital expenditures of $55,983 utilized is the 2016-2018 average capital expenditure due to lack of projected information.

The DCF method begins with an estimate of the income or cash flow producing capabilities of the business. Specifically, our DCF methods use estimates of the results of the Wastewater System's operations over the next 13 years. We use two different assumptions for the Wastewater System's future operations in the DCF methods: MUNI ownership shown on Exhibit 13 and IOU ownership shown on Exhibit 14.

Under the MUNI ownership the discount rate is the current 3.62% municipal revenue bond yield and under the IOU ownership the discount rate is the current net of tax overall cost of capital, reflecting the upper and lower range of the net of tax overall cost of capital for the Comparable Group of 6.41% to 7.70%. For the Capitalization DCF, the capitalization rate reflects a scenario of no additional growth (i.e., discount rate = capitalization rate) and a scenario of minimal growth of 0.3% (i.e., discount rate – 0.3% growth = capitalization rate) under MUNI ownership and 0.3% (i.e., discount rate – 0.3% growth = capitalization rate) under IOU ownership based on inflation, changes in Debt Free Net Cash Flows and the projected population growth.

We computed the Market Multiple DCF terminal values by multiplying the Wastewater System's projected EBIT and EBITDA by the Comparable Group's adjusted multiples of 18.8-times and 12.6-times, respectively. We computed the Capitalization DCF terminal value by dividing the projected Debt Free Net Cash Flow by the capitalization factor. The capitalization factor is equal to the discount rate minus assumed growth in projected Debt Free Net Cash Flow.

Exhibit 13 shows the results of the DCF method under the MUNI ownership scenario. The results of the Capitalization DCF shown on Exhibit 13 show a range of value for the Wastewater System of $18.6 million to $19.7 million. The results of the Market Multiple DCF shown on Exhibit 13 show a value of $15.1 million. Collectively, the DCF method based on the

MUNI ownership scenario indicates a value of $17.4 million for the Wastewater System based on the 0.3% growth assumption.

Exhibit 14 shows the results of the DCF method under the IOU ownership scenario. The results of the Capitalization DCF shown on Exhibit 14 show a range of value for Wastewater System of $9.7 million to $12.1 million. The results of the Market Multiple DCF shown on Exhibit 14 show a range of value of $13.6 million to $15.3 million. Collectively, the DCF method based on the IOU ownership scenario and a 0.3% growth assumption indicates a value of $12.9 million for the Wastewater System.[16]

In conclusion, the DCF method based on the MUNI ownership scenario indicates a value of $17.4 million and the DCF method based on the IOU ownership scenario indicates a value of $12.9 million. Collectively, the DCF method indicates a value of $15.1 million.

We note change in ownership of the Wastewater System to a MUNI or an IOU produces a myriad of problems for the DCF Method. Under a MUNI purchase, future cash flow estimates are uncertain because they would reflect the actual price paid for the acquisition. Under an IOU purchase and the associated regulation by the PUC, future cash flow estimates are uncertain since regulation by the PUC would result in an unknown determination of rate base, and the related depreciation and authorized/achieved earning levels.

With PUC regulation, under Section 1329, the value of acquired water and wastewater system assets (rate base) allowed to be included in the acquiring utility's rate base for ratemaking

16 If we used the 6.81% Comparable Group's DSIC (distribution system improvement charge) related net of tax overall cost of capital in our valuation shown on Exhibit 14, the results of the Capitalization DCF would show a range of value for Wastewater System of $11.1 million to $11.3 million. Further, the results of the Market Multiple DCF would show a value of $14.8 million and collectively, the DCF method based on the IOU ownership scenario and a 0.3% growth assumption would indicate a value of $13.1 million for the Wastewater System. The DCF method based on the MUNI ownership scenario indicates a value of $17.4 million and the DCF method based on the IOU ownership scenario using DSIC indicates a value of $13.1 million. Collectively, the DCF method indicates a value of $15.2 million when DSIC is considered.

purposes is based on the lesser of the purchase price negotiated by the acquiring utility and seller or the "fair market value" of the selling utility's system (66 Pa. C.S. § 1329(c)(2)). In the current instance, the Asset Purchase Agreement's ("APA") negotiated purchase price for the Wastewater System is less than our fair market value appraisal.

If we used the APA's purchase price in our valuations shown on Exhibits 13 and 14, the DCF method based on the MUNI ownership scenario indicates a value of $22.5 million and the DCF method based on the IOU ownership scenario indicates a value of $16.6 million. Collectively, the DCF method based on the APA's purchase price would indicate a value of $19.5 million.

The Market Approach. There are two methods of doing the Market Approach to valuation: the market multiples method; and the selected transaction method. We developed both the market multiples method and the selected transaction method in our valuation analysis.

The Market Multiples Method. The market multiples method valuation begins by reviewing market price data of corporations engaged in the same or a similar line of business as the Wastewater System. We relied upon market data for the Comparable Group for these purposes since they are equally affected by similar economic, industry, and business risks as the Wastewater System. Since no marketplace exists for the common stock of the Wastewater System, an alternative to estimate the value of the Wastewater System is to analyze the price investors are willing to pay for the publicly traded common stock of companies that are similar to the Wastewater System. The specific market price data reviewed includes the market value of common equity plus minority interest, preferred stock, and total debt net of cash and cash equivalents (i.e., Enterprise Value). Where the market value of common equity is the product of multiplying the closing stock price by the number of common shares outstanding. The Enterprise

Value provides an indication of the value of the entire business. The Enterprise Value multiples ("Market Multiples") are shown on Exhibit 15. For the Comparable Group, the Market Multiples were calculated as of June 30, 2019 based on the latest twelve months of financial data available at the appraisal date.

We used the Comparable Group's Enterprise Value at June 30, 2019 and calculated Market Multiples of: gross property plant and equipment ("GPPE"); net property plant and equipment ("NPPE"); investor provided capital ("ICAP"); revenue ("Revenue"); EBITDA; EBIT; utility customers ("Customers"); and population of the area served ("Population").

The next step in the market multiples method valuation was applying the Comparable Group's Market Multiples to corresponding financial and operating statistics of the Wastewater System. The Comparable Group's Market Multiples reflect their capitalization rate of each financial and operating statistic. For example, a Market Multiple of EBIT of 16.14 times equates to a capitalization of EBIT of 6.20% (1 ÷ 16.14 = 6.20%). Each capitalization rate is unique to the entity and the statistic being evaluated and reflects the growth and investment risk of the entity.

We believe that similar economic, industry and business risks have affected the Comparable Group as those faced by the Wastewater System. However, consideration must be given to the fact that no two companies are exactly alike. On average, the Comparable Group are much larger than the Wastewater System. The relative size difference between the Comparable Group and Wastewater System suggests that the risk to the investors of the Wastewater System is greater than the Comparable Group. Further, based upon our quantitative and qualitative analysis, we concluded that the Wastewater System has more risk than the Comparable Group.

Accordingly, the Comparable Group's Market Multiples are not directly applicable to the Wastewater System. We assumed the higher risk due to the Wastewater System's small size is

added to higher risk assumed from our quantitative and qualitative analysis. This combined risk was assumed to result in the Wastewater System being 30% riskier than the Comparable Group and produces a 70% (100% - 30%) base risk adjustment to the Comparable Group's Market Multiples. We applied the 70% base risk adjustment to all financial multiples. For example, the Comparable Group's ICAP multiple was multiplied by 70% to produce a lower multiple applicable to the Wastewater System to account for risk differences.

The Comparable Group's Market Multiples of Revenue, EBITDA, and EBIT were adjusted for the base risk adjustment to produce multiples applicable to the Wastewater System (Exhibit 15, page 3). The Comparable Group's Market Multiples of GPPE and NPPE were adjusted for the base risk adjustment and for their percentage of property plant and equipment (Exhibit 15, page 3) financed with "cost free" capital such as contributions because "cost free" capital should not be part of this valuation process. The Comparable Group's Market Multiples of Customers and Population were adjusted for the type of assets of the Wastewater System and growth.

The net risk adjustments to the Comparable Group's Market Multiples are shown on page 1 of Exhibit 15. The adjustments to the Comparable Group's Market Multiples are: 70% of ICAP (more risk/lower growth), 91% of GPPE (more risk/lower growth and contributions), 91% of NPPE (more risk/lower growth and contributions), 70% of Revenue (more risk/lower growth); 70% of EBIT and 70% EBITDA (more risk/lower growth); and 90% of Customers and Population (contributions).

Page 1 of Exhibit 15 shows the market multiples method indicated values based on: ICAP, GPPE and NPPE (collectivity called "Capital Items"); Revenue, EBIT and EBITDA (collectivity called "Income Statement Items"); and Customers and Population (collectivity called "Demographics Items"). For most municipal utilities the indicate values based on Income

Statement Items are far below the indicated values that are based on Capital Items and those based on Demographics Items. We attribute this to the dollars of Revenue, EBIT and EBITDA do not reflect any provision for taxes while the multiples for the Comparable Group do.[17] Consequently, we do not believe the results of the multiples of Revenue, EBIT and EBITDA are meaningful and should not be used for municipal utilities.

In the market multiples method, the meaningful Market Multiples of the Comparable Group are used to develop an indicated value of the Wastewater System. This is accomplished by multiplying the Wastewater System's financial and operating data by the Comparable Group's median Market Multiples (Exhibit 15, page 1). The results of the market multiples method (Exhibit 15, page 1) show a range of value for the Wastewater System of $12.8 million to $21.9 million and collectively, indicate value of $17.3 million based on the meaningful Market Multiples.

The Selected Transactions Method. The selected transactions method entails analyzing certain public information relating to selected transactions involving the purchase or sales of businesses involved in the same or similar business line. The number of selected transactions available for review is limited because most acquisitions in the water and wastewater industry involve small acquisitions for which no public information exits. Additionally, not all transactions are comparable since some purchase prices may only involve the acquisition of the common stock, purchase prices may be net of cash and others may only involve assets. In any of these instances, the derived multiples (e.g., purchase price as a multiple of: Revenues; EBITDA;

17 The Revenue, EBIT and EBITDA for the Wastewater Systems also do not include taxes or a fair rate of return.

EBIT; etc.) would understate (overstate) the multiples involving a purchase price for an entire business enterprise (common stock) or business assets.

The selected transactions method provides a valuation of a business, or assets, at the time the acquisition of that business was completed, rather than the appraisal date market value (June 30, 2019). The change in the Comparable Group's market multiples of NPPE and ICAP, shown in Figure 1, shows the change in market valuation over a recent 72 month period. In Figure 1 the Comparable Group's market multiples of NPPE and ICAP were indexed to June 30, 2019 valuation multiples so that the June 30, 2019 valuation multiples have an index value of 100.

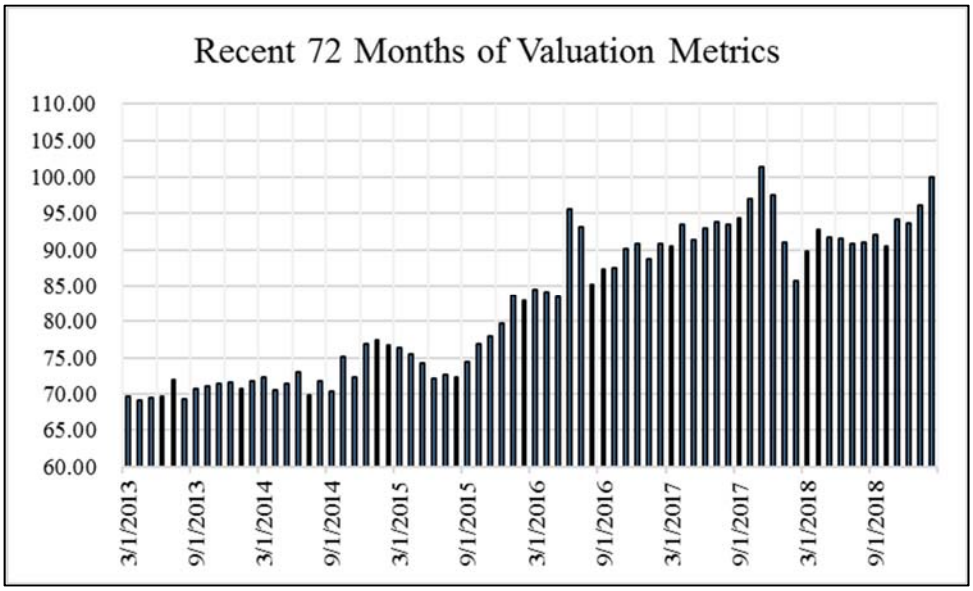

Figure 1

The Comparable Group's appraisal date (June 30, 2019) valuation multiples are 4% higher than 2019's lowest levels and equal to the 2019's highest levels and 14% higher than 2018's lowest levels and 6% above the 2018's highest levels. The Comparable Group's June 30, 2019 valuation multiples are 14% higher than 2017's lowest levels and 1% below the 2017's highest levels, are

4% to 17% higher than 2016's, are 20% to 28% higher than 2015's, and are 23% to 30% higher than 2014's multiples.

Because of the rapid rise in valuation multiples since early 2016 we limited our search for selected transactions to: (1) those that occurred in 2016 or later; (2) purchases of water or sewer systems; (3) assets being purchased; and (4) those that did not discount "cost free" capital/customer contributions in the valuation. The selected transactions that met the stated selection criteria are shown on pages 2 and 3 of Exhibit 16.

Using certain public information, we calculated sales price multiples of selected transactions involving the purchase or sale of businesses that met the stated selection criteria. The calculated sales price multiples included transactions multiples of: ICAP; GPPE; NPPE; Revenue; EBITDA; EBIT; Customers; and Population. As shown on pages 2 and 3 of Exhibit 16, the selected transactions method indicated values based on the Income Statement Items are far different than the Wastewater System's selected transactions method indicated values based on Capital Items and those based on Demographics Items. We attribute this to the fact the selling utilities' dollars of Income Statement Items do not reflect any provision for taxes.[18] Consequently, we do not believe the results of the multiples of Income Statement Items are meaningful.

The selected transaction method relies on and reflects information that was known, ex-ante, at the time the winning purchase bid (price) was given and the metrics used are time period sensitive. For example, bids made in 2016 only reflects metrics from 2015 since the results of 2016 could not be known at the time of the bids. The selected transaction method ex-ante

18 Further, Revenue, EBIT and EBITDA for the Wastewater Systems also do not include a fair rate of return.

information (metrics) is shown on page 2 of Exhibit 16. Completed information only exists for a few of the transactions, with only Customers and Population having ample data for all transactions as is evident from the information shown (Exhibit 16, page 2). Therefore, we supplemented the ex-ante data with ex-post information of GPPE and NPPE (collectivity called "Asset Items") as shown on page 3 of Exhibit 16.

In the selected transactions method, the significant selected transactions multiples of the selling utilities are used to develop an indicated value of the Wastewater System. This is accomplished by multiplying the Wastewater System's financial and operating data by the selling utilities' transactions multiples (Exhibit 16, pages 2 and 3). The results of the selected transactions method (Exhibit 16, page 1) show a range of value for the Wastewater System of $15.3 million to $27.8 million when all transactions are considered and a range of value of $20.4 million to $26.5 million when fully integrated assets are solely considered. Collectively, the indicate value for the Wastewater System is of $22.5 million after giving additional weight to the more comparable selected transactions multiples.

In 2018 two IOUs, Connecticut Water Service, Inc and SJW Group, announced a planned merger with Connecticut Water being acquired by SJW through a stock purchase. Although this acquisition is not directly applicable to the Wastewater System, it does provide a range of indicated value for the Wastewater System (Exhibit 16, page 4) which we relied on as a check. In this selected transaction, the significant selected transactions multiples of the selling utilities (Connecticut Water) are used to develop an indicated value of the Wastewater System. This is accomplished by multiplying the Wastewater System's financial and operating data by the selling utilities' transactions multiples. The results of the Connecticut Water selected transactions show a range of value for the Wastewater System of $25.9 million when the reported significant selected

transactions multiples are considered and a value of $28.1 million when the reported significant selected transactions multiples have been adjusted for "cost free" capital. Since the Connecticut Water transaction is a stock transaction, we believe it may understate the value of an asset purchase. However, we also note that Connecticut Water is a fully integrated company which is publicly traded while the Wastewater System is not.

The results of the market multiples method shown on Exhibit 15 show a range of value for the Wastewater System of $12.8 million to $21.9 million and collectively, indicate value of $17.3 million. The results of the selected transactions method shown on Exhibit 16 show a range of value of $21.6 million to $23.5 million and collectively, indicate value of $22.5 million. Based on the aforesaid, the Market Approach to valuation indicates a value of $19.9 million for the Wastewater System based on the results of the market multiples method and the selected transactions method.

Conclusion. We summarize our findings for the Wastewater System on Exhibit 17. Our findings for the Wastewater System is based on the Cost, Market and Income Approaches to valuation. We used six methods under the Cost, Market and Income Approaches to valuation: Original Cost Method, Replacement Cost Method, Capitalization of Earnings Method, Discounted Cash Flow Method (market multiple discounted cash flow method and the capitalization discounted cash flow method), Market Multiples Method, and the Selected Transactions Method.

The results from the capitalization of earnings method, market multiple discounted cash flow method and the capitalization discounted cash flow method form the basis for our Income Approach. Our Market Approach is supported by the market multiples method and selected transactions method. The results from the original cost method form the basis for our replacement cost method, and both methods form the basis for our Cost Approach.

We considered the results of each approach as an indicator of value individually, or as independent indicators of value. Therefore, all three approaches to valuation were given consideration in arriving at our estimate of the fair market value conclusion. Based on these facts, our conclusion regarding the fair market value is $22.9 million. Our conclusion regarding the fair market value can be described by the weights and the specific results of the three approaches to valuation that are shown on Exhibit 17. The results of our analyses, shown on Exhibit 17, indicate a range of value for the Wastewater System of $15.1 million to $33.7 million and collectively indicate a fair market value of $22,885,000 for the Wastewater System.

COMPLIANCE & APPRAISAL CERTIFICATION

Compliance with Uniform Standards of Professional Appraisal Practice (USPAP) 2018-2019

Fulfillment of Requirements for a Personal Property Appraisal and Report

- **State the identity of the client and any intended users, by name or type:**

  The client is Kane Borough Authority. The intended users of the valuation are Kane Borough Authority, Pennsylvania American Water Company, Inc. and the Pennsylvania Public Utility Commission.

- **State the intended use of the appraisal**

  The intended use of the valuation is to comply with 66 Pa. C.S. Section 1329, Valuation of Acquired Water and Wastewater Systems and conduct a fair market value appraisal of the Kane Borough Authority Wastewater System's assets in compliance with the Uniform Standards of Professional Appraisal Practices, employing the cost, market and income approaches.

- **Describe information sufficient to identify the property, real, personal, and intangible, involved in the appraisal, including the physical and economic property characteristics relevant to the assignment.**

  Kane Borough Authority Wastewater System's ("Wastewater System") assets include related assets necessary to run the System; all personal property and fixed assets, including all Equipment and Machinery, and auxiliary equipment and plant equipment. Kane Borough Authority Wastewater System's asset include sewage collection and transmission assets and two wastewater treatment facilities. The Wastewater System consists of gravity separate and combined sewers within the Borough, gravity separate sewers and low-pressure sewers in contiguous Township, eight collection system lift stations (West Wind, Pond Street, Jo Jo Road Grinder Pump, Route 321 South, Route 6, Route 66, West Kane and Willow Run) and two wastewater treatment plants ("WWTP"), the Pine Street WWTP and Kinzua Road WWTP. The eight pump stations used in the Wastewater System are all located in the Township. Six pump stations convey sewage to the Pine Street WWTP and two to the Kinzua Road WWTP.

  The Wastewater System currently provides service to 2,026 customers and about 2,507 EDUs: 1,244 EDUs through the Pine Street WWTP; and 1,263 EDUs through the Kinzua Road WWTP. There are no significant industries within the watershed for either WWTP in the Wastewater System's service area.

The Wastewater System collection system is divided into two major drainage basins: the Hubert Run Drainage Basin serviced by the Kinzua Road WWTP; and the West Run Drainage Basin serviced by the Pine Street WWTP. The Hubert Run Drainage Basin collection system consists of approximately 52,100 linear feet of vitrified clay pipe, ductile iron pipe, and PVC pipe ranging from 8" to 36" in diameter. The West Run Drainage Basin collection system consists of approximately 65,400 linear feet of vitrified clay pipe, ductile iron pipe, and PVC pipe ranging from 8" to 36" in diameter.

The Kinzua Road WWTP and the Pine Street WWTP use identical treatment methods and both NPDES Permit allows for an average monthly flow of 1.50 MGD. In 2016 Kinzua Road WWTP had an average monthly flow of 0.516 MGD and the Pine Street WWTP had an average monthly flow of 0.449 MGD. The Kinzua Road WWTP employs biological and chemical treatment processes to attain an effluent quality which consistently meets NPDES Permit requirements. The wastewater process facilities at the Kinzua Road WWTP consists of preliminary treatment works, which includes a mechanically cleaned bar screen and a grit removal system, an activated sludge secondary treatment system (four tank sequencing batch reactor activated sludge process), two chlorine contact tanks, sodium bisulfite dechlorination system and an effluent water tank. Treated effluent from the Kinzua Road WWTP is discharged to Hubert Run.

The Pine Street WWTP employs biological and chemical treatment processes to attain an effluent quality which consistently meets NPDES permit requirements. The wastewater process facilities at the Pine Street WWTP consists of preliminary treatment works which includes a mechanically cleaned bar screen and a grit removal system, an activated sludge secondary treatment system (four tank sequencing batch reactor activated sludge process), two chlorine contact tanks, sodium bisulfite dechlorination, system and an effluent water tank. Treated effluent from the Pine Street WWTP is discharged to West Run.

Sludge produced at both WWTPs is dewatered at the Kinzua Road WWTP. In addition, the Borough receives and processes sludge from the Kane Pennsylvania American Water Company plant. Sludge is disposed of at the Casella Landfill in Chatauqua County New York. In 2016 approximately 191.31 wet tons of sludge was removed from the Kinzua Road WWTP.

The Kane Borough Authority Wastewater System’s property is in reasonable condition for their age based on physical observations and reviews of operating and financial statements. The property is an operating wastewater system, the economics of which were analyzed from financial statements which were incorporated into the income approach to value in this appraisal.

Kane Borough Authority Wastewater System's land and land rights include land used for the eight collection system lift stations (West Wind, Pond Street, Jo Jo Road Grinder Pump, Route 321 South, Route 6, Route 66, West Kane and Willow Run) and two wastewater treatment plants ("WWTP"), the Pine Street WWTP and Kinzua Road WWTP operate. Kane Borough Authority Wastewater System's land and land rights also include multiple easements and rights-of-way necessary to operate the Wastewater System.

- **State the type and definition of value and cite the source of the definition, including whether the opinion of value is in terms of cash or of financing terms equivalent to cash, or based on non-market financing or financing with unusual conditions or incentives**

  Fair market value is defined as:

  > "The price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm's length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts." The International Glossary of Business Valuation Standards

- **State the effective date of the appraisal and the date of the report**

  The effective date of the appraisal is as of June 30, 2019 and the appraisal report date is November 2019.

- **Describe sufficient information to disclose to the client and any other intended users of the appraisal the scope of work used to develop the appraisal**

  Conduct a fair market value appraisal of the Kane Borough Authority Wastewater System's assets in compliance with the Uniform Standards of Professional Appraisal Practices, employing the cost, market and income approaches.

  The premise of value is going concern and the assets are valued as a group under the premise that they collectively comprise an ongoing operating business enterprise.