Exhibit No:	
Issues:	Proposed Subsidy of Noel and KMB Systems by Silverleaf; Capital Structure and Return on Equity; Correction to Staff's Direct Testimony; Liberty Utilities' Proposed Rate Design; Phase-In of Silverleaf Rates
Witness:	William G. Stannard
Type of Exhibit:	Rebuttal Testimony
Case No:	WR-2018-0170 SR-2018-0171
Date Testimony Prepared:	July 20, 2018

REBUTTAL TESTIMONY

OF

WILLIAM G. STANNARD

ON BEHALF OF SILVERLEAF RESORTS INC.

AND ORANGE LAKE COUNTRY CLUB, INC.

LIBERTY UTILITIES (MISSOURI WATER), LLC
D/B/A LIBERTY UTILITIES

CASE NO. WR-2018-0170

Jefferson City, Missouri
July 2018

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the matter of Liberty Utilities (Missouri Water) LLC's Application for Rate Increase.	))	File No. WR-2018-0170 SR-2018-0171

State of Missouri)
) **SS**
County of Jackson)

Affidavit of William Stannard

William G. Stannard, being first duly sworn, on his oath states:

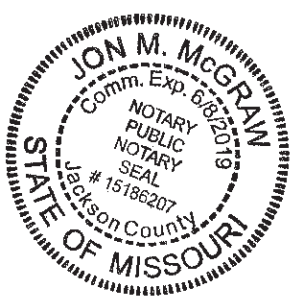
1. My name is William Stannard. I am a consultant with Raftelis Financial Consultants, Inc., having its principal place of business at 3013 Main St., Kansas City, Missouri 64108. We have been retained by Silverleaf Resorts, Inc. and Orange Lake Country Club, Inc. in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes are my direct testimony and schedules which were prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. WR-2018-0170 and SR-2018-0171.

3. I hereby swear and affirm that the testimony and schedules are true and correct and that they show the matters and things that they purport to show.

William G. Stannard

Subscribed and sworn to before me this 16th day of July, 2018.



Notary Public

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BACKGROUND OF WITNESS

Q. Please state your name and business address.

A. My name is William G. Stannard and my business address is 3013 Main Street, Kansas City, Missouri, 64108.

Q. By whom are you employed and in what capacity?

A. I am Chairman of the Board of Raftelis Financial Consultants, Inc., a firm specializing in the provision of financial and management consulting services to the water and wastewater utility industry.

Q. Please describe your educational background and work experience.

A. Schedule A provides a detailed description of my education and prior work experience.

Q. Please briefly describe your role in this proceeding.

A. I have been retained as an expert witness by Silverleaf Resorts, Inc. ("Silverleaf") and Orange Lake Country Club1, a water and sewer customer of Liberty Utilities (Missouri Water), LLC (referred to as "Liberty Utilities"). I have been retained to analyze the testimony and workpapers provided by Liberty Utilities and Missouri PSC Staff ("Staff") in this proceeding.

[1] For ease, properties owned by Silverleaf Resorts, Inc. and Orange Lake Country Club, Inc. will simply be referred to as "Silverleaf".

EXECUTIVE SUMMARY

Q. Please provide an overview of your rebuttal testimony.

A. My rebuttal testimony:

(1) Recommends that the rates applied to Liberty Utilities' customers in the Holiday Hills, Timber Creek, and Ozark Mountain service territories (herein "Silverleaf Systems") be based on the cost-of-service for the Silverleaf Systems, and that the rates for each newly acquired system by Liberty Utilities be based on the cost-of-service for those systems;

(2) Recommends that the Silverleaf Systems be excluded from the Staff-recommended rate case for Liberty Utilities to address its acquisition of Ozark International, Inc.

(3) Adopts the Staff's recommendation that the Commission approve a capital structure of 42.83 percent common equity and 57.17 percent long-term debt;

(4) Explains Silverleaf's coordination with Staff to correct a mathematical error in proposed rates in order to avoid approximately $106,000 annually in overearnings by Liberty Utilities;

(5) Details the flaws in Liberty Utilities' proposed rate design and proposed rates and recommends a rate design that promotes water conservation and does not harm smaller users which obscene increases in the customer charge; and

(6) Describes my concern that a rate revenue increase of 76 and 71 percent on Silverleaf's water and sewer systems would cause severe rate shock; and offers a phased-in rate increase to mitigate the rate shock problem created by the size of the proposed increase.

PROPOSED SUBSIDY OF THE NOEL WATER SYSTEM AND THE KMB PROPERTIES AT THE EXPENSE OF HOLIDAY HILLS, TIMBER CREEK, AND OZARK MOUNTAIN CUSTOMERS

Q. Please briefly describe your understanding of the nature of the water and sewer service provided by Liberty Utilities in Missouri.

A. In Missouri, Liberty Utilities provides water and sewer service to customers in Franklin, Jefferson and Cape Girardeau Counties. Liberty Utilities' water and sewer operations in Missouri consist of eleven (11) water and three (3) sewer systems.

In 2005, Liberty Utilities purchased the Holiday Hills, Timber Creek and Ozark Mountain water and sewer systems from Silverleaf Resorts, Inc. In 2011, Liberty Utilities purchased the Noel water system from Noel Water Company and the Lakewood, Cedar Hill, Scotsdale, Crestview Acres, Warren Woods, Hillshine, High Ridge and Cape Rock Village systems from KMB Properties. In 2018, Liberty Utilities was approved to acquire seven additional water systems in Case No. WM-2018-0023, (Ozark International, Inc.); the seven (7) new systems have approximately 900 customers combined. It is important to note that the Ozark International systems are not included in this rate case proceeding, but Staff has recommended that Liberty Utilities file another rate case in 18-24 months.

Since the 2011 acquisition, by Liberty Utilities, customers receiving service from the Liberty Utilities systems have been served by nine (9) distinct water tariff districts and two (2) distinct sewer tariff districts. Noel receives water service only and has a distinct tariff schedule. Holiday Hills, Timber Creek and Ozark Mountain are served under the same water (for Holiday Hills, Timber Creek and Ozark Mountain) and sewer (for Timber Creek and Ozark Mountain) tariffs as one another. Each of the systems acquired from KMB Properties has its own distinct water and

sewer tariffs. **Table 1** below summarizes Liberty Utilities' water and sewer systems in Missouri:[2]

Table 1: Liberty Utilities Water and Sewer Systems

Noel		
System	Service	Tariff
Noel	Water	Noel

Silverleaf		
System	Service	Tariff
Holiday Hills	Water	Silverleaf Water
Timber Creek	Water	
Ozark Mountain	Water	
Timber Creek	Sewer	Silverleaf Sewer
Ozark Mountain	Sewer	

KMB		
System	Service	Tariff
Lakewood	Water	Lakewood
Cedar Hill	Water	Cedar Hill
Scotsdale	Water	Scotsdale
Crestview	Water	Crestview
Warren Woods	Water	Warren Woods
Hillshine	Water	Hillshine
High Ridge	Water	High Ridge
Cape Rock	Sewer	Cape Rock

Q. Please briefly describe the nature of the water and sewer service Silverleaf receives from Liberty Utilities.

A. Silverleaf has properties which are served by Liberty Utilities water and sewer systems in the Holiday Hills, Timber Creek and Ozark Mountain service territories. In the Holiday Hills territory, Silverleaf only receives water service, while it receives both water and sewer service in the Timber Creek and Ozark Mountain territories.

Q. Do the Silverleaf Resort properties represent the <u>only</u> customers served in Holiday Hills, Timber Creek and Ozark Mountain?

A. No, the Holiday Hills, Timber Creek and Ozark Mountain systems have many other customers. The three systems have been referred to collectively as "Silverleaf" throughout this

[2] In addition to the water and sewer systems in Missouri, Liberty Utilities and its affiliates own water and sewer systems in Illinois, Texas, Arizona, California, and Arkansas. https://libertyutilities.com/what-we-do/water-and-wastewater.html#navbar-what-we-do-residential Additionally, Liberty Utilities and its affiliates serve about 285,000 electricity customers in Arkansas, California, Kansas, Missouri, New Hampshire and Oklahoma. https://libertyutilities.com/what-we-do/electricity.html#navbar-what-we-do-residential. Liberty Utilities and its affiliates have about 290,000 natural gas customers in Georgia, Illinois, Iowa, Massachusetts, Missouri and New Hampshire. https://libertyutilities.com/what-we-do/natural-gas.html#navbar-what-we-do-residential.

case because Liberty Utilities bought these systems from Silverleaf about 13 years ago. While Silverleaf is the largest Liberty Utilities' customer on the Holiday Hills, Timber Creek and Ozark Mountain systems, all customers are subject to the relevant Liberty Utilities' tariffs. Moreover, Silverleaf represents approximately 36,686 owners of time-share units at its resort properties. These consumers will ultimately bear the burden of increased costs for water and sewer service if Liberty Utilities' request is approved.

Q. Does Silverleaf have concerns regarding the Liberty Utilities rate case proposed by Staff to occur 18-24 months from the effective date of this proceeding?

A. Yes. Staff's witness, Mr. Harrison, proposed that Liberty Utilities file another rate case approximately 18-24 months from the effective date of this proceeding to address Liberty Utilities' April 2018 acquisition of Ozark International, Inc. (Ozark International). Including the Silverleaf Systems, which is subjected to this proposed rate case, in another rate case in 18-24 months is unnecessary and inappropriate. As a matter of fundamental fairness, it makes no sense for customers on the Silverleaf Systems to be punished by additional rate case costs and other substantial burdens based solely on Liberty Utilities' acquisition of an unrelated, non-contiguous system.

The Ozark International acquisition does little or nothing to change the cost to provide service to the Silverleaf water and sewer systems. The only potential change could be a minimal shift in the allocation of shared services' expense related to the new acquisition. This possible change in allocated shared services can be addressed in the next rate case which is not *entirely driven* by Liberty Utilities' acquisition of separate, distinct systems, but rather legitimate changes in the

underlying cost of providing service to Liberty Utilities' services as a whole and the Silverleaf Systems in particular.

In fact, to the extent that the acquisition of Ozark International would cause an increase in costs to Liberty Utilities' current customers, it is difficult to see how the acquisition is in the public interest at all. At the very least, the Ozark International acquisition should not adversely affect customers on the Silverleaf Systems in this docket or in the future.

Staff's recommendation begs the question: Will the customers of Liberty Utilities' separate and distinct systems be forced to protect their interest in a rate case proceeding with each future Liberty Utilities' acquisition or divestiture of water or sewer systems? If so, the existing customers of Liberty Utilities would ask the Commission to consider this profoundly negative impact in any future CCN applications for Liberty Utilities.

Q. Do you have a proposal for how the Silverleaf Systems should be treated in Staff's recommended near-future rate case?

A. Yes. The tariff and rates for the three (3) water and two (2) sewer systems which serve Silverleaf customers should ***not*** be included in this near-future rate case which is **solely** driven by the acquisition of Ozark International, Inc. Additionally, the water and sewer rates of the Silverleaf Systems should not be included in any future rate cases *solely* related to the acquisition of another system by Liberty Utilities.

Q. Please explain your rationale for this proposal.

A. The water and sewer systems which serve Silverleaf are separate and non-contiguous with the other Liberty Utilities' systems. They do not share assets with the KMB or Noel systems and the majority of the labor for the Silverleaf Systems is provided by outside contractors. In fact, as emphasized in the direct testimony of Matthew J. Barnes (see pages 5 and 6), there is essentially no relationship between the cost of providing service to the Silverleaf Systems and those of KMB and Noel:

> "Q. What characteristics about the Liberty water systems support DSP [district specific pricing]?
>
> A. DSP is appropriate in this case because each system is unique in that each system is relatively small customer-wise, and the costs to serve Liberty's customers vary among each system. The cost of service for each system varies based on number of customers, different usage patterns, or the cost to replace or upgrade plant and infrastructure."

> "Q. How is the cost of service different for the various Liberty water systems?
>
> A. For example, and as can be seen in Table 1 above, the largest water system is Noel. Noel is a small city that has 665 water customers, of which a majority of them are permanent residents. Noel is the only system in Liberty that serves industrial customers. Noel is Liberty's only system located in the southwest corner of the state. Compared to Noel, KMB's systems range from 19 customers to 185 customers. KMB has a combination of permanent customers and time-share customers. KMB currently does not have any industrial customers in its service area and all of KMB's systems are in the neighboring Jefferson and Franklin Counties. As mentioned above, the primary benefit

of DSP is that it matches costs to cost-causers. Because the systems themselves are so different, combining the system costs for the sake of combining costs would make these customers' rates go up or down, without regard to the actual cost of operations, or the type of service provided at each system."

As acknowledged by Liberty Utilities, the cost of serving the Silverleaf Systems is unique and unrelated to that of the other systems, including the Ozark International system and can be readily established with the information already available to Liberty Utilities. Accordingly, a distinct rate case should be required to adjust the rates of Liberty Utilities' newly acquired water and sewer systems.

CAPITAL STRUCTURE AND RETURN ON EQUITY

Q. What are the positions of Staff and Liberty Utilities, respectively, on this issue capital structure and return on equity?

A. Staff witness Paul Harrison's testimony supports a capital structure of 42.83 percent common equity and 57.17 percent long-term debt, with a cost of debt of 4.65 percent and a return on equity of 10.00 percent. This yields a rate of return of 6.94 percent.

Jill Schwartz's testimony on behalf of Liberty Utilities proposes a capital structure of 53.00 percent common equity and 47.00 percent long-term debt and a return on equity of 10.25

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Q. What is your position on this issue?

A. The capital structure proposed by Staff is reasonable. The return on equity proposed by Staff and Liberty is not for two reasons:

First, the rate structure for the Silverleaf water and sewer systems is heavily weighted towards fixed cost recovery with approximately 35 percent of existing revenue recovered via the fixed service charge. Staff has proposed increasing this to 52 percent in the rate design included in Mr. Barnes direct testimony. Such a structure significantly mitigates risk related to weather and other factors which causes customer usage to vary.

Second, Liberty Utilities is a subsidiary of a much larger company which financially supports its operations, further mitigating any risk it may face. As I noted above, Liberty Utilities and its affiliates have hundreds of thousands of retail customers across the United States. Liberty Utilities parent is a multi-national corporation traded on the New York and Toronto stock exchanges.

Q. What would be a more appropriate return on equity?

A. A more appropriate return on equity would take the long-term risk-free rate and apply to it a risk premium reflecting the risk inherent in financial markets. Duff & Phelps is a financial services firm that provides periodic guidance on the equity risk premium which can be applied to the risk-free rate for the purposes of cost of capital determinations. In September of 2017, the firm established a new equity risk premium of 5.00 percent[3]. Adding this premium to the 30-

[3] https://www.duffandphelps.com/insights/publications/cost-of-capital/us-equity-risk-premium-recommendation-2017.

year treasury rate (2.97 percent[4]) yields an overall return on equity of 7.97 percent. Utilizing this approach, a more appropriate return on equity would lie between 8.00 percent and 9.00 percent.

CORRECTION TO STAFF'S DIRECT TESTIMONY

Q. Do you believe that Staff's estimate of Liberty Utilities' revenue requirement needs revision?

A. Yes. Since the filing of direct testimony, Staff and I have agreed that Staff's testimony overstated Liberty Utilities' revenue requirement and should be corrected.

Q. Please briefly summarize the error identified in Staff's direct testimony.

A. On June 22, 2018, Staff filed direct testimony from Paul R. Harrison and Matthew J. Barnes. Mr. Barnes testimony included proposed rates for the three Silverleaf water systems (Holiday Hills, Timber Creek and Ozark Mountain). Mr. Harrison provided testimony regarding the revenue requirement for these systems. The rates proposed by Mr. Barnes for the Silverleaf water systems would over-recover the revenue requirement indicated in Mr. Harrison's direct testimony by approximately $106,000.

Q. How did you identify the potential over-recovery in rates for the Silverleaf water systems?

A. I performed a revenue proof to confirm that the proposed rates would recover the revenue requirement but instead found the over-recovery issue. In my analysis of Mr. Barnes' direct testimony, I calculated a revenue proof using the rates proposed by Mr. Barnes and the billing determinants which had been used throughout Staff's work papers. The sewer rates for Timber

[4] As of July 17, 2018.

Creek and Ozark Mountain were within a reasonable tolerance (*i.e.*, rounding), but the revenues generated by the water rates materially exceeded the revenue requirement indicated in Mr. Harrison's testimony. **Tables 2 and 3** demonstrate the revenue proof for the proposed water and sewer rates.

Table 2: Water Rate Revenue Proof
(Holiday Hills, Timber Creek, Ozark Mountain)

Rate	Units	Charge	Revenue
Fixed Charge			
3/4"	644	$ 31.81	$ 245,828
1"	21	54.08	13,627
2"	80	168.59	161,849
3"	10	318.10	38,172
4"	3	531.23	19,124
Total Fixed	758		$ 478,601
Commodity Charge	36,510	$ 6.80	$ 248,266
		Total Water Revenue	**$ 726,867**
		Harrison Direct	$ 620,270
		Variance	$ 106,597

Table 3: Sewer Rate Revenue Proof
(Timber Creek, Ozark Mountain)

Rate	Units	Charge	Revenue
Fixed Charge			
3/4"	228	$ 34.86	$ 95,379
1"	3	59.26	2,133
2"	14	184.76	31,040
3"	1	348.61	4,183
Total Fixed	246		$ 132,736
Commodity Charge	8,187	$ 25.94	$ 212,382
		Total Water Revenue	**$ 345,118**
		Harrison Direct	$ 344,797
		Variance	$ 321

Q. Are Missouri PSC Staff aware of the error?

A. Yes. When the issue was broached with Staff, they agreed that revision is needed to correct their proposed water rates and to update their corresponding working papers. Staff further indicated that they would address these corrections in rebuttal testimony. The updated proofs and revised Staff proposed rates are indicated in **Tables 4 and 5** below.

Table 4: Water Rate Revenue Proof – Staff Corrected (Holiday Hills, Timber Creek, Ozark Mountain)

Rate	Units	Charge	Revenue
Fixed Charge			
3/4"	644	$ 26.95	$ 208,288
1"	21	45.82	11,546
2"	80	107.81	103,497
3"	10	296.48	35,577
4"	3	377.33	13,584
Total Fixed	758		$ 372,492
Commodity Charge	36,510	$ 6.80	$ 248,362
		Total Water Revenue	**$ 620,854**
		Harrison Direct	$ 620,270
		Variance	$ 584

Table 5: Sewer Rate Revenue Proof (Timber Creek, Ozark Mountain)

Rate	Units	Charge	Revenue
Fixed Charge			
3/4"	228	$ 34.86	$ 95,379
1"	3	59.26	2,133
2"	14	184.76	31,040
3"	1	348.61	4,183
Total Fixed	246		$ 132,736
Commodity Charge	8,187	$ 25.94	$ 212,382
		Total Water Revenue	**$ 345,118**
		Harrison Direct	$ 344,797
		Variance	$ 321

LIBERTY UTILITIES' PROPOSED RATE DESIGN

Q. Please briefly describe your concerns regarding Liberty Utilities' proposed rate designs for the Silverleaf water and sewer systems?

A. There are numerous and significant flaws in the water and sewer rate designs included in Ms. Schwartz' testimony and in the revenue requirement testimony that Liberty Utilities has offered to date.

Q. Please describe the flaws in Liberty Utilities' proposed revenue requirement and rate designs.

A. There are three flaws: potential over-recovery of the Silverleaf revenue requirement, flawed water and sewer rate designs, and the use of the incorrect "existing" rates.

The potential over-recovery is my biggest concern. As noted above, Ms. Schwartz's testimony appears to indicate agreement with Staff's revenue requirement in all areas except capital structure and return on equity. **confidential information removed**

Even if one were to accept Liberty Utilities' desired capital structure and return on equity, Liberty Utilities has miscomputed and overstated the revenue requirement needed to service their desired capital structure and return on equity. According to Ms. Schwartz' direct testimony (page 7), the proposed modifications to return on equity and capital structure represents a

$60,000 impact split between water and sewer, and among all the systems in this docket.

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[5] Based on a 53 percent cost of equity and 10.25 percent ROE proposed in Ms. Schwartz' testimony **confidential information removed**

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Similarly, Liberty Utilities' proposed rate design includes peculiarities. First, the proposed water rates include a different commodity rate for each meter size, *i.e.*, the price of water inexplicably varies depending on the size of the customer's meter. There is no cost of service justification for varying commodity rates by meter size. Varying commodity rates are developed based on the demand characteristics of individual customer classes (residential, commercial, etc.), rather than the size of a customer's meter. Second, the 1" meter fixed charge for sewer is less than that of the 3/4". Meter-based fixed charges are generally increased as meter size increases, reflecting the additional cost of purchasing, installing and maintaining the larger meter as well as recognizing the additional capacity provided. The existing structures for water and sewer should be maintained and updated as necessary in the future to achieve the appropriate level of revenue and to represent the actual cost of service.

The existing water commodity charges in Liberty Utilities' testimony also are incorrect. The existing water rate is $5.96 per 1,000 gallons, but the rates indicated in Ms. Schwartz', Liberty

Utilities' witness, testimony range from $2.12 to $4.71 per 1,000 gallons, all lower than the existing rate. This implies an overall rate revenue increase of 174 percent, more than double the increase in Silverleaf's revenue requirement as proposed by Staff throughout this case. This error does not directly impact the proposed rates, but is misleading to the Commission in that it utterly distorts the impact of Liberty Utilities' proposal on the retail rates incurred by Missouri consumers.

Q. Does Silverleaf agree with Liberty Utilities' proposed capital structure and return on equity?

A. No. I use Liberty Utilities' proposed capital structure and return on equity in the above computations not because I endorse them, but to illustrate the errors in their computations even when those numbers are used. As I noted previously, I believe that Staff's recommended capital structure reasonable.

STAFF'S PROPOSED RATE DESIGN

Q. Please briefly describe your concerns regarding Staff's proposed rate designs for Liberty Utilities' Silverleaf water and sewer systems?

A. The overall rate revenue increase for the Silverleaf water and sewer systems resulting from Staff's proposed revenue requirement is 76 percent and 71 percent respectively. This represents a significant burden on retail customers served by Liberty Utilities' Silverleaf Systems.

Q. Please describe the term "rate shock."

A. Rate shock can simply be described as the harm caused to customers from a sudden,

significant increase in their utility bills caused by an increase in rates. Sudden and significant increases in utility bills especially can hurt customers on limited budgets.

Q. Have state regulators addressed rate shock in the past?

A. Yes. State regulatory agencies such as the Missouri Public Service Commission have broad discretion to establish a rate design that will mitigate the impact of sudden rate shock. James Bonbright in his seminal book *Principles of Public Utility Rates* lists the attributes that a regulator should seek to achieve in designing rates, one of which is the **stability** of those rates[6], meaning that regulators should seek to minimize sudden, unexpected changes to rates that negatively affect existing customers.

Q. Please describe Staff's proposed changes to the rate design currently used on the Silverleaf Systems.

A. In addition to the proposed significant increase to rates, the rates proposed by Staff shift a significant amount of revenue recovery from the commodity charge to a fixed service charge. Under the existing rates the approximate 38 percent and 30 percent of cost recovery is fixed for water and sewer respectively. Under the proposed rates, water fixed cost recovery will increase to 60 percent of revenues and sewer will increase to 38 percent. **Table 8** below summarizes the change.

[6] Bonbright James C., *Principles of Public Utility Rates*, Colombia University Press, New York, NY 1961, p. 291.

Table 8: Fixed and Variable Revenues

	Existing			Staff Direct			Staff Corrected		
	Fixed	Variable	Total	Fixed	Variable	Total	Fixed	Variable	Total
Water $	$ 134,974	$ 217,598	$ 352,572	$ 478,601	$ 248,266	$ 726,867	$ 372,492	$ 248,362	$ 620,854
Sewer $	60,992	141,150	202,142	132,736	212,382	345,118	132,736	212,382	345,118
Total $	$ 195,965	$ 358,748	$ 554,714	$ 611,336	$ 460,648	$ 1,071,985	$ 505,228	$ 460,744	$ 965,972
Water %	**38%**	62%	100.0%	**66%**	34%	100.0%	**60%**	40%	100.0%
Sewer %	**30%**	70%	100.0%	**38%**	62%	100.0%	**38%**	62%	100.0%
Total %	**35%**	65%	100.0%	**57%**	**43%**	100.0%	**52%**	48%	100.0%
Water % Δ				**255%**	14%	106%	**176%**	14%	76%
Sewer % Δ				**118%**	50%	71%	**118%**	50%	71%
Total % Δ							**158%**	28%	74%

Q. Why is this shift problematic?

A. Large fixed charges make it difficult for customers to control their monthly bills by controlling their usage. The higher the percentage of fixed cost recovery the more a customer's bill is unaffected by the actual volumes they use. This design removes economic incentives for responsible use of water by reducing the savings on monthly bills that historically corresponded with conservation. Additionally, by shifting more of Liberty Utilities' revenue to fixed charges, the lowest volume customers are hurt the most. Low volume users are typically customers with small or no yards, no swimming pools, etc. The combined impact of the overall revenue increase that Liberty Utilities seeks to impose on the customers of the Silverleaf Systems, and the significant shift toward fixed cost recovery, could pose significant affordability problems. Finally, shifting more costs to a fixed customer charge reduces the utility's risk by substantially mitigating weather risk. Accordingly, any increase in the percentage recovered by the fixed charge should be balanced by a decrease in return on equity to account for the reduction in risk.

Q. Did Staff evaluate potential customer bill impacts at assumed monthly usage levels?

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The overall rate revenue increases were 76 percent and 71 percent for water and sewer respectively. However, the impact on an individual customer's bill could be much larger. As indicated below, Staff's bill impacts imply a 94 percent bill increase for water and an 83 percent bill increase for sewer. This is because most of the increase is recovered in the fixed charge, which represents a larger proportion of a smaller user's bill.

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Q. Have you performed an independent analysis of customer bill impacts?

A. Yes. **Tables 11 and 12** indicate the bill impacts at each size based on the corrected water rates provided by Staff and the sewer rates indicated in Staff's direct testimony. As indicated the percentage change in the bill for many customers will significantly exceed the overall change in the revenue requirement. The majority of water customers are 3/4". Half the bills in this group would increase by more than **130 percent** under the proposed rates, significantly exacerbating the rate shock problem beyond that of the proposed **76 percent** overall rate revenue increase for water. For sewer the shift is less dramatic, but half of the customers at the smallest meter size (3/4") would still see their bills increase by over **90 percent** versus an overall rate revenue increase of **71 percent**.

Table 11: Monthly Water Bill Impacts – 3/4" Meter (Holiday Hills, Timber Creek, Ozark Mountain)

	20th Percentile	40th Percentile	Median	60th Percentile	80th Percentile
Existing Structure					
Fixed	$ 8.96	$ 8.96	$ 8.96	$ 8.96	$ 8.96
Commodity	$ 5.96	$ 5.96	$ 5.96	$ 5.96	$ 5.96
Staff Direct					
Fixed	$ 31.81	$ 31.81	$ 31.81	$ 31.81	$ 31.81
Commodity	$ 6.80	$ 6.80	$ 6.80	$ 6.80	$ 6.80
Staff Corrected					
Fixed	$ 26.95	$ 26.95	$ 26.95	$ 26.95	$ 26.95
Commodity	$ 6.80	$ 6.80	$ 6.80	$ 6.80	$ 6.80
Bill Impact (at Corrected Rates)					
Usage (gal.)	-	460	900	1,492	2,832
Existing	$ 8.96	$ 11.70	$ 14.32	$ 17.85	$ 25.84
Proposed	$ 26.95	$ 30.08	$ 33.07	$ 37.10	$ 46.22
$ Change	**$ 17.99**	**$ 18.38**	**$ 18.75**	**$ 19.25**	**$ 20.38**
% Change	**200.8%**	**157.1%**	**130.9%**	**107.8%**	**78.9%**

Table 12: Monthly Sewer Bill Impacts - 3/4" Meter (Timber Creek, Ozark Mountain)

	20th Percentile	40th Percentile	Median	60th Percentile	80th Percentile
Existing Structure					
Fixed	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00
Commodity	$ 17.24	$ 17.24	$ 17.24	$ 17.24	$ 17.24
Staff Direct					
Fixed	$ 34.86	$ 34.86	$ 34.86	$ 34.86	$ 34.86
Commodity	$ 25.94	$ 25.94	$ 25.94	$ 25.94	$ 25.94
Staff Corrected					
Fixed	$ 34.86	$ 34.86	$ 34.86	$ 34.86	$ 34.86
Commodity	$ 25.94	$ 25.94	$ 25.94	$ 25.94	$ 25.94
Bill Impact (at Corrected Rates)					
Usage (gal.)	-	210	500	840	2,138
Existing	$ 16.00	$ 19.62	$ 24.62	$ 30.48	$ 52.85
Proposed	$ 34.86	$ 40.31	$ 47.83	$ 56.65	$ 90.31
$ Change	**$ 18.86**	**$ 20.69**	**$ 23.21**	**$ 26.17**	**$ 37.46**
% Change	**117.9%**	**105.4%**	**94.3%**	**85.8%**	**70.9%**

Q. What do you conclude regarding the impact of the higher fixed charge?

A. The level of fixed revenue recovery under the existing rates is already substantial, at nearly 35 percent overall. This existing level of fixed revenue recovery alone may be unreasonable given the regulated nature of Liberty Utilities. Staff's proposal layers on a significant increase to the fixed charges, with the impact disproportionately falling on lower volume users and reducing the incentive of all customers to use water responsibly.

Q. Did Staff or Liberty Utilities provide any testimony regarding this large shift towards fixed cost recovery?

A. Mr. Barnes is the only Staff witness to provide direct testimony regarding rate design, but offers limited commentary on fixed and variable cost recovery (See page 3):

> "The customer charge is developed by comparing certain costs that are generally considered fixed. Commodity charges are generally developed by comparing the remaining costs and the usage characteristics of each system"

While it is certainly reasonable to take fixed costs into consideration when developing a customer charge, Mr. Barnes offers no further justification regarding the nature of the fixed costs selected for inclusion or the level at which they are included. Liberty Utilities has an existing rate structure in place for Silverleaf which has been approved by the Commission, presumably based on the fixed costs incurred by Liberty Utilities. While Staff has indicated in direct testimony that the overall level of rate revenue should be increased, ***no*** rationale has been provided regarding the massive shift towards recovering that revenue in the fixed charge. Without additional evidence, it strains credulity to suggest that the actual fixed costs incurred by

Liberty Utilities in relation to variable costs has increased so drastically since the last time rates were established.

Liberty Utilities' witness Ms. Schwartz does not address rate design and the issue in the rate schedules attached to her testimony (See Schedule JMS-2) making it challenging to determine Liberty Utilities' intent regarding rate design.

Q. Do you have an alternative rate design proposal?

A. Yes. I recommend applying the overall percentage increase in rate revenues needed for these systems to each charge equally. In other words, if 76 percent and 71 percent increases in revenues are needed for water and sewer respectively, then each water rate would increase by 76 percent and each sewer rate would increase by 71 percent. This method ensures simplicity and transparency in the application of the revenue increase to the rates charged. As noted above, neither Staff nor Liberty Utilities has provided any testimony justifying a change to the rate structure for the Silverleaf water and sewer utilities. Yet, this shift will disproportionately impact the lowest volume users of the Silverleaf water and sewer systems. Rather than piling a burdensome rate structure change on top of a substantial increase in revenue requirement, the Commission should mitigate the damage by approving an across the board increase to the existing Silverleaf water and sewer rates. The rates under an across the board approach compared with the corrected rates provided by Staff are indicated in **Tables 13 and 14**.

Table 13: Across the Board Water Rate Increase vs. Staff Corrected (Holiday Hills, Timber Creek, Ozark Mountain)

Rate	Existing	Across the Board		Staff Corrected	
	Charge	Charge	% Δ	Charge	% Δ
Fixed Charge					
3/4"	$ 8.96	$ 15.78	76.1%	$ 26.95	200.8%
1"	14.93	26.29	76.1%	45.82	206.9%
2"	47.76	84.10	76.1%	107.81	125.7%
3"	89.55	157.69	76.1%	296.48	231.1%
4"	149.25	262.82	76.1%	377.33	152.8%
Total Fixed					
Commodity Charge	$ 5.96	$ 10.50	76.1%	$ 6.80	14.1%
Fixed %	38.3%	38.3%		60.0%	
Variable %	61.7%	61.7%		40.0%	

Table 14: Across the Board Sewer Rate Increase vs. Staff Corrected (Timber Creek, Ozark Mountain)

Rate	Existing	Across the Board		Staff Corrected	
	Charge	Charge	% Δ	Charge	% Δ
Fixed Charge					
3/4"	$ 16.00	$ 27.32	70.7%	$ 34.86	117.9%
1"	26.67	45.53	70.7%	59.26	122.2%
2"	85.33	145.68	70.7%	184.76	116.5%
3"	160.00	273.17	70.7%	348.61	117.9%
Total Fixed					
Commodity Charge	$ 17.24	$ 29.43	70.7%	$ 25.94	50.5%
Fixed %	30.2%	30.2%		38.5%	
Variable %	69.8%	69.8%		61.5%	

Q. How do the fixed charges proposed by Staff compare to those of other Missouri water and sewer utilities?

A. **Table 15** indicates a comparison of fixed charges for other Missouri water and sewer

utilities. Even using an across the board approach, Liberty Utilities' fixed charges would be significantly higher than many other Missouri utilities. Staff's approach compounds this disparity by heavily weighting the increase toward the fixed charge.

Table 15: Fixed Charge[7] Comparison

	Water	Sewer
Missouri American Water	$ 9.00	
St. Louis MSD Sewer		$ 21.52
Kansas City Water Services	$ 14.10	$ 21.30
Lee's Summit	$ 9.95	$ 14.15
Columbia	$ 9.75	$ 12.25
Cape Giradeau	$ 8.48	$ 12.69
Average	**$ 10.26**	**$ 16.38**
Silverleaf Water and Sewer		
Existing	$ 8.96	$ 16.00
Across the Board	$ 15.78	$ 27.32
Staff Corrected	$ 26.95	$ 34.86

PHASE-IN OF SILVERLEAF WATER AND SEWER RATES

Q. Why are you recommending a phase-in of the water and sewer rates for the Silverleaf Systems?

A. As demonstrated above, the proposed increases are substantial and would likely pose affordability challenges for Liberty Utilities' customers served on the Silverleaf water and sewer systems. The rates proposed by Staff not only represent a substantial increase in overall revenue recovery for these systems, they also shift a significant amount of cost recovery to lower volume users, impeding their ability to control their monthly bills. The decision to wait nine years before filing a rate case did not lie with those customers. It was the choice of Liberty Utilities. These customers should not be penalized for Liberty Utilities' failure to file for timely rate adjustments

[7] For utilities that have a meter size based fixed charge, charge is based on smallest meter size.

over the years. In keeping with Mr. Bonbright's attribute of Rate Stability, I propose that the Commission require Liberty Utilities to phase in its new rates.

Q. Please describe your proposed phase-in approach.

A. A phase-in approach would move incrementally from the existing rates to the rates approved in this case over a 4-year period. The rates in each year would reflect an incremental increase related to the phase-in plus an adjustment to reflect the under-recovery during the phase-in period. By the end of Year 4, the rates would fully recover the proposed revenue requirement plus a final adjustment for the under-recovery. At that point, the adjustment could be phased-out, leaving the rates as proposed in Year 5 and beyond. Liberty Utilities should be financially indifferent between my proposed phase-in approach and the implementation of new rates in each year. **Tables 16 and 17** demonstrate the phase-in approach.

Table 16: 4-Year Phase-In of Water Rate Increase
(Holiday Hills, Timber Creek, Ozark Mountain)

Rate	Existing	Proposed	Year 1	Year 2	Year 3	Year 4	Year 5
	Charge	Charge	Charge	Charge	Charge	Charge	Charge
Fixed Charge							
3/4"	$ 8.96	$ 15.78	$ 10.32	$ 13.71	$ 17.46	$ 21.62	$ 15.78
1"	14.93	26.29	17.20	22.84	29.09	36.03	26.29
2"	47.76	84.10	55.02	73.07	93.07	115.25	84.10
3"	89.55	157.69	103.16	137.01	174.50	216.10	157.69
4"	149.25	262.82	171.93	228.35	290.83	360.17	262.82
Commodity Charge	$ 5.96	$ 10.50	$ 6.87	$ 9.12	$ 11.61	$ 14.38	$ 10.50

Table 17: 4-Year Phase-In of Sewer Rate Increase
(Timber Creek, Ozark Mountain)

Rate	Existing	Proposed	Year 1	Year 2	Year 3	Year 4	Year 5
	Charge	Charge	Charge	Charge	Charge	Charge	Charge
Fixed Charge							
3/4"	$ 16.00	$ 27.32	$ 18.29	$ 23.92	$ 30.11	$ 36.95	$ 27.32
1"	26.67	45.53	30.49	39.86	50.19	61.59	45.53
2"	85.33	145.68	97.54	127.54	160.59	197.06	145.68
3"	160.00	273.17	182.89	239.15	301.12	369.51	273.17
Commodity Charge	$ 17.24	$ 29.43	$ 19.71	$ 25.77	$ 32.45	$ 39.81	$ 29.43

Q. Does your proposal include the carrying cost related to the portion of the revenue requirement yet to be implemented over the 4-year period?

A. No. While the Commission has approved the inclusion of carrying costs related to the delayed recovery of a revenue requirement associated with a phase-in, I do not believe that would be appropriate in this case. The purpose of the phase-in is to mitigate the impact of a large rate increase, the magnitude of which is principally driven by Liberty Utilities failure to file for timely periodic rate adjustments. The need for the phase-in is driven by a Liberty Utilities management decision. Accordingly, the carrying cost of a phase-in should be borne by Liberty Utilities. If the Commission does allow the inclusion of carrying costs, the interest rate should be based on the short-term cost of commercial borrowing.

Q. If the Commission were to approve your rate design proposal (across the board increases), would you still recommend a phase-in?

A. Yes, I would. Even if applied across the board, the overall rate revenue increases Staff has proposed would represent a substantial new burden to Liberty Utilities' customers and lead to rate shock.

Q. Would your phase-in approach mitigate some of your concerns about rate shock?

A. Yes, the phase-in approach would have a significant benefit in reducing the rate shock felt by customers on the Silverleaf Systems. Referring back to **Table 11** above and the discussion surrounding it, about half of Liberty Utilities' Silverleaf water customers would see their water bills double under the Staff proposal. The phase-in approach would "stair step" any increase in rates such that only 1/4 of the increase is felt in year 1 and customers have time to adjust their budgets to take into account this new, unavoidable expense.

Q. Does this conclude your testimony?

A. Yes.

William Stannard PE

Chairman of the Board

Mr. Stannard has 40 years of experience providing consulting services to investor- and municipally-owned utilities covering management, operation, economic, and financial matters. His extensive experience encompasses formulation of financial systems and ordinances for compliance with regulations regarding the Clean Water Act and the Safe Drinking Water Act; comprehensive revenue requirements and cost of service studies; consulting engineers and financial feasibility reports related to the sale of revenue bonds; financial feasibility analyses; organizational and management reviews; and utility competitiveness studies. He has served as an expert witness in rate litigation matters in federal and state courts and before arbitration panels and state public service commissions. Mr. Stannard has also served as an arbitrator in resolving water and wastewater rate disputes. Mr. Stannard has been an active member of the WEF and AWWA. He served as chair of the WEF task force charged with the development of a *Manual of Practice, Financing and Charges for Wastewater Systems*. Mr. Stannard also authored a chapter entitled, "Selecting the Optimal Capital Financing Plan and Pricing Structure," for the Fourth Edition of the industry guidebook, *Water and Wastewater Finance and Pricing: The Changing Landscape*. This authoritative text is used by utility managers and consultants throughout the United States. He is the Chair of AWWA's Management and Leadership Division, a Trustee of AWWA's Technical & Education Council, and a past-Chair of AWWA's Finance, Accounting and Management Controls Committee.

TECHNICAL SPECIALTIES

- Cost of service and rate studies
- Financial planning studies
- Valuation and acquisitions
- Bond forecasts and examinations
- Regionalization studies
- Management policy and practice
- Environmental finance & accounting

PROFESSIONAL HISTORY

- Raftelis Financial Consultants, Inc.: Chairman of the Board (2017-present); Chief Executive Officer (2012-2016); President (2008-2016); Vice President (2002-2008)
- Black & Veatch: Senior Vice President (1996-2002); Vice President (1992-1996); Project Manager (1984-1992); Assistant Project Manager (1980-1984); Staff Consultant (1975-1980)

EDUCATION

- Bachelor of Science in Business Administration - Kansas State University (1975)
- Bachelor of Science in Civil Engineering - Kansas State University (1975)

PROFESSIONAL MEMBERSHIPS

- American Society of Civil Engineers
- American Water Works Association: Chair of Management and Leadership Division, Trustee of Technical and Education Council, Past-Chair of Finance, Accounting and Management Controls Committee, Texas Section Rates Committee
- Water Environment Federation: Past-Chair of Task Force on Wastewater Charges
- Listed in Best Lawyers in America – Directory of Expert Witnesses
- Listed in Who's Who in Science and Engineering

PROFESSIONAL REGISTRATIONS

- Registered Professional Engineer: MI (6201028796); OH (PE 57725); MA (38847); KS - 1979 (8636)

CERTIFICATIONS

- Series 50 Municipal Advisor Representative

EXPERT WITNESS AND LITIGATION SUPPORT EXPERIENCE

City of Detroit Water and Sewerage Board (MI)

United States District Court, Eastern District of Michigan

Mr. Stannard testified on behalf of the City of Detroit and its Water and Sewerage Department regarding its wastewater rates charged to its wholesale wastewater customers and its industrial retail customers on multiple occasions during the period 1977 through 1996. During this period, Mr. Stannard testified on twelve occasions in depositions and in hearings in Federal Court. In addition to his testimony Mr. Stannard was directly involved in the negotiation of four rate settlement agreements between the City of Detroit and the wholesale customers.

Oakland County Michigan Circuit Court

Mr. Stannard testified on behalf of the City of Detroit in support of the City's water rates charged to the City of Novi, Michigan. The Trial Court found in favor of the City of Detroit citing Mr. Stannard's testimony as a fundamental basis for the decision.

Kalamazoo (MI)

Kalamazoo County, Michigan Circuit Court

Mr. Stannard testified as an expert witness in support of the City in a wastewater rate dispute with its wholesale customers. Mr. Stannard's testimony was provided in deposition conducted by the plaintiff's attorney and helped facilitate a settlement agreement between the parties establishing a process and methodology for determination of future wastewater rates.

Holland (MI)

Arbitration between the City of Holland and the City of Zeeland
Mr. Stannard served as an expert witness on behalf of the City of Holland, Michigan in its arbitration on water rates with the City of Zeeland, Michigan. His testimony was provided in depositions and during the arbitration hearings. The findings of the arbitration panel were principally in support of the City of Holland's water rates.

Bay City (MI)

Water Rate Arbitration between the City of Bay City and its wholesale customers Bay County and Hampton Township
Mr. Stannard served as an arbitrator representing Bay County and Hampton Township in a challenge of the City of Bay City's wholesale water rates. The challenges to the water rates focused on the determination of the City's revenue requirements to be recovered from the water rates and the application of the "utility basis" in the determination of the wholesale cost of service. The neutral arbitrator agreed with the arguments presented by Mr. Stannard and found in favor of Bay County and Hampton Township.

Newark (NJ)

Essex County New Jersey Circuit Court
Mr. Stannard served as an expert witness for the Seton Leather Company in a suit challenging the equity of the City of Newark's wastewater rates. Mr. Stannard testified in deposition and during the Trial Court hearing on this matter. At the conclusion of the trial the Judge found in favor of Seton leather recognizing the testimony of Mr. Stannard as a substantial basis for his decision. The City of Newark appealed the decision to the New Jersey Supreme Court who ruled in favor of the City due to the effect that implementing the Trial Court's decision would have on the residential customers of the City.

Lawrence (MA)

Essex County Massachusetts District Court
Mr. Stannard served as an expert witness on behalf of the Merrimack Paper Company challenging the wastewater rates enacted by the City of Lawrence, Massachusetts. Mr. Stannard testified in deposition and in the hearing setting forth the results of his analyses and his opinions regarding the equity and fairness of the City's wastewater rates in relation to generally accepted wastewater rate making principles and industry standards. The District Court ruled in favor of the City which prompted Merrimack Paper to Appeal to the Commonwealth Supreme Court. Once the appeal was accepted for hearing by the Supreme Court the City agreed to enter into a settlement with Merrimack paper.

Billings (MT)

Water Rate Arbitration between the Billings Heights Water District and the City of Billings, Montana
This matter started as a suit filed by the Billings Heights Water District against the City of Billings challenging water rates that had been adopted by the City. Mr. Stannard was retained as an expert witness on behalf of the District and presented testimony in deposition. After the parties had deposed the experts, the Trial Judge worked with them to enter into a new contract that provided for arbitration to settle disputes. The City then revised its water rates incorporating many of the issues raised by Mr. Stannard but still left other items with which the District disagreed. The case then moved to arbitration which was conducted as "baseball" arbitration with a single arbitrator rather than three. Mr. Stannard testified in the arbitration hearing presenting his analyses and opinions regarding the rate issues. The Arbitrator concurred with many of Mr. Stannard's issues and opinions, but due to the nature of baseball arbitration the ultimate finding favored the City.

PUBLIC SERVICE COMMISSION APPEARANCES

Indiana Regulatory Commission

Bloomington. Mr. Stannard served as expert rate consultant on six separate water rate cases before the Commission. Three of the cases were across the board adjustments to the rate structure based on the overall revenue requirement for the water utility. The other three cases included detailed cost of service and rate design determinations.

Columbus. Mr. Stannard served as the expert rate consultant on two water rate cases before the Indiana Utility regulatory Commission on behalf of the City of Columbus. The first case included a comprehensive cost of service study and rate design and the second case was based solely on development of proposed revenue requirements.

Evanston. Mr. Stannard served as the expert rate consultant on behalf of the City of Evanston on two water rate cases heard by the Indiana Utility Regulatory Commission. Both cases included development of test year revenue requirements, comprehensive cost of service analyses and rate design.

Kentucky Public Service Commission

Boone County Kentucky Water District. Mr. Stannard testified as an expert water rate consultant on behalf of Boone County before the Kentucky Public Service Commission in support of the Water District's proposed water impact fees. The Commission approved the District's application for implementation of these fees.

RELEVANT PROJECT EXPERIENCE

Metropolitan St. Louis Sewer District (MO)

Mr. Stannard served as Project Manager for Raftelis' engagement as rate consultant to the St. Louis MSD Rate Commission. As the Commission's rate consultant, Mr. Stannard was responsible for performing an independent review of MSD's proposed wastewater and stormwater rates covering the period 2008 through 2012. The project included a detailed evaluation of the cost of service studies supporting the wastewater and stormwater rates, an evaluation of proposed policies for implementation of the rates, and examination of the level and phasing of annual rate adjustments proposed during the five-year study period. Mr. Stannard was also responsible for submitting testimony and exhibits for the rate hearings conducted by the Rate Commission and assisted the Commission's Counsel in

cross examination of MSD witnesses and witnesses of the various interveners in the case.

City of Saginaw (MI)

Mr. Stannard served as the Project Manager for a water cost of service engagement for the City of Saginaw (City). The engagement included development of a comprehensive financial plan, cost of service analysis and design of water rates. In addition to its retail customers, the City also provides water service to 19 wholesale customers, which use approximately 60% of the water produced. A key element of the engagement involved meetings with each of the wholesale customers to explain in detail the cost of service allocation methodology and the effect on the customer's water rates.

City of Wichita (KS)

As Project Manager, Mr. Stannard assisted the City of Wichita (City) in performing an analysis of wholesale water rates by evaluating billing data for the past three years for all of the City's wholesale customers and provided recommendations to improve the recovery of revenue requirements from these customers. Raftelis has also performed a rate study to determine a raw water rate for a proposed new industrial customer seeking service from the City. Raftelis also analyzed the City's rate structure to determine its effectiveness for providing stable revenues during varying weather conditions.

Little Rock Wastewater Utility (AR)

Mr. Stannard is Project Manager for a comprehensive wastewater financial planning, cost of service and rate study for the City of Little Rock's Wastewater Utility (LRW). In addition to the cost of service analysis, this project includes a feasibility study of alternative system growth charges and a system value determination. LRW is in the midst of a major capital improvement program to address wet weather flow management issues. The program includes construction of a new wastewater treatment plant and, as such, LRW is interested in assessing the feasibility of instituting a system development charge to be applied to new customers. The system valuation element of the project will be an integral step in LRW's ongoing asset management program development.

Fort Gratiot Township (MI)

Mr. Stannard served as the Project Manager on an engagement for Fort Gratiot Township, Michigan (Township) to review proposed water rates from the City of Port Huron (City). The City provides wholesale water service to the Township and the Township was concerned about the level of proposed rate increases they were facing and, hence, engaged Raftelis to review the proposed rates to ensure they were appropriate.

City of Detroit (MI)

Mr. Stannard served as Project Manager/Principal-in-Charge for various projects for the City of Detroit (City), including comprehensive water and wastewater revenue requirements, cost of service and rate design studies; consulting engineers/feasibility reports for over $2 billion of water and wastewater system revenue bonds; an automated capital improvement program management and tracking system; and an automated work order tracking system. The rate study engagements included development of user-friendly, Windows-based, rate models, initially using Lotus 123 and, subsequently, Microsoft Excel® for use by the City's rate and finance staff.

City of Grosse Pointe (MI)

Mr. Stannard served as Project Manager to the City of Grosse Pointe, Michigan (City) performing a comprehensive water and wastewater cost of service study including benchmarking analysis allowing the City to compare their performance with respect to key performance criteria to the performance of other similar utilities. Mr. Stannard has also been responsible for the development of a ten-year financial plan for the City's Utilities Department, and creation of a financial planning and rate model for use by City staff in preparing annual updates to the water and wastewater rates.

City of Philadelphia (PA)

Mr. Stannard served as a water rate expert, assisting the City of Philadelphia in a water rate dispute with one of the City's major wholesale customers. Dispute resolution was accomplished through arbitration where Mr. Stannard provided expert testimony in support of the City's water cost of service analysis and rate design. He also assisted the City in developing the overall strategies for crafting the City's case.

City of Baltimore (MD)

Mr. Stannard serves as the Project Director on this multi-year engagement with the City of Baltimore's Bureau of Water and Wastewater (City). The engagement encompasses a variety of cost of service and rate studies for the City's water and wastewater systems. He is currently leading our Firm's wastewater cost of service analysis and development of high strength surcharge rates in accordance with EPA user charge regulations. Other components of our engagement with the City include review and evaluation of cost allocations to the City's wholesale water and wastewater customers in accordance with the water and sewer service agreements.

City of Portland (OR)

Mr. Stannard was Project Manager for an engagement for the City of Portland Water Bureau (Bureau) which provides retail water service to customers within the City and wholesale water service to 19 agencies under agreements that will expire within the next couple of years. Raftelis' scope of work was separated into two parts: assistance in developing wholesale rates and development of a robust modeling tool for onging rate calculation and financial planning use by the Bureau.

Northeast Ohio Regional Sewer District (OH)

Mr. Stannard served as Project Director in the development of a comprehensive financial plan for the five year period 2007-2011 and 2012-2016, as well as various other engagements for the District since 2004. The financial plan included projections of customers, water usage and revenues under the existing rates, projections of operating and maintenance expense, debt service on existing bonds and additional bonds necessary to fund the capital improvement program, and reserve fund deposits. In addition, Raftelis recommended a rate adjustment program over the five year study period to meet the projected revenue requirements and maintain the District's financial sustainability. A user-friendly

computer model was also developed for use by District staff to analyze different planning scenarios.

City of Los Angeles (CA)

Mr. Stannard served as Principal-in-Charge for the best practices study for the Los Angeles Wastewater Program. This project built on the City's efforts conducted during the five years prior to the best practices study during which the City, working through its Labor Management Committee, had reduced the program's full-time employment by 28 percent. The best practices study covered every aspect of the organization including plants, collection system, engineering, finance, accounting, human resources, billing and collection, customer service, construction management, and many others. As a result, additional savings of nearly 20 percent were identified over the ensuing five-year period, utilizing normal attrition in lieu of layoffs. The projected savings incorporated business process changes that were identified and evaluated as part of the project with a significant portion of the savings to be achieved in the areas of support services and capital improvement programs.

City of San Diego (CA)

Mr. Stannard served as the Principal-in-Charge for a management review of the City's Water Department. This review was driven by City Council concerns about the overall management of the Department and several specific areas within the Department, as identified by the Council. The City Council directed a very tight time schedule for the project, which was completed within two months. In order to accomplish the goals of the project within this schedule, separate work teams were formed for each of the assigned areas. The systematic approach provided an efficient, thorough and comprehensive review of each functional area while allowing the project team to successfully conform to the tight schedule.

City of Cincinnati (OH)

Mr. Stannard served as the Partner-in-Charge for the project team engaged by Cincinnati Water Works (CWW) to work with CWW's Executive Management Team in development of their first Strategic Business Plan. The work on this project included a complete employee survey, outreach with key external stakeholders, multiple workshops with the Executive Team and staff representatives for development of CWW's vision and mission, as well as goals, objectives and strategies, and leading multi-disciplined CWW teams in development of specific action plans. The result of this engagement was a comprehensive business plan which established a road map for the utility over the coming decades.

City and County of San Francisco (CA)

Mr. Stannard served as Project Manager on an engagement with the San Francisco Public Utilities Commission (SFPUC) in the development of contract negotiation strategies regarding the renegotiation of SFPUC's wholesale water service agreements with it wholesale water customers. A major component of Mr. Stannard's work included the analysis of the impact of SFPUC's $4.5 billion capital improvement program on the overall financial plan and the allocation of costs to the wholesale customers under the utility basis of cost allocation as well as the cash basis to determine the short, mid, and long term impacts on retail rates and wholesale rates.

City of Suffolk (VA)

Mr. Stannard serves as Project Director for Raftelis' multi-year engagement with the City of Suffolk (City) to provide financial services to the City's Department of Public Utilities (DPU). The scope of services include an annual update of the ten-year comprehensive financial plan, determination of water and sewer costs of service, development of proposed water and sewer rates for the upcoming fiscal year, and an assessment of the City's water and sewer system availability fees. In addition, Raftelis also conducts an annual true-up analysis for wholesale water service to the Authority. The true-up analysis recalculates the water rates using actual cost and water usage data to determine the actual cost-of-service for the Authority during the prior year.

Franklin Water Utility (WI)

Franklin Water Utility (FWU) purchases water supplies on a wholesale basis from the adjacent City of Oak Creek (Oak Creek). Mr. Stannard provided extensive testimony on behalf of the wholesale intervenors in the 2011 rate increase application of the Oak Creek Water and Sewer Utility (PSCW Docket No. 4310-WR-104). Mr. Stannard's testimony focused on three key areas. First, was a refutation of Oak Creek's proposed use of coincident customer class peaking factors in its base-extra capacity cost of service study (something not previously done by the PSCW). Second, Mr. Stannard proposed that Oak Creek conduct a detailed analysis of customer class demand characteristics in lieu of their proposed use of demand factors that severely disadvantaged wholesale customers. Finally, Mr. Stannard filed extensive testimony regarding the allocation of public fire projection costs to the City of Franklin under the methodology approved for use by Milwaukee Water Works in PSC Docket No. 372-WR-107. The PSC issued a ruling affirming Mr. Stannard's position on these issues in the Commission's delegated Final Decision on July 23, 2012 (PSC Ref#: 168775). This ruling was upheld in the Commission's preliminary determination to modify the Final Decision made on October 3, 2012 (PSC Ref#: 173880).

Northwest Water Commission (IL)

Mr. Stannard has served as principal-in-charge for several engagements for the Northwest Water Commission (Commission). These engagements have included review of water rates charged to the Commission proposed by the City of Evanston (City) and assistance with negotiation of the rates to be charged under the terms of the Commission's contract with the City, and a determination of the current value of the Commission's water system assets. Currently, Raftelis is developing proposed water rates for potential service to new contract customers.

City of Naperville (IL)

Mr. Stannard served as Project Director for a comprehensive water and wastewater rate study for the City of Naperville (City). The scope of work included development of financial plans for the

water and wastewater utilities, cost of service analyses, and design of proposed rates to fund the projected revenue requirements for the two utilities. The findings of the study were presented to the City Council which approved the proposed changes in rates including a purchased water component which will serve as a pass through to reflect the rates for water purchased from the Du Page County Water Commission.

Loudoun County Sanitation Authority (VA)

Mr. Stannard served as the Project Director on two engagements for Loudoun County Sanitation Authority (Authority), a cost of service rate study and a bond feasibility study. The Authority's goal for the rate study was to maintain the current rate structure and minimize rate increases while still preserving a sufficient fund balance to meet all internal coverage requirements. The follow-up bond feasibility study used the newly developed rate model to ensure the Authority's financial capability to issue new debt.

City of Kansas City (MO)

Mr. Stannard served as the Project Director for a wastewater financial planning and cost of service study for the City of Kansas City Water Services Department (Department). The project included development of a comprehensive financial plan, cost of service analysis and design of wastewater rates. In addition to its retail customers, the Department also provides wastewater service to more than 20 wholesale customers. A key element of the engagement involved a detailed analysis of the costs of the system components which serve the wholesale customers to serve as the basis for a move to cost of service based rates for the wholesale customers in place of the historic practice of tying the wholesale rates to the inside City retail rates.

Tarrant Regional Water District (TX)

Mr. Stannard served as Project Director on a project for the Tarrant Regional Water District (TRWD) to study the financial, economic, and policy impacts of a proposal that TRWD pay communities for wastewater effluent discharged into the Trinity River which would subsequently be used to augment TRWD's raw water supply.

City of Hobbs (NM)

Mr. Stannard has been the Project Manager on the City of Hobbs (City) water and wastewater rate study. The City was faced with significant capital expenditures to upgrade their wastewater treatment plant and wanted to ensure that the water and wastewater utilities were operating in a self-sufficient manner. Raftelis worked with City Staff as well as the City Council and Water Board to determine the City's rate setting goals. Raftelis then developed water and wastewater rate structures that addressed these goals, in particular, conservation, while providing for adequate capital financing.

City of Lee's Summit (MO)

As Project Manager, Mr. Stannard performed comprehensive water and wastewater cost of service studies for the City of Lee's Summit (City) as well as provided an update of the City's system development charges collected from new customers.

City of Olathe (KS)

Mr. Stannard has been the Project Manager on a series of engagements for the City of Olathe (City). Raftelis first performed an analysis of the City's existing System Development Fee methodology and provided guidance on how the fees could be updated and improved. Raftelis provided the subsequent revisions and updates and presented these findings to City Council. Raftelis has subsequently been engaged by the City to analyze proposed wastewater impact fees that would supplement system development charge revenue, to update the City's cost of service computer model, and to assist with the determination of wholesale wastewater rates.

City of Wyoming (MI)

Mr. Stannard was the Project Manager for Raftelis' engagement with the City of Wyoming (City) to perform a water cost of service study and to provide assistance in the negotiation of new wholesale contracts for water and wastewater service. The City engaged Raftelis to perform a water cost of service study to support the negotiation of new wholesale water contracts. Raftelis also provided expertise in areas including rate of return, cost of service allocations, industrial surcharges, and rate design.

OTHER RELEVANT PROJECT EXPERIENCE

- Allegheny County Sanitary Authority (PA) – Rate Study, Industrial SC Review
- Arlington County (VA) – Alternative Rate Structure Analysis, Financial Planning, Availability Fee Development, and Public Involvement Program
- City of Columbus (OH) – Water and Wastewater Rate Study
- City of Henderson (NV) – Water and Wastewater Rate Study
- City of Lexington (KY) – Water System Valuation
- City of Loveland (OH) – Evaluation of Wastewater Service Alternatives
- City of Kalamazoo (MI) – Wastewater Rate Review
- City of Macomb (MI) – Wastewater Rate Litigation Assistance and Feasibility Analysis for Acquisition
- Oakland County (MI) – Water and Wastewater Rate Review and Master Plan Financial Analysis
- San Antonio Water System (TX) – Water and Sewer Rate Study
- San Francisco Public Utilities Commission (CA) – Wholesale Contract Development, Reuse Water Pricing Review, Wheeling Rate Review
- City of Warren (MI) – Water Rate Litigation Support
- United States Navy, Norfolk (VA) – Water Rate Review

OTHER EXPERIENCE

- Invited Instructor: University of Colorado School of Engineering – Graduate Course on Utility Management and Finance

FULL CLIENT LIST

Alabama
- Birmingham Water Works Board
- Jasper Water Board
- Jefferson County Wastewater

Arizona
- City of Phoenix
- Pima County Wastewater

California
- City of Los Angeles Bureau of Sanitation
- City of Los Angeles Department of Water and Power
- Metropolitan Water District of Southern California (Los Angeles)
- City of San Diego
- City of San Francisco Public Utilities Commission
- Armor Foods – Turlock, CA

Colorado
- Town of Grand Lake
- Littleton Sewer Rate Coalition

Illinois
- City of Peoria
- City of Carbondale
- Northwest Water Commission

District of Columbia
- Water and Sewer Authority

Georgia
- City of Atlanta
- City of Columbus
- Gwinnett County

Indiana
- City of Bloomington
- City of Columbus
- City of Evansville
- Indianapolis Water Company

Kansas
- City of Olathe
- City of Wichita
- City of Valley Center

Kentucky
- Boone County Water District
- Hardin County Water District No. 1
- Lexington-Fayette Urban County Government

Louisiana
- New Orleans Sewerage and Water Board

Maryland
- City of Baltimore
- Howard County
- Washington Suburban Sanitary Commission
- Massachusetts
- Massachusetts Water Resources Authority
- Merrimack Paper Company – Lawrence, MA
- City of Saugus
- Michigan
- Bay County
- City of Detroit
- City of Flat Rock
- City of Flint
- City of Grand Rapids
- City of Holland
- City of Kalamazoo
- City of Lansing
- Macomb County
- Oakland County
- City of Saginaw
- City of Warren
- City of Wyoming

Mississippi
- City of Jackson

Missouri
- City of Columbia
- City of Gladstone
- City of Kansas City
- City of Jefferson
- City of Lee's Summit
- City of North Kansas City
- City of St. Joseph
- St. Louis Metropolitan Sewer District

Montana
- County Water District of Billings Heights
- New Jersey
- Seton Leather Company – Newark, NJ

New Mexico
- City of Hobbs

Nevada
- City of Henderson

New York
- City of New York

North Carolina
- Orange County Water and Sewer Authority
- City of Winston-Salem

Ohio
- City of Cincinnati
- Cincinnati Metropolitan Sewer District
- City of Lakewood
- City of Loveland
- Northeast Ohio Regional Sewer District
- City of Mason
- City of Middletown

Oregon
- City of Portland

Pennsylvania
- Alleghany County Sanitary Authority
- City of Philadelphia

South Carolina
- City of Charleston

Texas
- City of Arlington
- City of Austin
- City of Dallas
- City of Denton
- City of Houston
- City of San Antonio
- Tarrant Regional Water District

Virginia
- Arlington County
- Chesterfield County
- Loudoun County
- City of Portsmouth
- City of Richmond
- City of Suffolk
- City of Virginia Beach

Washington
- City of Seattle

Canada
- Regional Water Customers Group, Edmonton, AB

International
- Bangkok – Trade Development Agency
- Cairo - USAid
- Lima, Peru – World Bank
- Oman
- Puerto Rico Water and Sewer Authority

Federal
- United States Navy