

Oct-18

Department Description	Total employee % of time spent indirectly on capital related projects	Number of Employees as per Survey Response Form	Total Department %	Response Status	Number of Employees as per HR Data
LABS Executive is a department consisting of senior leaders of shared services functions. It includes the Senior VP of Shared Services, the VP of Human Resources, the Chief Administrative Officer/Corporate Secretary and the Business Unit Compliance Director.	20	2	10.00	Received	2
EP is a corporate shared resource group that provides short term and long term energy supply planning, gas and electric procurement services, gas scheduling, and demand forecasting services to Liberty's natural gas utilities. Liberty's electric utilities in CA and NH. The team is led centrally in Oakville, with staff located in two U.S. states.	25	1	25.00	Received	1
Corporate customer experience exists to provide the regions with consistent support & Vendor management and project support ensuring knowledgeable answers to operational issues, and initiatives. Five key areas of focus: <ul style="list-style-type: none"> • Customer Care - Support customer inquiries from all channels • Meter Data Services / Billing Set up and billing of customers • Credit and Collections - Secure timely payments • Customer Marketing & Communications • Commitment to Communities 	115	8	14.38	Received	9
IT Corporate represents employees and the work they perform, and 3rd party expenses (e.g. IT service providers, hardware and software maintenance, etc.) that follow a companywide standard and are essentially mandatory for the business units. Areas covered are system architecture, network, server, security, end user services and helpdesk.	805	16.1	50.00	Received	23
IT Business represents employees and the work they perform, and 3rd party expenses that are required and/or requested by the business. The various business units have a more explicit say in what work is performed and how it is paid for. Areas covered are transition, project management and application support.	525	10.5	50.00	Received	15
A group of professionals with a mandate to support operations in recognizing and controlling workplace hazards to prevent environmental, safety or security non-conformances. On-going resource to assist operations in reducing workplace risk for personnel and contractors through the administration of EHS monitoring and measuring programs. Measuring and managing security risk controls in conjunction with operations.	190	4	47.50	Received	10
Corporate Procurement department is in charge of developing company-wide policies and procedures on company procurement as well as developing a procurement, warehousing, fleet corporate strategy. The group is involved in negotiating company-wide contracts to support multiple Liberty Utilities' entities.	210	3	70.00	Received	3

Oct-18

Department Description	Total employee % of time spent indirectly on capital related projects	Number of Employees as per Survey Response Form	Total Department %	Response Status	Number of Employees as per HR Data
Pre-construction cost modeling, securing required information and completing application forms, insurance quotation procurement, contract wording reviews, assist various business units with risk assessment to understand the implications of entering in various service/construction contracts, insurance policies placement, working with independent insurance consultants to complete lender reviews in various states of funding, claim reporting, negotiation of claim settlements, claim payment collections, paperwork relating to securing claim settlements, contractor insolvencies/contract violations meetings – advising and guiding in-house and outside council, third party subrogation demands, assist various business units with contract negotiations with contractors/vendors, budget preparation, bond procurement and placement, invoice allocation and payment	50	1	50.00	Received	1
Accounting, Tax, Reporting and Administrative Support	147.35	22	6.70	Received	32
The Financial Planning & Analysis department is responsible for managing the long term planning, budgeting, forecasting and management reporting activities and processes for APUC.	230	7	32.86	Received	14
The Treasury department is responsible for corporate, subsidiary and project financing, enterprise wide cash management, enterprise financial risk management (FX and Interest rate) and Capital Planning	360	7	51.43	Received	7
The Internal Audit (IA) Department is an independent and objective assurance and consulting activity that is guided by a philosophy of adding value to improve the operations of APUC and its subsidiaries. It assists APUC in accomplishing its objectives by bringing a systematic and disciplined approach to evaluate and improve the effectiveness of the organization's governance, risk management, and internal control.	80	6	13.33	Received	6
Provide legal support to all areas of business as needed	175	8	21.88	Received	8
Enterprise Risk Management team supports the company with the identification, assessment, and mitigation of its risks.	90	3	30.00	Received	3
The Regulatory Strategy Department is responsible for managing the regulatory strategy for all of Liberty Utilities' natural gas, electricity, and water entities in the U.S. Currently Liberty Utility operates in 12 states, and approval to operate in New York state is pending.	40	2	20.00	Received	2

Oct-18

Department Description	Total employee % of time spent indirectly on capital related projects	Number of Employees as per Survey Response Form	Total Department %	Response Status	Number of Employees as per HR Data
<ul style="list-style-type: none"> Establish annual and long term targets and ensure that the annual plans are built for operational and financial success. Drive financial and operational achievement of the approved business and local plans through the use of Balanced Scorecards. Develop overall organizational growth strategy and long term business plans Standardize functional processes to ensuring a common approach is used regardless of location. Support the development of a health and safety culture at Liberty Utilities that improves the quality of the workplace environment, provides an injury-free workplace and protects public security and safety. 	30	1	30.00	Received	1
Strategic Planning	15	1	15.00	Received	1
Oversight of regulatory strategy, business & community development, control & dispatch, and energy procurement teams.	30	1	30.00	Received	1
<p>The Investor Relations group is responsible for all interactions, corporate messaging, and disclosures to Algonquin's institutional and retail investors.</p> <p>The Investor Relations group works on a number of matters that benefit Liberty Utilities with respect to issuing/preparing press releases, completing regulatory filings (as required by Canadian and U.S. securities laws), managing investor relationships and investor programs (e.g., conferences, analyst meetings, conference calls, etc.), managing relationships with external service providers such as Transfer Agent, newswire dissemination services, Bloomberg, etc., managing relationships with the Toronto and New York Stock Exchanges, preparing investor presentation decks (equity, debt, earnings calls, acquisitions, AGM, etc.), preparing the Annual Report and Corporate Responsibility Reports and managing their printing and distribution, assisting with AGM preparations including preparation of the proxy voting materials, and managing internal and external media news.</p>	75	3	25.00	Received	3
<p>Included under Transformation is the Sustainment department 9881. The department is responsible for managing the ERP system (currently Great Plans) for finance. They support Finance as well as the Customer First program in activities related to Great Plans, Concur Expense, and Hyperion Financial Management (HFM). Some example of the activities performed by this department are running reports, extracting data, managing the integrations of 3rd party software applications to Great Plans and troubleshooting data issues and supporting users.</p>	30	3	10.00	Received	3

Oct-18

Department Description	Total employee % of time spent indirectly on capital related projects	Number of Employees as per Survey Response Form	Total Department %	Response Status	Number of Employees as per HR Data
<p>The Transformation department includes the Customer First program. The Customer First program is a transformational set of initiatives that enables APUC's vision and creates opportunities arising from the disruption and change in the utility industry. The Customer First program will deploy a set of leading practice business processes, technology solutions and operating models that enable APUC to deliver compelling customer-centric product and service offerings in regulated and non-regulated markets. The overall Customer First solution is comprised of a number of "best-in-class" technologies including SAP, AMI, GIS, ADMS, and others that will enable the capabilities that are needed to deliver the service offerings or standards to customers and stakeholders. This department is focused strictly on ERP specific technologies and capabilities.</p>	180	6	30.00	Received	6
<p>The Transformation department includes the Customer First program. The Customer First program is a transformational set of initiatives that enables APUC's vision and creates opportunities arising from the disruption and change in the utility industry. The Customer First program will deploy a set of leading practice business processes, technology solutions and operating models that enable APUC to deliver compelling customer-centric product and service offerings in regulated and non-regulated markets. The overall Customer First solution is comprised of a number of "best-in-class" technologies including SAP, AMI, GIS, ADMS, and others that will enable the capabilities that are needed to deliver the service offerings or standards to customers and stakeholders. This department is focused strictly on CIS specific technologies and capabilities.</p>	60	2	30.00	Received	2
<p>The Transformation department includes the Customer First program. The Customer First program is a transformational set of initiatives that enables APUC's vision and creates opportunities arising from the disruption and change in the utility industry. The Customer First program will deploy a set of leading practice business processes, technology solutions and operating models that enable APUC to deliver compelling customer-centric product and service offerings in regulated and non-regulated markets. The overall Customer First solution is comprised of a number of "best-in-class" technologies including SAP, AMI, GIS, ADMS, and others that will enable the capabilities that are needed to deliver the service offerings or standards to customers and stakeholders. This department is focused strictly on EAM specific technologies and capabilities.</p>	60	2	30.00	Received	3

Oct-18						
Department Description	Total employee % of time spent Indirectly on capital related projects	Number of Employees as per Survey Response Form	Total Department %	Response Status	Number of Employees as per HR Data	
<p>The Transformation department includes the Customer First program. The Customer First program is a transformational set of initiatives that enables APUC's vision and creates opportunities arising from the disruption and change in the utility industry. The Customer First program will deploy a set of leading practice business processes, technology solutions and operating models that enable APUC to deliver compelling customer-centric product and service offerings in regulated and non-regulated markets. The overall Customer First solution is comprised of a number of "best-in-class" technologies including SAP, AMI, GIS, ADMS, and others that will enable the Capabilities that are needed to deliver the service offerings or standards to customers and stakeholders.</p> <p>This department is focused strictly on OCM and PMO specific activities related to the Customer First program.</p>	110	4	27.50	Received	4	
	3652.35	123.6	29.55			
HR Operations Support to employees in Oakville : Generalized HR Support, Talent Acquisition, Policies and Procedures, Performance Management, Coaching & Organizational Design	147.75	5	29.55		5	
Oversee and administer Total Rewards for Company, including compensation, payroll and benefits, as well as HR Systems	472.80	16	29.55		16	
<ul style="list-style-type: none">• Provide a framework for:<ul style="list-style-type: none">o learning and development policies and activitieso developing people through individual learning strategies• Develop Organizational programs to meet business and employee needs• Consult with the business about L&D needs by conducting training needs analysis• Establish priorities and plans for training activities and resources• Advise on training budgets and resources• Ensure trainers are qualified to deliver training• Manage enterprise-wide Learning Management System	147.75	5	29.55		5	
<ul style="list-style-type: none">• Provide a framework for:<ul style="list-style-type: none">o Communication policies and activitieso Create Communication strategies• Drive and Support Organizational programs to drive culture• Consult with the business about communication needs by conducting communication needs analysis• Establish priorities and plans for communication activities and resources• Advise on Comms budgets and resources• Ensure a consistent corporate message is being driven across organization• Communicate Organizational Changes• Work directly with CEO and E-Team on Corporate Culture and direction• Supporting and Organizing Corporate driven events	59.10	2	29.55		2	

Oct-18

Department Description	Total employee % of time spent indirectly on capital related projects	Number of Employees as per Survey Response Form	Total Department %	Response Status	Number of Employees as per HR Data
Reception courier, lunch order, building maintenance, supply orders, landlord services, Leasehold improvements	0.00	0	29.55		0
Response received. The following 4 employees: Kathy Turlinski, Mike, Eden, Irene Raposo, and Sherin Surrao perform Oakville facilities and maintenance support functions.	118.20	4	29.55		
	4598	156	29.55		

Job Description	Total employee % of time spent indirectly on capital related projects	Number of Employees as per Survey Response Form	Total Department %	Response Status	Number of Employees as per HR Data
The executive team is responsible for the overall planning, budgeting, approving, and strategizing (including regulatory rate cases) on a number of capital investments throughout the organization (e.g., infrastructure, IT, plant and equipment, vehicles), arranging for capital financing, and preparing and reviewing capital related items/projects for Board approval	40	1	40	Received	1
The executive team is responsible for the overall planning, budgeting, approving, and strategizing (including regulatory rate cases) on a number of capital investments throughout the organization (e.g., infrastructure, IT, plant and equipment, vehicles), arranging for capital financing, and preparing and reviewing capital related items/projects for Board approval	40	1	40	Received	1
The executive team is responsible for the overall planning, budgeting, approving, and strategizing (including regulatory rate cases) on a number of capital investments throughout the organization (e.g., infrastructure, IT, plant and equipment, vehicles), arranging for capital financing, and preparing and reviewing capital related items/projects for Board approval	50	1	50	Received	1
APUC Total	130	3	43.3		

2018 INDOH Rate	4727.9	159	29.81
------------------------	---------------	------------	--------------

Verification	Comments	Final	Finance verification to reconcile # LU Canadian EEs to HRIS extract
-	Response received, employee data verified with HR Data	Final	
-	Response received, employee data verified with HR Data	Final	
1	Response received, employee data verified with HR Data, 1 excluded employee has left the organization	Final	
7	Response received, employee data verified with HR Data, requested for signed forms. The employee labour adjusted to reflect the survey response form	Final	
5	Response received, employee data verified with HR Data, requested for signed forms. The employee labour adjusted to reflect the survey response form	Final	
2	Response received, The following 4 employees: Kathy Turlinski, Mike, Eden, Irene Raposo, and Sherin Surrao are not included on this form as they perform Oakville facilities and maintenance support functions. The 4 employees excluded are included as average percentage. 2 LPCo dedicated employees are excluded	Final	
-	Response received, employee data verified with HR Data	Final	

Finance
verification to
reconcile # LU
Canadian EEs to
HRIS extract

Final

Comments

Verification

Final

- Response received, employee data verified with HR Data

Final

10 Response received, employee data verified with HR Data, excluded 10 employees - Excluding 9 dedicated LPCo employees & 1 Co-op Student

Final

7 Response received, employee data verified with HR Data, excluded 7 employees - Excluding 7 dedicated LPCo employees

Final

- Response received, employee data verified with HR Data

Final

- Response received, employee data verified with HR Data, Survey response included MO employees but this sheet includes only Oakville employees, emailed Dan to include only Oakville employees

Final

- Response received, employee data verified with HR Data

Final

- Response received, employee data verified with HR Data

Final

- Response received, employee data verified with HR Data,

Finance
verification to
reconcile # LU
Canadian EEs to
HRIS extract

Final

Comments

Verification

- Response received, employee data verified with HR Data,

Final

- Response received, employee data verified with HR Data

Final

- Response received, employee data verified with HR Data

Final

- Response received, employee data verified with HR Data

Final

- Response received, employee data verified with HR Data

Final

Finance
verification to
reconcile # LU
Canadian EEs to
HRIS extract

Final

Comments

Verification

Response received, employee data verified with HR Data

Final

Response received, employee data verified with HR Data

Final

(1) Response received, employee data verified with HR Data

Final

Finance
verification to
reconcile # LU
Canadian EEs to
HRIS extract

Final

Comments

Verification

Final

Response received, employee data verified with HR Data

Verification	Comments	Final	Finance verification to reconcile # LU Canadian EEs to HRIS extract
	Response received, The following 4 employees: Kathy Turlinski, Mike, Eden, Irene Raposo, and Sherin Surrao are not included on EHS form as they perform Oakville facilities and maintenance support functions. Hence, they are applied average percentage		#N/A Department not in HRIS but created in budgets
			10/1/03 Department already included above in row 8

Verification	Comments	Final
-	Response received, employee data verified with HR Data	Final
-	Response received, employee data verified with HR Data	Final
-	Response received, employee data verified with HR Data	Final

PRIVILEGED & CONFIDENTIAL

Company Code & Department Cost Code	Department Category	LUC/LABS Report account descriptions	Person Completing the Survey	Response Survey Signed on Date	Survey Response Email received Date
2200-9860	Executive and Strategic Management	LABS - Executive	George Trisic	10-Sep-18	14-Sep-18
2100-9835	Energy Procurement	LUC - Energy Procurement	William Killeen	13-Aug-18	13-Aug-18
2100-9865	Customer Experience	LUC - Customer Experience	Brent Baker	5-Sep-18	7-Sep-18
2200-9800	Information Technology	LABS - Corporate IT	John Lowson	1-Dec-18	1-Dec-18
2200-9801	Information Technology	LABS - Business IT	John Lowson	1-Dec-18	1-Dec-18
2200-9815	Environment, Health, Safety and Security	LABS - EH&S	Timothy Deppmeyer	30-Nov-18	30-Nov-18
2200-9825	Procurement	LABS - Purchasing	Luiza de Camaret	2-Nov-18	2-Nov-18

PRIVILEGED & CONFIDENTIAL

Company Code & Department Cost Code	Department Category	LUC/LABS Report account descriptions	Person Completing the Survey	Response Survey Signed on Date	Survey Response Email received Date
2200-9821	Risk Management	LABS -Insurance & Risk Management	Marianna Michael	23-Aug-18	3-Oct-18
2200-9820	Financial Reporting, Planning and Administration	LABS - Accounting & Admin	Todd Mooney	26-Oct-18	26-Oct-18
2200-9827	Financial Reporting, Planning and Administration	LABS - FPA	Frank Coschignano	10-Oct-18	10-Oct-18
2200-9822	Treasury	LABS - Treasury	Arthur Kacprzak	4-Oct-18	4-Oct-18
2200-9824	Internal Audit	LABS - Internal Audit	Dan Gilpin	16-Nov-18	16-Nov-18
2200-9823	Legal Costs	LABS - Legal	Jen Tindale	10-Oct-18	10-Oct-18
2200-9828	Compliance	LABS - Compliance	Lisa Jeffray	4-Oct-18	4-Oct-18
2100-9830	Regulatory Strategy	LUC - Regulatory	Gaetana Girardi	31-Oct-18	31-Oct-18
2100-9850	Executive, Operations & Administration	LUC - Operations	Gerald Tremblay	18-Sep-18	1-Nov-18
2200-9868	Executive and Strategic Management	Strategy	Michael Griffin	11-Sep-18	11-Sep-18

PRIVILEGED & CONFIDENTIAL

Company Code & Department Cost Code	Department Category	LUC/LABS Report account descriptions	Person Completing the Survey	Response Survey Signed on Date	Survey Response Email received Date
2100-9868	Executive, Operations & Regulatory Strategy	LUC - Strategic Planning	Peter Eichler	7-Sep-18	7-Sep-18
2200-9870	External Communications	LABS - Investor Relations & Communication	Ian Tharp	11-Sep-18	11-Sep-18
2200-9881	Information Technology	Sustainment	Luisa Read	14-Sep-18	14-Sep-18
2200-9810	Human Resources	LABS - HR	Theresa Pettos		
2200-9811	Human Resources	LABS - Rewards	Punam Maini		
2200-9812	Training	LABS - Learning & Development	Dainna Datchko		

PRIVILEGED & CONFIDENTIAL

Company Code & Department Cost Code	Department Category	LUC/LABS Report account descriptions	Person Completing the Survey	Response Survey Signed on Date	Survey Response Email received Date
2200-9817	Human Resources	Communications	Danna Datchko		
2200-9826	Facilities and Building Rent	LABS - Building	Gary Sommer		
2200-9815	Environment, Health, Safety and Security	LABS - EH&S	Timothy Deppmeyer		
Employees excluded for 2019					
2200-9874	Information Technology	Customer First	Luisa Read	14-Sep-18	

PRIVILEGED & CONFIDENTIAL

Company Code & Department Cost Code	Department Category	LUC/LABS Report account descriptions	Person Completing the Survey	Response Survey Signed on Date	Survey Response Email received Date
2200-9875	Information Technology	Transformation-CIS	Katy Cook	14-Sep-18	
2200-9876	Information Technology	Transformation-EAM	David Holmes	17-Sep-18	
2200-9877	Information Technology	Transformation	David Pasieka	7-Nov-18	
Company Code & Cost Code	Department Category	APUC Report account descriptions	Person Completing the Survey	Response Received on	Column1

PRIVILEGED & CONFIDENTIAL

Company Code & Department Cost Code	Department Category	LUC/LABS Report account descriptions	Person Completing the Survey	Response Survey Signed on Date	Survey Response Email received Date
1050-9860	Executive and Strategic Management	Vice Chairman	David Bronicheski	5-Nov-18	
1050-9860	Executive and Strategic Management	Chief Executive Officer	David Bronicheski	5-Nov-18	
1050-9860	Executive and Strategic Management	Chief Financial Officer	David Bronicheski	5-Nov-18	

Prepared by Roshan Ranshinge Date 30 Nov, 2018

First Review by Elaine Peach Date _____

Final Review & Approval Gaetana Girardi Date _____

		Oct-18			
Email Response Received from	Department Description	Total employee % of time spent indirectly on capital related projects	Number of Employees as per Survey Response Form	Total Department %	
George Trisic	LABS Executive is a department consisting of senior leaders of shared services functions. It includes the Senior VP of Shared Services, the VP of Human Resources, the Chief Administrative Officer/Corporate Secretary and the Business Unit Compliance Director.	20	2	10.00	
William Killeen	EP is a corporate shared resource group that provides short term and long term energy supply planning, gas and electric procurement services, gas scheduling, and demand forecasting services to Liberty's natural gas utilities Liberty's electric utilities in CA and NH. The team is led centrally in Oakville, with staff located in two U.S. states.	25	1	25.00	
Prafull Koli	Corporate customer experience exists to provide the regions with consistent support & Vendor management and project support ensuring knowledgeable answers to operational issues, and initiatives. Five key areas of focus: <ul style="list-style-type: none"> • Customer Care - Support customer inquiries from all channels • Meter Data Services / Billing Set up and billing of customers • Credit and Collections - Secure timely payments • Customer Marketing & Communications • Commitment to Communities 	115	8	14.38	
John Lowson	IT Corporate represents employees and the work they perform, and 3rd party expenses (e.g. IT service providers, hardware and software maintenance, etc.) that follow a companywide standard and are essentially mandatory for the business units. Areas covered are system architecture, network, server, security, end user services and helpdesk.	805	16.1	50.00	
John Lowson	IT Business represents employees and the work they perform, and 3rd party expenses that are required and/or requested by the business. The various business units have a more explicit say in what work is performed and how it is paid for. Areas covered are transition, project management and application support.	525	10.5	50.00	
Timothy Deppmeyer	A group of professionals with a mandate to support operations in recognizing and controlling workplace hazards to prevent environmental, safety or security non-conformances. On-going resource to assist operations in reducing workplace risk for personnel and contractors through the administration of EHS monitoring and measuring programs. Measuring and managing security risk controls in conjunction with operations.	190	4	47.50	
Luiza de Camaret	Corporate Procurement department is in charge of developing company-wide policies and procedures on company procurement as well as developing a procurement, warehousing, fleet corporate strategy. The group is involved in negotiating company-wide contracts to support multiple Liberty Utilities' entities.	210	3	70.00	

Email Response Received from	Department Description	Oct-18		
		Total employee % of time spent indirectly on capital related projects	Number of Employees as per Survey Response Form	Total Department %
Marianna Michael	Pre-construction cost modeling, securing required information and completing application forms, insurance quotation procurement, contract wording reviews, assist various business units with risk assessment to understand the implications of entering in various service/construction contracts, insurance policies placement, working with independent insurance consultants to complete lender reviews in various states of funding, claim reporting, negotiation of claim settlements, claim payment collections, paperwork relating to securing claim settlements, contractor insolvencies/contract violations meetings – advising and guiding in-house and outside council, third party subrogation demands, assist various business units with contract negotiations with contractors/vendors, budget preparation, bond procurement and placement, invoice allocation and payment.	50	1	50.00
Irene Trumble	Accounting, Tax, Reporting and Administrative Support	147.35	22	6.70
Manasa Rao	The Financial Planning & Analysis department is responsible for managing the long term planning, budgeting, forecasting and management reporting activities and processes for APUC.	230	7	32.86
Arthur Kacprzak	The Treasury department is responsible for corporate, subsidiary and project financing, enterprise wide cash management, enterprise financial risk management (FX and Interest rate) and Capital Planning The Internal Audit (IA) Department is an independent and objective assurance and consulting activity that is guided by a philosophy of adding value to improve the operations of APUC and its subsidiaries. It assists APUC in accomplishing its objectives by bringing a systematic and disciplined approach to evaluate and improve the effectiveness of the organization's governance, risk management, and internal control.	360	7	51.43
Dan Gilpin	Provide legal support to all areas of business as needed	80	6	13.33
Corinne Brough	Enterprise Risk Management team supports the company with the identification, assessment, and mitigation of its risks.	175	8	21.88
Peter Eichler	The Regulatory Strategy Department is responsible for managing the regulatory strategy for all of Liberty Utilities' natural gas, electricity, and water entities in the U.S. Currently Liberty Utility operates in 12 states, and approval to operate in New York state is pending.	90	3	30.00
Gaelana Girardi	<ul style="list-style-type: none"> Establish annual and long term targets and ensure that the annual plans are built for operational and financial success. Drive financial and operational achievement of the approved business and local plans through the use of Balanced Scorecards. 	40	2	20.00
Gerald Tremblay	<ul style="list-style-type: none"> Develop overall organizational growth strategy and long term business plans Standardize functional processes to ensuring a common approach is used regardless of location. Support the development of a health and safety culture at Liberty Utilities that improves the quality of the workplace environment, provides an injury-free workplace and protects public security and safety. 	30	1	30.00
Michael Griffin	Strategic Planning	15	1	15.00

		Oct-18		
Email Response Received from	Department Description	Total employee % of time spent indirectly on capital related projects	Number of Employees as per Survey Response Form	Total Department %
Peter Eichler	Oversight of regulatory strategy, business & community development, control & dispatch, and energy procurement teams.	30	1	30.00
Ian Tharp	<p>The Investor Relations group is responsible for all interactions, corporate messaging, and disclosures to Algonquin's institutional and retail investors.</p> <p>The Investor Relations group works on a number of matters that benefit Liberty Utilities with respect to issuing/preparing press releases, completing regulatory filings (as required by Canadian and U.S. securities laws), managing investor relationships and investor programs (e.g., conferences, analyst meetings, conference calls, etc.), managing relationships with external service providers such as Transfer Agent, newswire dissemination services, Bloomberg, etc., managing relationships with the Toronto and New York Stock Exchanges, preparing investor presentation decks (equity, debt, earnings calls, acquisitions, AGM, etc.), preparing the Annual Report and Corporate Responsibility Reports and managing their printing and distribution, assisting with AGM preparations including preparation of the proxy voting materials, and managing internal and external media news.</p>	75	3	25.00
Luisa Read	Included under Transformation is the Sustainability department 9881. The department is responsible for managing the ERP system (currently Great Plains) for finance. They support Finance as well as the Customer First program in activities related to Great Plains, Concur Expense, and Hyperion Financial Management (HFM). Some example of the activities performed by this department are running reports, extracting data, managing the integrations of 3rd party software applications to Great Plains and troubleshooting data issues and supporting users.	30	3	10.00
		3242.35	109.6	29.58
HR Operations Support to employees in Oakville : Generalized HR Support, Talent Acquisition, Policies and Procedures, Performance Management, Coaching & Organizational Design		147.92	5	29.58
Oversee and administer Total Rewards for Company, including compensation, payroll and benefits, as well as HR Systems.		473.34	16	29.58
<ul style="list-style-type: none"> • Provide a framework for: <ul style="list-style-type: none"> o learning and development policies and activities o developing people through individual learning strategies • Develop Organizational programs to meet business and employee needs • Consult with the business about L&D needs by conducting training needs analysis • Establish priorities and plans for training activities and resources • Advise on training budgets and resources • Ensure trainers are qualified to deliver training • Manage enterprise-wide Learning Management System 		147.92	5	29.58

Oct-18

Email Response Received from	Department Description	Total employee % of time spent indirectly on capital related projects	Number of Employees as per Survey Response Form	Total Department %
	<ul style="list-style-type: none"> • Provide a framework for: <ul style="list-style-type: none"> o Communication policies and activities o Create Communication strategies • Drive and Support Organizational programs to drive culture • Consult with the business about communication needs by conducting communication needs analysis • Establish priorities and plans for communication activities and resources • Advise on Comms budgets and resources • Ensure a consistent corporate message is being driven across organization • Communicate Organizational Changes • Work directly with CEO and E-Team on Corporate Culture and direction • Supporting and Organizing Corporate driven events 	59.17	2	29.58
	Reception courier, lunch order, building maintenance, supply orders, landlord services, Leasehold improvements	0.00	0	29.58
	Response received, The following 4 employees: Kathy Turlinski, Mike, Eden, Irene Raposo, and Sherin Surrao perform Oakville facilities and maintenance support functions.	118.33	4	29.58
		4189	142	29.58

Luisa Read

The Transformation department includes the Customer First program. The Customer First program is a transformational set of initiatives that enables APUC's vision and creates opportunities arising from the disruption and change in the utility industry. The Customer First program will deploy a set of leading practice business processes, technology solutions and operating models that enable APUC to deliver compelling customer-centric product and service offerings in regulated and non-regulated markets. The overall Customer First solution is comprised of a number of "best-in-class" technologies including SAP, AMI, GIS, ADMS, and others that will enable the capabilities that are needed to deliver the service offerings or standards to customers and stakeholders. This department is focused strictly on ERP specific technologies and capabilities.

Oct-18				
Email Response Received from	Department Description	Total employee % of time spent indirectly on capital related projects	Number of Employees as per Survey Response Form	Total Department %
Katy Cook	The Transformation department includes the Customer First program. The Customer First program is a transformational set of initiatives that enables APUC's vision and creates opportunities arising from the disruption and change in the utility industry. The Customer First program will deploy a set of leading practice business processes, technology solutions and operating models that enable APUC to deliver compelling customer-centric product and service offerings in regulated and non-regulated markets. The overall Customer First solution is comprised of a number of "best-in-class" technologies including SAP, AMI, GIS, ADMS, and others that will enable the capabilities that are needed to deliver the service offerings or standards to customers and stakeholders. This department is focused strictly on CIS specific technologies and capabilities.	0	2	0.00
David Holmes	The Transformation department includes the Customer First program. The Customer First program is a transformational set of initiatives that enables APUC's vision and creates opportunities arising from the disruption and change in the utility industry. The Customer First program will deploy a set of leading practice business processes, technology solutions and operating models that enable APUC to deliver compelling customer-centric product and service offerings in regulated and non-regulated markets. The overall Customer First solution is comprised of a number of "best-in-class" technologies including SAP, AMI, GIS, ADMS, and others that will enable the capabilities that are needed to deliver the service offerings or standards to customers and stakeholders. This department is focused strictly on EAM specific technologies and capabilities.	0	3	0.00
David Pasieka	The Transformation department includes the Customer First program. The Customer First program is a transformational set of initiatives that enables APUC's vision and creates opportunities arising from the disruption and change in the utility industry. The Customer First program will deploy a set of leading practice business processes, technology solutions and operating models that enable APUC to deliver compelling customer-centric product and service offerings in regulated and non-regulated markets. The overall Customer First solution is comprised of a number of "best-in-class" technologies including SAP, AMI, GIS, ADMS, and others that will enable the capabilities that are needed to deliver the service offerings or standards to customers and stakeholders. This department is focused strictly on OCM and PMO specific activities related to the Customer First program.	0	4	0.00
		0	15	0.00

Response Received from	Job Description	Total employee % of time spent indirectly on capital related projects	Number of Employees as per Survey Response Form	Total Department %
------------------------	-----------------	---	---	--------------------

		Oct-18			
Email Response Received from	Department Description	Total employee % of time spent indirectly on capital related projects	Number of Employees as per Survey Response Form	Total Department %	
David Bronicheski	The executive team is responsible for the overall planning, budgeting, approving, and strategizing (including regulatory rate cases) on a number of capital investments throughout the organization (e.g., infrastructure, IT, plant and equipment, vehicles), arranging for capital financing, and preparing and reviewing capital related items/projects for Board approval.	40	1	40	
David Bronicheski	The executive team is responsible for the overall planning, budgeting, approving, and strategizing (including regulatory rate cases) on a number of capital investments throughout the organization (e.g., infrastructure, IT, plant and equipment, vehicles), arranging for capital financing, and preparing and reviewing capital related items/projects for Board approval.	40	1	40	
David Bronicheski	The executive team is responsible for the overall planning, budgeting, approving, and strategizing (including regulatory rate cases) on a number of capital investments throughout the organization (e.g., infrastructure, IT, plant and equipment, vehicles), arranging for capital financing, and preparing and reviewing capital related items/projects for Board approval.	50	1	50	
APUC Total		130	3	43.3	
2019 INDOH Rate		4319	145	29.87	

Finance
verification to
reconcile # LU
Canadian EEs
to HRIS extract

Response Status	Number of Employees as per HR Data	Verification	Comments	Final
Received	2	-	Response received, employee data verified with HR Data	Final
Received	1	-	Response received, employee data verified with HR Data	Final
Received	9	1	Response received, employee data verified with HR Data, 1 excluded employee has left the organization	Final
Received	23	7	Response received, employee data verified with HR Data, requested for signed forms	Final
Received	15	5	Response received, employee data verified with HR Data, requested for signed forms	Final
Received	10	2	Response received, The following 4 employees: Kathy Turlinski, Mike, Eden, Irene Raposo, and Sherin Surrao are not included on this form as they perform Oakville facilities and maintenance support functions. The 4 employees excluded are included as average percentage	Final
Received	3	-	Response received, employee data verified with HR Data	Final

Finance
verification to
reconcile # LU
Canadian EEs
to HRIS extract

Response Status	Number of Employees as per HR Data	Verification	Comments	Final
Received	1	-	Response received, employee data verified with HR Data	Final
Received	32	10	Response received, employee data verified with HR Data, excluded 10 employees - Excluding 9 dedicated LPCo employees & 1 Co-op Student	Final
Received	14	7	Response received, employee data verified with HR Data, excluded 7 employees - Excluding 7 dedicated LPCo employees	Final
Received	7	-	Response received, employee data verified with HR Data	Final
Received	6	-	Response received, employee data verified with HR Data, Survey response included MO employees but this sheet includes only Oakville employees, emailed Dan to include only Oakville employees	Final
Received	8	-	Response received, employee data verified with HR Data	Final
Received	3	-	Response received, employee data verified with HR Data	Final
Received	2	-	Response received, employee data verified with HR Data,	Final
Received	1	-	Response received, employee data verified with HR Data,	Final
Received	1	-	Response received, employee data verified with HR Data	Final

Finance
verification to
reconcile # LU
Canadian EEs
to HRIS extract

Response Status	Number of Employees as per HR Data	Verification	Comments	Final
Received	1	-	Response received, employee data verified with HR Data	Final
Received	3	-	Response received, employee data verified with HR Data	Final
Received	3	-	Response received, employee data verified with HR Data	Final

31

5

16

5

Finance
verification to
reconcile # LU
Canadian EEs
to HRIS extract

Final

Response Status

Number of
Employees as
per HR Data

Verification

Comments

2

0

Department
not in HRIS but
created in
budgets
#N/A

Response received, The following 4 employees: Kathy Turlinski, Mike, Eden, Irene Raposo, and Sherin Surrao are not included on EHS form as they perform Oakville facilities and maintenance support functions. Hence, they are applied average percentage

Department
already
included
10.00 above in row 8

Received

6

Response received, employee data verified with HR Data

Final

Finance
verification to
reconcile # LU
Canadian EEs
to HRIS extract

Response Status	Number of Employees as per HR Data	Verification	Comments	Final
Received	2	-	Response received, employee data verified with HR Data	Final
Received	3	-	Response received, employee data verified with HR Data	Final
Received	4	-	Response received, employee data verified with HR Data	Final

Response Status	Number of Employees as per HR Data	Verification	Comments	Final
-----------------	--	--------------	----------	-------

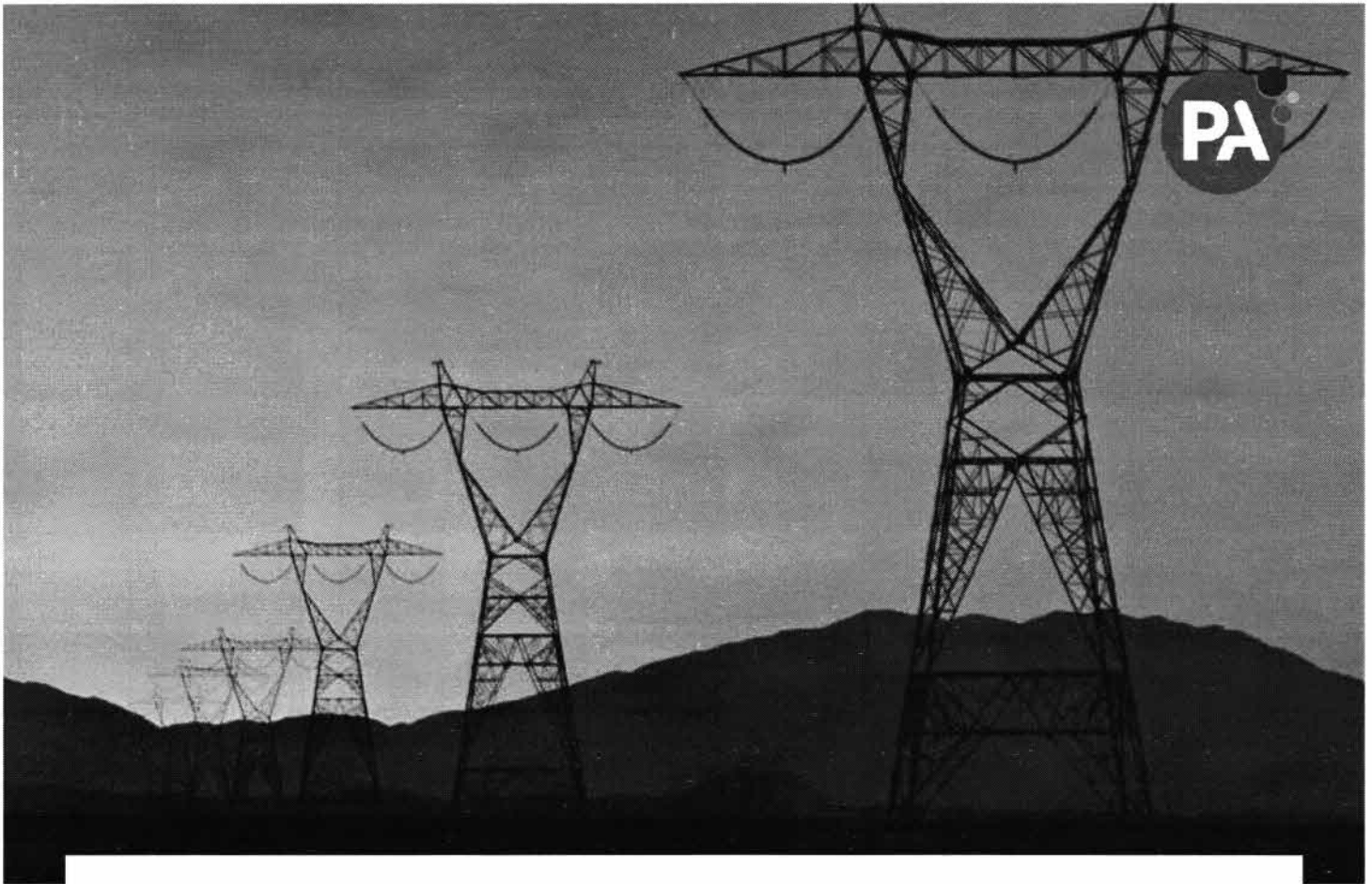
Finance
verification to
reconcile # LU
Canadian EEs
to HRIS extract

Response Status	Number of Employees as per HR Data	Verification	Comments	Final
Received	1	-	Response received, employee data verified with HR Data	Final
Received	1	-	Response received, employee data verified with HR Data	Final
Received	1	-	Response received, employee data verified with HR Data	Final

In USD

in USD		Full Year 2018		Full Year 2019		
		Forecast		Forecast		
		8,454,916		7,694,117		
All Lines of Business	Liberty Utilities Co					Tab - FP&A Budget Data-Email
						Tab - FP&A Budget Data-Email
						Tab - FP&A Budget Data-Email
						Tab - FP&A Budget Data-Email
		2018	2019			
	LUCC	38,891,360	38,371,335			
	APUC	10,807,854	8,520,063			
		49,699,214	46,891,398			
	LUCC	0.78	0.82			
	APUC	0.22	0.18			
	Capital Survey INDOH %					
	LUCC	29.55	29.58			
	APUC	43.33	43.33			
	Weighted Rate					
	LUCC	23.12	24.21			
	APUC	9.42	7.87			
		32.55	32.08			

EXHIBIT LW-DT4



LIBERTY UTILITIES 2018 & 2019 INDIRECT OVERHEAD CAPITALIZATION STUDY RESULTS

PA CONSULTING GROUP

April 8, 2019

CONTENTS

CONTENTS	2
EXECUTIVE SUMMARY	3
CHAPTER 1: PA STUDY APPROACH, OBSERVATIONS AND RECOMMENDATIONS	5
OVERVIEW	5
PA APPROACH	7
SUMMARY OF FINDINGS AND RECOMMENDATIONS	8
CONCLUSION	9
CHAPTER 2: LIBERTY UTILITIES 2018 AND 2019 INDIRECT OVERHEAD (INDOH) STUDY PROCESS	10
STEPS IN THE APUC/LUC INDOH STUDY PROCESS	10
INDIRECT OVERHEAD CAPITALIZATION FORM	10
REVIEW AND VERIFICATION PROCESS	12
CHAPTER 3: 2018 AND 2019 INDOH STUDY RESULTS	14



EXECUTIVE SUMMARY

Corporate services play an important role in a utility's capital program. The following administrative activities, among others, are all essential elements of a successful capital program.

- Attending a capital budget meeting or preparing a capital budget.
- Preparing financial statements for capital expenditures.
- Ordering materials for capital projects.
- Accounting duties performed on capital projects.
- Customer communications for capital projects.
- Attending capital project requirement, resource and vendor meetings.
- Preparing a business case for capital projects.

Further, active involvement in the capital program by executive management to provide leadership and oversight are also important elements of a successful capital program.

Fully accounting for the corporate services aspects of a capital project is important in that the complete cost of a project provides important information to all involved in the process. Further, including appropriate amounts of administrative and support services costs (referred to as indirect overheads in this report) as a component of the cost of long-lived utility plant assets contributes to intergenerational equity among customers.

Organizationally, employees providing administrative and support services to the regulated utilities of Liberty Utilities Co. ("Liberty Utilities") are primarily located in three business units: Algonquin Power & Utilities Corp. ("APUC"), Liberty Utilities (Canada) Corp. ("LUC" or the "Company"), and Liberty Utilities Service Corp. ("LUSC"). APUC and LUC employees are located in Oakville, Ontario and depending on the nature of the function, provide shared services to both Liberty Utilities and Liberty Power or individually to either Liberty Utilities or Liberty Power. Virtually all US-based employees of Liberty Utilities are LUSC employees.¹ LUSC shared services employees are organized similar to the Canadian employees in that some employees support both Liberty Utilities and Liberty Power while others support only Liberty Utilities. Among the employees supporting only Liberty Utilities, some are regional employees supporting multiple regulated utilities located in either the East, Central or West Regions. LUSC "non-shared" employees are dedicated to specific utilities.

PA Consulting Group (PA) was retained by the Company to review the reasonableness of the approach used by the Company for completing the 2018 and 2019 Indirect Overhead ("INDOH") Study ("Study") for APUC and LUC and the calculation of the 2018 and 2019 INDOH rates using the results of the study. This was accomplished by comparing the Company's current practices to common industry practices based on similar studies performed by PA and studies reviewed by PA. Industry practices to account for indirect capital overheads, typically referred to as "capitalized A&G", are guided by FERC and NARUC regulatory accounting standards.

¹ California employees working for CalPeco, Apple Valley, and Park utilities are employed by those utilities, not by LUSC.

The increase in APUC/LUC INDOH percentages from 21% based on the 2013 study to 32.55% and 32.08%% (2018 and 2019 rates respectively) based on the current Study in large part reflects increasing levels of capital spend; for example, in 2013, Liberty Utilities had \$98.5 million in additions to utility plants, while in 2017, this amount had increased to \$397.9 million. The Company forecasts capital expenditures to average \$1.0 billion annually for the period 2019 through 2022.

In our opinion, the approach used by the Company in completing the APUC/LUC indirect overhead study is reasonable and within common industry practices, and the calculated INDOH percentages for APUC/LUC (32.55% for 2018 and 32.08% for 2019) resulting from the study are reasonable.



CHAPTER 1: PA STUDY APPROACH, OBSERVATIONS AND RECOMMENDATIONS

OVERVIEW

PA Consulting Group (PA) was retained by the Company to review the reasonableness of the approach used by the Company for completing the 2018 and 2019 Indirect Overhead ("INDOH") Study ("Study") for APUC and LUC and the calculation of the INDOH rates using the results of that study. This was accomplished by comparing the Company's current practices to common industry practices based on similar studies performed by PA and studies reviewed by PA.

Since 2010, PA has completed six A&G/indirect overhead capitalization studies on behalf of U.S. regulated utilities, has reviewed practices at several other North American utilities in connection with other regulatory accounting engagements, and has reviewed A&G capitalization studies at other regulated utilities as part of our research in this area. Our prior experience with industry practices as well as our familiarity with regulatory accounting guidance forms the basis for the conclusions reached in performing this review.

Industry practices to account for indirect capital overheads, typically referred to as "capitalized A&G", are guided by FERC and NARUC regulatory accounting standards. In our opinion, an approach which assesses a cost's eligibility to be capitalized based on whether that A&G work and/or cost would be eliminated over time if the construction program were eliminated is consistent with both the NARUC USoA and common industry practices. This is the approach taken by the Company in completing the 2018 and 2019 Study.

The Company recently completed its 2018 and 2019 indirect overhead study based on a survey of all cost center managers to identify the percentage of time cost center employees spend supporting capital projects. These survey results formed the basis of the calculation of the combined indirect overhead rate for APUC/LUC. The indirect overhead rate is used by Liberty Utilities' regulated utilities operating in the United States to apportion allocations from APUC and LUC to specific capital projects.

Both FERC and NARUC provide guidance to U.S. regulated utilities related to the capitalization of the costs of services provided in support of capital activities as shown in the table below.

Source	Guidance
Utility Plant Instruction No. 3 included in the FERC Uniform System of Accounts (Gas & Electric)	(12) General administration capitalized includes the portion of the pay and expenses of the general officers and administrative and general expenses applicable to construction work.
Utility Plant Instruction No. 4 included in the FERC Uniform System of Accounts (Gas & Electric)	A. All overhead construction costs, such as engineering, supervision, general office salaries and expenses, construction engineering and supervision by others than the accounting utility, law expenses, insurance, injuries and damages, relief and pensions, taxes and interest, shall be charged to particular jobs or units on the basis of the

Interpretation No. 59 of the NARUC
USoA² (Gas & Electric)

amounts of such overheads reasonably applicable thereto, to the end that each job or unit shall bear its equitable proportion of such costs and that the entire cost of the unit, both direct and overhead, shall be deducted from the plant accounts at the time the property is retired.

B. As far as practicable, the determination of pay roll charges includible in construction overheads shall be based on time card distributions thereof. Where this procedure is impractical, special studies shall be made periodically of the time of supervisory employees devoted to construction activities to the end that only such overhead costs as have a definite relation to construction shall be capitalized. The addition to direct construction costs of arbitrary percentages or amounts to cover assumed overhead costs is not permitted.

C. For major utilities, the records supporting the entries for overhead construction costs shall be so kept as to show the total amount of each overhead for each year, the nature and amount of each overhead expenditure charged to each construction work order and to each electric plant account, and the bases of distribution of such costs.

In general, it is believed that the incremental cost basis is the preferred method of determining amounts of administrative and general expenses which should be capitalized. Under this method only the costs specifically incurred for construction - costs which would not be incurred if construction were not undertaken - are chargeable to construction. The use of this plan will avoid the effect of showing greater net income merely because of increased construction work. Where the incremental cost basis is not employed, general and administrative expenses can properly be distributed to construction only if studies are made to determine the amounts thereof which relate to construction activities. In the case of compensation for personal services, such studies should be based upon time records or periodic surveys of the activities of employees. Where daily time reports are not in effect, periodic studies should be made at least once a year and more frequently if construction activities fluctuate considerably. Such studies should show each employee's activities and the proportion of his time which is includible in construction account. Where the expenditures relate to other than compensation for personal services, it must be shown (1) that the expenditure has a relationship to construction activities and (2) that a reasonable basis has been evolved for determining the amount of proportion properly capitalizable. In no event is it permissible to assign to construction a proportion or percentage of a particular class of expenditures without first having established the relationship of the expenditures in question to construction work.

The records supporting allocations of administrative and general expenses to construction should; therefore, show (1) the relationship of the particular function to construction activities, (2) the proportion of each employee's time or each particular expenditure allocable to construction, and (3) the method of determining (2), that is time studies, daily time reports, etc.

Uniform System of Accounts for
Class A Water and Wastewater
Utilities (NARUC, 1996)

19. Utility Plant - Components of Construction Cost

(12) "General administration capitalized" includes the portion of the pay and expenses of the general officers and administrative and general expenses applicable to construction work.

20. Utility Plant - Overhead Construction Costs

² Source: Interpretations of Uniform System of Accounts for Electric and Gas Utilities, September, 1988, National Association of Regulatory Utility Commissioners

A. All overhead construction costs, such as engineering, supervision, general office salaries and expenses, construction engineering and supervision by others than the accounting utility, legal expenses, insurance, injuries and damages, relief and pensions, taxes and allowance for funds used during construction, shall be charged to particular jobs or units on the basis of the amounts of such overheads reasonably applicable thereto, so that each job or unit shall bear its equitable proportion of such costs and that the entire costs of the unit, both direct and overhead, shall be deducted from the plant accounts at the time the property is retired.

B. As far as practicable, the determination of payroll charges includible in construction overheads shall be based on time card distributions thereof. Where this procedure is impractical, special studies shall be made periodically of the time of supervisory employees devoted to construction activities so that only such overhead costs as have a definite relation to construction shall be capitalized. The addition to direct construction costs of arbitrary percentages or amounts to cover assumed overhead costs is not permitted.

C. The records supporting the entries for overhead construction costs shall be so kept as to show the total amount of each overhead for each year, the nature and amount of each overhead expenditure charged to each construction work order and to each utility plant account, and the basis of distribution of such costs.

In the following section we describe in detail the approach used to complete the requested work.

PA APPROACH

To complete the assessment of the Company's current practices for capitalizing indirect overheads for APUC/LUC, PA completed the following tasks.

- Identified those corporate organizations providing support services to the regulated utilities, both company and department.
- Identified current practices used to capitalize indirect overheads for the services provided by APUC and LUC.
- We reviewed the approach taken to complete the APUC/LUC 2018 and 2019 indirect overhead study and performed the following.
- Assessed the instructions provided to cost center managers when completing the survey to identify work performed in support of capital activities against NARUC and FERC USoA guidance and common industry practices. Based on previous studies completed by PA, these activities may include, but not be limited to, the following:³
 - ✓ Providing leadership regarding capital expenditure resource allocation decisions and spend levels (i.e., senior executives)
 - ✓ Developing long-term plans and forecasts of capital expenditures
 - ✓ Developing capital budgets
 - ✓ Processing, validating, correcting time cards with charges to construction projects
 - ✓ Processing, validating, correcting vouchers for charges to construction projects
 - ✓ All tasks associated with closing construction and retirement work orders
 - ✓ Monitoring actual expenditures compared to budget for capital expenditures and explaining budget variances
 - ✓ Recruiting and hiring employees performing construction activities
 - ✓ Labor negotiations for represented employees performing construction activities
 - ✓ Providing insurance coverage for construction activities
 - ✓ Auditing construction activities
 - ✓ Workers comp claims for field workers

³ For Liberty Utilities, some of the activities on this list are performed by LUSC employees rather than APUC/LUC employees.

- ✓ Time spent arranging financing for capital projects
 - ✓ Legal work for construction contracts
 - ✓ Manage IT infrastructure (e.g., networks, telecommunications, computer hardware, etc.) and information systems supporting construction
 - ✓ Time spent by Procurement on capital related projects
 - ✓ Time devoted to Resource Planning, Scheduling and Dispatching related to capital projects
 - ✓ Directing and supervising employees with responsibilities for any of the above.
- Reviewed survey responses for consistency with the above guidance.
 - Assessed whether the study process considered the use of statistical bases for the determination of capitalization percentages where appropriate.
 - Assessed whether the study process separately assessed non-labor expenses (e.g., external audit fees, hardware / software maintenance fees) where appropriate.
 - Reviewed the methodology used to develop the indirect overhead capitalization percentage based on the survey results.
 - Developed conclusions and recommendations based on the work performed.

Based on our review of current capitalization practices at Liberty Utilities, PA believes that current policies are reasonable while providing opportunities for enhancement as allowed for by the USoA to more fully align with common industry practices.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

1. The definition of capital related activities as described in the completed surveys are consistent with those activities considered to be capital-related as used by PA Consulting when completing similar A&G capitalization studies for U.S. regulated utilities. In our opinion, this definition of capital-related activities is consistent with FERC and NARUC guidance.
2. The calculated combined percentages for APUC/LUC appropriately reflect the relative cost of services provided by APUC and LUC.
3. The survey form does not currently ask cost center heads to identify the percentage of departmental labor which direct charges capital projects. This question should be asked with the calculation of the weighted average then adjusted to reflect only departmental labor which is expensed. As an example, see the IT discussion below. We expect that other administrative departments, for example, Legal, also direct charge specific capital projects.
4. For Human Resources (HR) and Information Technology (IT), PA has generally found when completing similar studies that the connection between services provided and how those services support capital activities is less direct and requires a statistical solution rather than a "survey" solution in developing the capitalization percentage.
 - a. Human Resources – The current study uses the overhead study's overall capitalization percentage for the HR cost centers. While this is a statistical-type approach, PA suggests that a more theoretically-supportable approach is to develop a percentage based on the percentage of total employees (utility, regional and APUC/LUC) benefiting from the specific services provided who directly or indirectly charge construction projects. Based on a preliminary analysis, differences between the current study results and the recommended approach are not significant enough to warrant adjustment as part of the current study. PA recommends that the approach for these HR departments (as well as Training and EH&S) be re-visited in subsequent studies.
 - b. Information Technology – To complement survey responses, PA recommends a multi-step analytical / statistical approach such as the following to develop capitalization percentages for IT costs.⁴
 - i. Identify and categorize IT services. While this categorization can quickly become very granular, we recommend a higher-level categorization of no more than a half dozen or so cost pools. One suggested categorization is Applications, Operations and Infrastructure. In previous studies, we've found a need to breakdown the "Applications" cost pool as different groups of employees often benefit from different applications.

⁴ About 80% of IT non-labor costs are direct charged to the utilities and are excluded from the pool of dollars capitalized based on the results of this study. There are differing practices in place at the individual utilities regarding the capitalization of these, and other, direct charged costs.

- ii. Identify appropriate cost drivers by category. These cost drivers may be based on a survey approach depending on the nature of the services provided.
 - iii. Develop a capitalization percentage that properly weights both labor and non-labor spend.
 - c. Information Technology – For certain IT cost centers, the survey responses were revised based on our review to more clearly describe the breakdown between labor direct charged to capital projects and labor expensed; and for expensed labor, to better reflect the percent of time spent supporting capital project.
5. To develop the final combined APUC/LUC INDOH rate for 2018, the Company adjusted the study results calculated prior to our review for the issues identified in 4.c. above and then weighted the 2018 individual APUC and LUC INDOH rates based on 2018 budgeted APUC and LUC allocated shared services dollars.
 6. To develop the final combined APUC/LUC INDOH rate for 2019, the Company weighted the individual 2019 APUC and LUC INDOH rates based on 2019 budgeted APUC and LUC allocated shared services dollars.
 7. During calendar 2018, the regulated utilities properly used the calculated percentage from the prior study (21%) to capitalized allocated APUC/LUC costs. Now that the 2018 study is complete, we recommend that the updated INDOH percentage be used in place of the prior study percentage.
 8. Now that the 2019 study is complete, we recommend that the 2019 INDOH percentage should be used in place of the 2018 percentage going forward.

CONCLUSION

The increase in INDOH percentages from 21% (based on the 2013 study) to 32.55% and 32.08%, for 2018 and 2019 respectively, based on the current study in large part reflects increasing levels of capital spend; for example, in 2013, Liberty Utilities had \$98.5 million in additions to utility plants, while in 2017, this amount had increased to \$397.9 million. The Company forecasts capital expenditures to average \$1.0 billion annually for the period 2019 through 2022.

In our opinion, the approach used by the Company in completing its 2018 and 2019 APUC/LUC indirect overhead study is reasonable and within common industry practices and the calculated INDOH percentages for APUC/LUC resulting from the study (32.55% for 2018 and 32.08% for 2019) are reasonable.



CHAPTER 2: LIBERTY UTILITIES 2018 AND 2019 INDIRECT OVERHEAD (INDOH) STUDY PROCESS

STEPS IN THE APUC/LUC INDOH STUDY PROCESS

In late 2018, the Company completed an indirect overhead study for the Canadian employees of Liberty Utilities (Canada) Corp. (LUC) and Algonquin Power & Utilities Corp. (APUC). The previous study was completed in 2013. A survey process was used to identify the time spent indirectly supporting capital projects by department.

The design of the survey form was based on the collaborative efforts of the Corporate Accounting and Regulatory teams.

The study was kicked-off in mid-July with a WebEx meeting to explain the new INDOH survey form and provide guidance to the department heads (or their representatives) on how the form should be completed. Completed surveys were required for each APUC/LUC department. A supporting presentation along with a completed survey example was provided and then later emailed to the teams.

It is the Company's intention that these surveys will be refreshed periodically (between every 3-5 years based on standard rate case cycle).

INDIRECT OVERHEAD CAPITALIZATION FORM

The blank survey form sent to department heads at the start of the study process is provided below.



Liberty Utilities
WATER GAS ELECTRIC

**LIBERTY UTILITIES
INDIRECT OVERHEAD CAPITALIZATION FORM**

BACKGROUND: A capital project is defined as a fixed asset that is used to provide utility services to customers; such as land, buildings, equipment, plant, computer hardware and software, and other similar projects. Capital expenses consist of two components: direct costs (time expenses coded to a specific budgeted capital project) and indirect overhead that supports capital projects excluding acquisition projects (percentage of indirect costs).

PURPOSE OF FORM: To be completed by Liberty Utilities (Canada) Corp and Algonquin Power & Utilities Corp., departments to help determine and support the derived indirect overhead percentage.

INSTRUCTIONS: Review your department's duties applicable to regulated utilities and time spent on tasks related to capital projects during the past year and provide the average percentage of time spent on such activities, along with a few responsibilities that are performed for time spent on capital projects.

The following are some examples of capital project related activities:

- Attending a capital budget meeting or preparing a capital budget.
- Preparing financial statements for capital expenditures.
- Ordering materials for capital projects.
- Accounting duties performed on capital projects.
- Customer communications for capital projects.
- Attending capital project requirement, resource and vendor meetings.
- Preparing a business case for capital projects.



Liberty Utilities
WATER GAS ELECTRIC

**LIBERTY UTILITIES
INDIRECT OVERHEAD CAPITALIZATION FORM**

Department: _____

Company Code & Cost Code: _____

Number of Oakville employees: _____

Department Description:

--

Capital Activities:

How much of your group's time is spent on capital projects or supporting capital projects?

List a few responsibilities that are performed if you have any time spent on capital projects.

Department Staff –Canadian Employees Only

List the names, job titles, and percentage of time spent indirectly on capital related projects of all employees for Liberty Utilities

First Name	Last Name	Job Title	%
		Total %	

On average, our Department spends about ____% (Total employee % /Number of employees) of our time indirectly on capital related projects for Liberty Utilities

Department Manager

Company Name (LUC or APUC)

Signature (PRINT INITIALS)

Date

By indicating my initials above, I confirm the above percentage has been reviewed and agreed with by my manager.

REVIEW AND VERIFICATION PROCESS

Upon receipt of the completed surveys, Regulatory personnel entered the survey data into a spreadsheet and performed the following tasks:

- Confirmed that all required responses were received. Followed-up with departments for whom responses were not received.
- Reviewed responses for completeness.
- Reconciled the total number of employees reported to data provided from HRIS.
- Adjusted the reported data for employees dedicated to Liberty Power or whose time was direct charged to capital projects.
- Calculated the overall percentage for LUC for all departments except HR, Training, Facilities and Rent, and EH&S.
- Used the LUC percentage for the remaining departments and calculated a 2018 and 2019 total percentage for LUC.
- Calculated the indirect overhead percentage for APUC.
- Calculated a combined INDOH rate for both 2018 and 2019 for APUC/LUC by weighting the indirect overhead percentages for APUC and LUC individually with their respective allocated shared services 2018 and 2019 budget amounts as provided by Corporate Accounting.
- Activities related to business development and utility acquisitions were not included in the survey.

Following the work completed by Regulatory to develop the overall 2018 and 2019 weighted INDOH %, Corporate Finance performed the following first level review:

- Ensured departmental submissions reconciled to '2018 capitalization survey' tab and the '2019' tab
- Reconciled department and employee lists to HRIS Excel extract to ensure completeness

- Reviewed department submissions greater than 50% (threshold is based on collective experience as anything >50% seems high and should be investigated)
- Confirmed accuracy of average department calculations
- Reviewed average calculation in column K on '2018 Capitalization survey' tab and '2019' tab

The Director, Regulatory Accounting performed a following second level review:

- Ensured departmental submissions reconciled to '2018 capitalization survey' tab and '2019' tab
- Liaised with department with submissions greater than 50%
- Reviewed average calculation in column K on '2018 Capitalization survey' tab and '2019' tab
- Reviewed department listing to ensure it was complete

CHAPTER 3: 2018 AND 2019 INDOH STUDY RESULTS

The combined APUC/LUC indirect overhead percentage for 2018 (based on 2018 budgeted APUC and LUC allocated shared services costs) resulting from the study process described in the preceding section is 32.55% as shown in the following table.⁵

	2018 Budget (\$)	% of 2018 Budget	Calculated INDOH %	Weighted INDOH %
LUC	38,891,360	78%	29.55%	23.12%
APUC	10,807,854	22%	43.33%	9.42%
Total	49,699,214	100%	NA	32.55%

The combined APUC/LUC indirect overhead percentage for 2019 resulting from the study process described in the preceding section is 32.08% as shown in the following table.

	2019 Budget (\$)	% of 2019 Budget	Calculated INDOH %	Weighted INDOH %
LUC	38,371,335	82%	29.58%	24.21%
APUC	8,520,063	12%	43.33%	7.87%
Total	46,891,398	100%	NA	32.08%



PA Consulting Group.

Make the Difference.

An independent firm of over 2,600 people, we operate globally from offices across the Americas, Europe, the Nordics, the Gulf and Asia Pacific.

We are experts in consumer, defence and security, energy and utilities, financial services, government, healthcare, life sciences, manufacturing, and transport, travel and logistics.

Our deep industry knowledge together with skills in management consulting, technology and innovation allows us to challenge conventional thinking and deliver exceptional results that have a lasting impact on businesses, governments and communities worldwide.

Our clients choose us because we challenge convention to find the solutions that really work in practice, not just on paper. Then we roll up our sleeves and get the job done.

PA. Make the Difference.

New York Office

PA Consulting Group Inc.
45th Floor
The Chrysler Building
405 Lexington Avenue

New York
NY 10174
USA
+1 212 973 5900

paconsulting.com

This report has been prepared by PA Consulting Group on the basis of information supplied by the client, third parties (if appropriate) and that which is available in the public domain. No representation or warranty is given as to the achievability or reasonableness of future projections or the assumptions underlying them, targets, valuations, opinions, prospects or returns, if any, which have not been independently verified. Except where otherwise indicated, the report speaks as at the date indicated within the report.

All rights reserved

© PA Knowledge Limited 2019

This report is confidential to the organisation named herein and may not be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical or otherwise, without the prior written permission of PA Consulting Group. In the event that you receive this document in error, you should return it to PA Consulting Group, PA Consulting Group Inc., 45th Floor, The Chrysler Building, 405 Lexington Avenue, New York, NY 10174, USA. PA Consulting Group accepts no liability whatsoever should an unauthorised recipient of this report act on its contents.

1 SHAPIRO LAW FIRM, P.C.
Jay L. Shapiro (No. 014650)
2 1819 E. Morten Avenue, Suite 280
Phoenix, Arizona 85020
3 Telephone (602) 559-9575
jay@shapslawaz.com
4

LIBERTY UTILITIES
5 Todd C. Wiley (No. 015358)
12725 W. Indian School Road, Suite D-101
6 Avondale, Arizona 85392
Todd.Wiley@LibertyUtilities.com
7

8 Attorneys for Liberty Utilities (Black Mountain Sewer) Corp.

9 **BEFORE THE ARIZONA CORPORATION COMMISSION**

10
11 IN THE MATTER OF THE APPLICATION
OF LIBERTY UTILITIES (BLACK
12 MOUNTAIN SEWER) CORP., AN
ARIZONA CORPORATION, FOR A
13 DETERMINATION OF THE FAIR VALUE
OF ITS UTILITY PLANTS AND
14 PROPERTY AND FOR INCREASES IN ITS
RATES AND CHARGES FOR UTILITY
15 SERVICE BASED THEREON.

DOCKET NO: SW-02361A-19-

16
17
18 **DIRECT TESTIMONY**
19 **OF**
20 **THOMAS J. BOURASSA**

21
22 **RATE BASE, INCOME STATEMENT & RATE DESIGN**

23
24 **June 27, 2019**
25
26

TABLE OF CONTENTS

I.	INTRODUCTION AND PURPOSE OF TESTIMONY	1
II.	OVERVIEW OF APPLICATION	3
III.	RATE BASE, INCOME STATEMENT AND SUMMARY SCHEDULES	4
A.	A, E, and F Schedules	4
B.	B Schedules (Rate Base)	5
1.	Plant-in-Service (PIS) and Accumulated Depreciation (A/D)	6
2.	Contributions-in-Aid of Construction (CIAC)	9
3.	Advances-in-Aid of Construction (AIAC)	9
4.	Deferred Regulatory Assets	10
5.	Accumulated Deferred Income Taxes (ADIT)	13
IV.	C SCHEDULES (INCOME STATEMENT)	14
V.	RATE DESIGN (H SCHEDULES)	18

1 **I. INTRODUCTION AND PURPOSE OF TESTIMONY.**

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

3 A. My name is Thomas J. Bourassa. My business address is 139 W. Wood Drive,
4 Phoenix, Arizona 85029.

5 **Q. WHAT IS YOUR PROFESSION AND BACKGROUND?**

6 A. I am a self-employed, Certified Public Accountant providing consulting and
7 general accounting services to utility companies. I have a B.S. in Chemistry and
8 Accounting from Northern Arizona University (1980), and an M.B.A. with an
9 emphasis in Finance from the University of Phoenix (1991).

10 **Q. WOULD YOU BRIEFLY SUMMARIZE YOUR PRIOR WORK AND**
11 **REGULATORY EXPERIENCE?**

12 A. Prior to becoming a private consultant, I was employed by High-Tech Institute,
13 Inc., and served as controller and chief financial officer. Prior to working for
14 High-Tech Institute, I worked as a division controller for the Apollo Group, Inc.
15 Before joining the Apollo Group, I was employed at Kozoman & Kermode, CPAs.
16 In that position, I prepared compilations and other write-up work for water and
17 wastewater utilities, as well as tax returns.

18 In my private practice, I have prepared and/or assisted in the preparation of
19 dozens of water and wastewater utilities rate applications before the Arizona
20 Corporation Commission ("Commission"). I have also testified in regulatory
21 proceedings before public utility commissions in Texas, California, Montana,
22 Arkansas and Alaska. A copy of my regulatory work experience is attached as
23 **Exhibit TJB-RB-DT1.**

24 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

25 A. On behalf of Liberty Utilities (Black Mountain Sewer) Corp. ("Liberty Black
26 Mountain" or the "Company"). Liberty Black Mountain is seeking a determination

1 of its fair value rate base ("FVRB") and the setting of rates and charges for
2 wastewater utility service based on that finding. For convenience, my direct
3 testimony is being filed in two volumes.

4 **Q. WHAT IS THE PURPOSE OF THIS VOLUME OF YOUR DIRECT**
5 **TESTIMONY?**

6 A. To address all the components of the revenue requirement and rates, except the
7 cost of capital. I address rate base, income statement (revenue and operating
8 expenses), required increase in revenue, and rate design and proposed rates and
9 charges for service. I am sponsoring the direct schedules (A through C and E, F,
10 and H), which are filed concurrently herewith. I was responsible for the
11 preparation of these schedules based on my investigation and review of Liberty
12 Black Mountain's relevant books and records.

13 **Q. WHAT IS COVERED IN THE SECOND VOLUME OF YOUR DIRECT**
14 **TESTIMONY**

15 A. In a second, separate volume of my direct testimony, I address cost of capital and
16 sponsor the D schedules. As shown on the D-1 Schedules, the proposed capital
17 structure for the Company is 46 percent debt and 54 percent equity. Liberty Black
18 Mountain's proposed weighted cost of long-term debt is 3.56 percent and required
19 cost of common equity is 10.50 percent. The weighted average cost of capital
20 ("WACC") for the Company is 7.31 percent.

21 **Q. WHAT IS THE COMPANY'S PROPOSED CAPITAL STRUCTURE?**

22 A. In the Company's 2015 rate case, the Commission authorized a capital structure of
23 70 percent equity and 30 percent debt. In this rate case, the Company is proposing
24 a capital structure of 54 percent equity and 46 percent debt.

1 **II. OVERVIEW OF APPLICATION.**

2 **Q. PLEASE SUMMARIZE LIBERTY BLACK MOUNTAIN'S APPLICATION.**

3 A. Liberty Black Mountain's FVRB is \$14,408,605 and the Company is seeking total
4 revenues of \$3,352,176. The increase in annual revenues necessary to provide for
5 recovery of Company's operating expenses and a 7.31 percent return on rate base is
6 approximately \$878,785, an increase of approximately 35.53 percent over the
7 adjusted and annualized test year revenues of \$2,473,391.

8 **Q. WHAT ARE THE MAIN DRIVERS OF THE COMPANY'S REQUESTED**
9 **INCREASE IN THIS CASE?**

10 A. The main driver of the requested revenue increase in this case is costs incurred by
11 Liberty Black Mountain to shut down the Boulder's Wastewater Treatment Plant
12 ("Boulders WWTP").

13 **Q. HOW MUCH DID THE PLANT CLOSURE COST?**

14 A. Matthew Garlick, the Company's President has a table identifying the specific
15 plant closure costs in his direct testimony and the total comes to approximately
16 \$11 million.¹ Some of these costs have been recognized in the prior rate case. For
17 example, \$1,133,080 of costs were dealt with in the last rate case where \$825,080
18 was recognized as a deferred regulatory asset, \$108,000 was recognized through
19 additional revenues through an increased effluent rate to the Boulders Resort, and
20 the Company agreed to forego recovery of \$200,000 of costs.² In the instant case,
21 the Company is seeking recognition of \$8,698,508 of additional plant closure
22 costs,³ about \$210,000 of non-plant closure related post-test year plant, and
23 \$1,200,000 of additional City of Scottsdale wastewater treatment capacity

24 ¹ Direct Testimony of Matthew Garlick ("Garlick Dt.") at 20.

25 ² Decision 75510 (April 22, 2016) at 12:26 – 13:6.

26 ³ About \$7,175,909 was placed into service in 2018 but not transferred from construction work in progress
as of the end of 2018, and the remaining \$1,522,597 will be placed into service in 2019.

1 purchased in 2018. I will discuss the ratemaking treatment of these costs later in
2 my testimony.

3 **III. RATE BASE, INCOME STATEMENT AND SUMMARY SCHEDULES.**

4 **A. A, E and F Schedules.**

5 **Q. PLEASE DESCRIBE THE SCHEDULES LABELED AS A, E, AND F.**

6 A. The A-1 Schedule is a summary of the rate base, operating income, current
7 operating margin, required operating margin, operating income deficiency, and the
8 increase in gross revenue. The return on FVRB, proposed increase in the revenue
9 requirement, and revenues at present and proposed and customer classifications are
10 also shown on this schedule.

11 The A-2 Schedule is a summary of results of operations for the test year,
12 prior years, and a projected year at present rates and proposed rates.

13 Schedule A-3 contains the capital structure for the test year and the two
14 prior years.

15 Schedule A-4 contains the plant construction and plant-in-service for the test
16 year and prior years. The projected plant additions are also shown on this
17 schedule.

18 Schedule A-5 is the summary of the changes in financial position (cash
19 flow) for the prior two years, the test year at present rates, and a projected year at
20 present and proposed rates.

21 The E Schedules are based on Liberty Black Mountain's actual operating
22 results, as reported in annual reports filed with the Commission. The E-1 Schedule
23 contains the comparative balance sheet data the years 2016, 2017, and 2018 ending
24 on December 31.

25 Schedule E-2, page 1, contains the income statement for the years 2016,
26 2017, and 2018 ending on December 31.

1 Schedule E-3 contains the statements of changes in Liberty Black
2 Mountain's financial position for the test year and the two prior years.

3 Schedule E-4 provides the changes in stockholder equity.

4 Schedule E-5 contains plant-in-service at the end of the test year, and one
5 year prior to the end of the test year.

6 Schedule E-7 contains operating statistics for the years ended 2016, 2017,
7 and 2018 ending on December 31.

8 Schedule E-8 contains the taxes charged to operations.

9 The accountant's notes to the financial statements and the financial
10 assumptions used in preparing the rate filing schedules are shown on Schedules E-9
11 and F-4, respectively, in accordance with the Commission's standard filing
12 requirements.

13 Schedule F-1 contains the results of operations at the present rates (actual
14 and adjusted), and at proposed rates.

15 Schedule F-2 contains the summary of changes in financial position (cash
16 flow) for the prior two years, the test year at present rates, and a projected year at
17 present and proposed rates.

18 Schedule F-3 shows projected construction requirements for 2019, 2020,
19 and 2021.

20 Schedule F-4 contains the assumptions used in developing the adjustments
21 and projections contained in the rate filing.

22 **B. B Schedules (Rate Base).**

23 **Q. WOULD YOU EXPLAIN THE RATE BASE SCHEDULES, WHICH ARE**
24 **LABELED AS THE B SCHEDULES?**

25 A. Yes. I will start with Schedule B-5, which is the cash working capital allowance.
26 The Company is proposing working capital of a negative \$59,801 based upon my

1 lead-lag study.

2 **Q. PLEASE CONTINUE.**

3 A. The Company did not file Schedules B-3 and B-4. To limit issues in dispute,
4 Liberty Black Mountain is requesting that its original cost rate base ("OCRB") be
5 used as its FVRB.

6 **Q. HAVE YOU PREPARED SCHEDULES SHOWING ADJUSTMENTS TO**
7 **THE ORIGINAL COST RATE BASE?**

8 A. Yes. Schedule B-2 shows adjustments to the OCRB cost rate base proposed by
9 Liberty Black Mountain. Schedules B-2, pages 2 through 7, provide the
10 supporting information.

11 **1. Plant-in-Service (PIS) and Accumulated Depreciation (A/D).**

12 **Q. PLEASE DISCUSS THE PIS ADJUSTMENTS.**

13 A. B-2 adjustment number 1, as shown on Schedule B-2, page 2, adjusts plant-in-
14 service ("PIS"). There are six PIS adjustments included in Adjustment 1. These
15 are shown on Schedule B-2, page 3, and are labeled as adjustments "A," "B," "C,"
16 "D," "E," and "F."

17 Adjustment A of B-2 adjustment number 1 increases PIS by \$210,857 for
18 post-test year plant. The Company is seeking inclusion of the following post-test
19 year plant in this case. Specifically, Liberty Black Mountain has \$210,856.61 of
20 post-test-year plant, including \$119,819.90 for vehicle replacements, \$89,168.77
21 for inflow and infiltration manholes under the Scottsdale Capacity agreement, and
22 \$1,867.94 for lift station pump replacements.

23 Adjustment B of B-2 adjustment number 1 increases PIS by \$8,698,506 for
24 Boulders WWTP plant closure costs. About \$7,175,909 of these costs were in
25 service by the end of 2018 but were not transferred from construction work-in-
26 progress at the end of 2018, and the remaining \$1,522,597 will be placed into

1 service in 2019. The Commission ordered closure of the Boulders WWTP in
2 Liberty Black Mountain's prior rate case, Decision No. 75510.

3 Adjustment C of B-2 adjustment number 1 reduces PIS for projected post-
4 test year retirements, which are primarily related to plant closure.

5 Adjustment D of B-2 adjustment number 1 reduces PIS for allocated
6 corporate plant.

7 Adjustment E of B-2, adjustment number 1, adjusts PIS to reflect the
8 reconciliation of the reconstruction of the Company's PIS reflected on Schedule B-
9 2, pages 3.6 to 3.10, to recorded general ledger amounts as shown on Schedule E-
10 1.

11 **Q. PLEASE DISCUSS THE A/D ADJUSTMENTS.**

12 A. B-2 adjustment number 2, as shown on Schedule B-2, page 2, adjusts A/D. There
13 are seven A/D adjustments included in Adjustment 1. These are shown on
14 Schedule B-2, page 4, and are labeled as adjustments "A," "B," "C," "D," and "E."

15 Adjustment A of B-2 adjustment number 2 reflects A/D (using half-year
16 convention) related to post-test year plant proposed in Adjustment "A" of B-2
17 adjustment number 1. As has been the historical practice, this adjustment reflects a
18 half-year of depreciation.

19 Adjustment B of B-2 adjustment number 2 increases A/D for post-in-service
20 depreciation on the plant closure costs and is related to PIS B-2 adjustment 1-B.
21 The A/D of the costs of closure reflects depreciation through June 30, 2020.

22 **Q. WHY DID YOU CALCULATE DEPRECIATION THROUGH JUNE 30,**
23 **2020?**

24 A. For two reasons. First, June 30, 2020 is an approximation of when new rates will
25 be put into effect from this rate case. If the rate case takes longer than expected,
26 the A/D will be adjusted accordingly. Second, it reflects the date through which the

1 Company would record depreciation and which would be offset by an equivalent
2 amount of deferred depreciation as a regulatory asset, both of which would be
3 recognized in rate base and new rates. I will discuss deferred depreciation further a
4 bit later in my direct testimony when I discuss the Company's proposed regulatory
5 assets.

6 **Q. THANK YOU, MR. BOURASSA. PLEASE CONTINUE.**

7 A. Adjustment C of B-2 adjustment number 2 reflects the adjustment to A/D and is
8 related to the post-test year retirements from B-2 adjustment 1-C.

9 Adjustment D of B-2 adjustment number 2 reflects the A/D related to
10 allocated corporate plant.

11 Adjustment E of B-2, adjustment number 2, adjusts A/D to reflect the
12 reconciliation of the reconstruction of the Company's A/D reflected on Schedule
13 B-2, pages 3.6 to 3.10, to recorded general ledger amounts as shown on Schedule
14 E-1.

15 **Q. DO THE PLANT IN SERVICE AND ACCUMULATED DEPRECIATION**
16 **SHOWN ON SCHEDULE B-2 REFLECT THE LAST COMMISSION RATE**
17 **ORDER FOR LIBERTY BLACK MOUNTAIN?**

18 A. Yes. The Company's reconstruction of the PIS and A/D balances started with the
19 PIS and A/D balance approved in the last rate case. Reconciliation to the starting
20 balances for PIS and A/D are shown on Schedule B-2, page 3.6. Plant additions
21 and retirements since the end of the last test year have been added to and deducted
22 from total plant shown on Schedule B-2, pages 3.6 to 3.10. Pages 3.6 to 3.10 of
23 the schedule also show the details for the A/D from the end of the last test year
24 through the end of the test year using the half-year convention for depreciation.

1 **2. Contributions-in-Aid of Construction (CIAC).**

2 **Q. PLEASE DISCUSS THE CIAC ADJUSTMENTS.**

3 A. B-2 adjustment number 3, as shown on Schedule B-2, page 2, adjusts CIAC and
4 accumulated amortization ("A.A.") to the reconstructed balances shown on
5 Schedule B-2, page 5.1 and summarized on Schedule B-2, page 5.

6 **Q. DO THE CIAC AND A.A. BALANCES SHOWN ON SCHEDULE B-2**
7 **REFLECT THE LAST COMMISSION RATE ORDER?**

8 A. Yes. The starting CIAC and A.A. balances shown in the reconstruction are the
9 balances approved in the last rate order. Additional CIAC recorded since the end
10 of the last year has been added to CIAC and are shown on Schedule B-2, page 5.1.
11 Computed amortization for each year based upon the annual composite
12 depreciation rate for plant has been added to A.A. and is also shown on Schedule
13 B-2, page 5.1.

14 **3. Advances-in-Aid of Construction (AIAC).**

15 **Q. PLEASE DISCUSS THE AIAC ADJUSTMENT.**

16 A. B-2 adjustment number 4, as shown on Schedule B-2, page 2, adjusts AIAC to the
17 reconstructed amounts shown on Schedule B-2, page 6.1 and summarized on
18 Schedule B-2, page 6.

19 **Q. DOES THE AIAC BALANCE SHOWN ON SCHEDULE B-2 REFLECT**
20 **THE LAST COMMISSION RATE ORDER?**

21 A. Yes. The starting AIAC balance shown in the reconstruction is the balance
22 approved in the last rate order. Additional AIAC recorded since the end of the last
23 year has been added to AIAC and are shown on Schedule B-2, page 6.1.

1 **4. Deferred Regulatory Assets.**

2 **Q. DOES LIBERTY BLACK MOUNTAIN CURRENTLY HAVE A**
3 **DEFERRED REGULATORY ASSET?**

4 A. Yes, a deferred regulatory asset was approved in the last rate case in order to allow
5 the Company to begin recovering a return on the costs it had already incurred
6 related to closure of the Boulders WWTP.⁴ Now, with the full amount of closure
7 costs known, the deferred regulatory asset needs to be adjusted in this rate case.

8 **Q. PLEASE DISCUSS THE ADJUSTMENTS TO DEFERRED REGULATORY**
9 **ASSETS THE COMPANY IS PROPOSING IN THIS RATE CASE.**

10 A. B-2 adjustment number 5, as shown on Schedule B-2, page 2, increases deferred
11 regulatory assets for the cost of additional wastewater treatment capacity the
12 Company purchased from the City of Scottsdale (“Additional Capacity”) and for
13 other plant closure costs, along with post-in-service AFUDC and post-in-service
14 depreciation related to these costs. The proposed amounts of post-in-service
15 AFUDC and post-in-service depreciation are shown on B-2 Schedule, page 7. For
16 the Additional Capacity, the post-in-service AFUDC and post-in-service
17 depreciation total \$374,224 (\$254,216 of AFUDC and \$120,008 of depreciation)
18 and are based on a cost of \$1,200,000 incurred in January of 2018. Deferred
19 AFUDC and depreciation are computed through June 30, 2020, which, as
20 mentioned, is the date used for when the Additional Capacity will be recognized in
21 rate base through rates from this case. Again, if the rate case takes longer than
22 expected, the requested AFUDC and deferred depreciation can be adjusted
23 accordingly.

24
25
26

⁴ Decision No. 75510 at 13:2-6.

1 For the plant closure costs, the post-in-service AFUDC and post-in-service
2 depreciation totaling \$1,589,894 (\$1,130,120 of AFUDC and \$459,774 of
3 depreciation) are based on 2018 actual and 2019 projected PIS costs totaling
4 \$8,698,506. Deferred AFUDC and depreciation are computed through June 30,
5 2020 for the reasons mention previously.

6 **Q. ON WHAT BASIS DOES THE COMPANY PROPOSE RECOGNIZING**
7 **POST-IN-SERVICE AFUDC AND POST-IN-SERVICE DEPRECIATION**
8 **ON THESE COSTS RELATED TO CLOSURE OF THE BOULDERS**
9 **WWTP?**

10 A. The basis is the Commission's order adopting the Comprehensive Settlement
11 Agreement in the Company's prior rate case decision.⁵ Regarding the Additional
12 Capacity purchase cost, section 3.3.2.2 of that settlement agreement states:

13 For ratemaking purposes, the Parties agree that the Company
14 shall treat the Replacement Capacity cost as a regulatory asset
15 and that the Company is to be permitted to defer the cost of
16 the Replacement Capacity depreciation expense recorded on
17 the underlying regulatory assets, and to accrue post-in-service
18 Allowance for Funds Used During Construction (AFUDC)
19 for later recovery in rates. The Parties further agree that the
20 post-in service AFUDC rate shall be 7.71 percent, the
weighted average cost of capital set forth in Section 2.4
above, and that the deferred amount shall be depreciated at a
rate of 5 percent *until such time as it is recognized for*
*inclusion in rate base.*⁶

21 **Q. BUT THAT SECTION OF THE AGREEMENT APPROVED BY THE**
22 **COMMISSION DID NOT MENTION OTHER PLANT CLOSURE COSTS,**
23 **MR. BOURASSA?**

24 A. Correct, the other plant closure costs are addressed in a different section of the

25 ⁵ Decision No. 75510 at 17:28 – 18:1.

26 ⁶ Decision No. 77510, Exhibit B (emphasis added).

1 agreement approved in the Company's prior decision. Section 3.4.2.5 of the
2 Comprehensive Settlement Agreement deals with the plant closure costs and states:

3 The Parties acknowledge that the remaining closure costs can
4 only be estimated at this time, and that despite the Company's
5 best efforts, the final actual remaining closure costs may be
6 higher than the current estimate. Additionally, the Parties
7 agree that the actual, total cost subject to the accrual of post-
8 in-service AFUDC and the deferral of depreciation in
9 accordance with Sections 3.4.2.3 and 3.4.2.4 above shall not
10 exceed \$3,299,700 (\$2,699,700 plus a maximum of
11 \$500,000), which amount is exclusive of the cost of the
12 Replacement Capacity addressed in Section 3.3.2 above. The
Company may seek relief in its next rate case for the actual
construction costs that exceed the maximum amount of
\$3,299,700, if any, that are subject to deferred depreciation
and the accrual of post in-service AFUDC in accordance with
this Comprehensive Settlement.⁷

13 **Q. DOESN'T THAT SECTION OF THE SETTLEMENT AGREEMENT**
14 **LIMIT THE AMOUNT OF PLANT CLOSURE COSTS SUBJECT TO**
15 **POST-IN SERVICE AFUDC AND DEFERRED DEPRECIATION?**

16 **A.** No. The Parties agreed to limit the amount of closure costs automatically subject
17 to this treatment to \$3,299,700 because that was the only estimate of the closure
18 costs then available. However, the Commission and the parties clearly recognized
19 that the plant closure costs estimates were preliminary and subject to change.⁸ For
20 this reason, the Settlement Agreement expressly contemplated that if the costs
21 exceeded the estimated cap, the Company could seek post-in service AFUDC and
22 deferred depreciation on the total closure cost amount as shown in the excerpt I
23 provided from that agreement.

24
25 ⁷ *Id.*

26 ⁸ Decision No. 75510 at 13:21 – 14:4; Garlick Dt. at 21-22.

1 **Q. WHY DOES LIBERTY BLACK MOUNTAIN BELIEVE AN AMOUNT**
2 **HIGHER THAN THE LIMIT IN THE PRIOR RATE CASE SHOULD BE**
3 **ALLOWED IN THIS CASE?**

4 A. Mr. Garlick discusses the Company's closure of the Boulders WWTP in
5 significant detail in his direct testimony and as he testifies, the Company did what
6 it was ordered to do by the Commission at the behest of the customers and
7 community, it did everything the right way, it did not spend any more than was
8 necessary and the total costs were reasonable and prudent.⁹ It should also be
9 recalled that in the 2015 rate case Liberty Black Mountain gave up the plant
10 closure cost surcharge that was both a condition of its agreement to close the
11 Boulders WWTP and approved by the Commission in the 2009 rate case.¹⁰ That
12 provision was specifically intended to ensure the Company's timely recovery of
13 costs it was required to incur to comply with the Commission's orders to close the
14 plant. The adjustments I have made to include post in service AFUDC and
15 deferred depreciation on the plant closure costs are intended to do the same thing.

16 **5. Accumulated Deferred Income Taxes (ADIT).**

17 **Q. PLEASE DISCUSS THE ADIT ADJUSTMENT.**

18 A. Adjustment number 7, shown on Schedule B-2, page 2, reflects the computed
19 deferred income taxes at the end of the test year. The Company's computation is
20 based on the adjusted PIS, A/D, AIAC, and CIAC balances in the instant case and
21 the adjusted tax basis of its assets using the effective tax rates computed on the
22 Schedule C-3, page 2. The detail of the Company's deferred income tax
23 computation is shown on Schedule B-2, pages 8.0 and 8.1.

24
25 ⁹ Garlick Dt. at 15-16.

26 ¹⁰ See Decision No. 75510 at 14:15-16; Decision No. 73885 at 50:22-25; Decision No. 71865 at 54:7 – 55:7.

1 **IV. C SCHEDULES (INCOME STATEMENT).**

2 **Q. WOULD YOU EXPLAIN THE C SCHEDULES?**

3 A. Schedule C-1, page 1 summarizes the test year actual and adjusted revenues and
4 expenses. Schedule C-1, page 2.1 and 2.2 shows the individual adjustments to the
5 test year. The following is a summary of adjustments shown on Schedule C-1,
6 pages 2.1 and 2.2.

7 Adjustment 1 annualizes depreciation and amortization expense. The
8 proposed depreciation rate for each component of utility plant is shown on
9 Schedule C-2, page 2. The depreciation rates approved in the last rate case were
10 plant account specific. The Company proposes to continue to use account specific
11 rates on a going forward basis. The Company's proposed depreciation and
12 amortization also reflects amortization of CIAC at the composite depreciation rate
13 of depreciable plant, amortization of Excess Accumulated Deferred Income Taxes
14 based upon the weighted average remaining life of depreciable plant at the end of
15 2017, and amortization of Deferred Regulatory Assets based upon a 20-year
16 amortization period.

17 Adjustment 2 increases the property taxes based on proposed revenues and
18 using the Arizona Department of Revenue's valuation method. The property tax
19 rate is reflective of 2018 property tax rates. The details of the computation are
20 shown on Schedule C-2, page 3.

21 Adjustment 3 is intentionally left blank. Typically, Adjustment 3 would be
22 used for rate case expense adjustments.

23 **Q. WHERE IS THE RATE CASE EXPENSE SHOWN?**

24 A. Rate case expense is not reflected in the operating expenses because the Company
25 is requesting recovery through a rate case expense surcharge.
26

1 **Q. WHY IS LIBERTY BLACK MOUNTAIN REQUESTING APPROVAL OF A**
2 **RATE CASE EXPENSE SURCHARGE?**

3 A. I believe this methodology is fair to both customers and the utility because it avoids
4 potential over or under recovery of rate case expense that can happen when rate
5 case expense is treated as a “normalized” expense. Rate case expense is not a
6 normal, regular expense. It is incurred for a limited purpose, outside the test year,
7 and may bear little resemblance to other cases where the expense is incurred.
8 Additionally, the utility pays rate case costs in advance and when treated as a
9 typical expense, any unrecovered rate case expense is forfeited if the utility gets
10 new rates before the amortization period has run. Alternatively, if the utility stays
11 out longer than the amortization period, the utility over recovers. A surcharge
12 avoids both possible outcomes because the utility will be allowed to collect the
13 surcharge until it recovers the authorized level of rate case expense and then the
14 surcharge ceases to be charged. In other words, using a rate case expense
15 surcharge, the Company will recover the amount authorized, no more, and no less.

16 **Q. WHAT IF THE NEXT RATE CASE IS COMPLETE BEFORE THE**
17 **COMPANY COMPLETES ITS RECOVERY OF THE COST OF THIS**
18 **CASE UNDER THE RATE CASE EXPENSE SURCHARGE?**

19 A. A rate case expense surcharge can always be a line item on the customer bill and
20 can include amounts to be recovered from different rate cases. The amount can
21 adjust as needed, up or down. This also has the benefit of making the cost of
22 ratemaking transparent to all stakeholders and another reason that in my
23 experienced professional opinion, rate case expense surcharges should be used in
24 most, if not all, rate cases.

1 **Q. OKAY, THANK YOU, MR. BOURASSA. WHAT IS THE REQUESTED**
2 **TOTAL RATE CASE EXPENSE?**

3 A. The Company estimates rate case expense of \$450,000 to be recovered over four
4 years, or \$122,500 annually.

5 **Q. HOW WAS THIS AMOUNT DETERMINED?**

6 A. It is an estimate based on the significant combined experience for lead counsel and
7 me before the Commission in rate cases, including the last three rate cases for
8 Liberty Black Mountain. In consultation with the Company's representatives, who
9 themselves have considerable experience in Commission ratemaking procedures,
10 we came up with our estimate taking into account the unique and anticipated
11 circumstances in this rate case, and the lengthy, complicated, often litigious and
12 always expensive history of the Company's closure of the Boulders WWTP. If the
13 estimate turns out to be too low or too high, it can always be revisited as the rate
14 case progresses.

15 **Q. BASED UPON THE TEST YEAR-END NUMBER OF CUSTOMERS,**
16 **WHAT IS THE MONTHLY RATE CASE EXPENSE SURCHARGE?**

17 A. The Company has about 2,200 customers. The proposed annual rate case expense
18 is \$122,500. The resulting monthly surcharge per customer would be \$4.26
19 (\$122,500/2,200/12).

20 **Q. WOULD THE COMPANY AGREE TO ANNUAL REPORTING OF THE**
21 **RATE CASE EXPENSE SURCHARGE COLLECTIONS TO THE**
22 **COMMISSION?**

23 A. Yes, if the Commission wishes.

24 **Q. THANK YOU, AGAIN. PLEASE CONTINUE WITH YOUR DISCUSSION**
25 **OF THE EXPENSE ADJUSTMENTS.**

26 A. Adjustment 4 annualizes revenues to the year-end number of customers. The

1 annualization of revenues is based on the year-end number of customers during the
2 test year, compared to the actual number of customers during each month of the
3 test year. Average revenues per customer by month were computed for the test
4 year and then multiplied by the increase (or decrease) in number of customers for
5 each month of the test year. The total of the monthly revenue change comprises
6 the revenue annualization.

7 Adjustment number 5 reduces reclaimed water revenues to zero as the
8 Company will no longer sell reclaimed water with the closing of the Boulders
9 WWTP.

10 Adjustment 6 reduces Contractual Services – Professional and reflects a
11 true-up of test-year allocated labor costs and a pro-forma one-year salary increase.

12 Adjustment 7 increases purchase wastewater treatment expense for expected
13 increases in the treatment costs charged by the City of Scottsdale. The Company
14 also is proposing adjuster mechanisms that are discussed in Ms. Washington's
15 testimony, including an adjuster for changes in the Additional Capacity charges.¹¹

16 Adjustments 8 through 12 are intentionally left blank.

17 Adjustment 13 adjusts interest expense to reflect interest synchronization
18 with rate base.

19 Adjustment 14 reflects income taxes based upon the Company adjusted test
20 year revenue and expense.

21
22
23
24
25
26 ¹¹ Direct Testimony of Leticia Washington at 26-29.

1 **V. RATE DESIGN (H SCHEDULES).**

2 **Q. WHAT ARE THE COMPANY'S PRESENT RATES FOR WASTEWATER**
3 **SERVICE?**

4 The present rates are:¹²

5 Residential Service – Per Month \$79.20

6 Commercial – per Month \$85.00

7 Commercial Commodity Charge (per 1,000 gallons)¹³ \$ 5.13

8 Effluent Sales (Per thousand gallons)¹⁴ \$1.666585

9 **Q. WHAT ARE THE COMPANY'S PROPOSED RATES FOR**
10 **WASTEWATER SERVICE?**

11 A. The proposed rates are:

12 Residential Service – Per Month \$104.94

13 Commercial – per Month \$112.20

14 Commodity Charge (per 1,000 gallons)¹⁵ \$ 6.758

15 Effluent Sales (Per thousand gallons) remove

16 **Q. WHY IS THE EFFLUENT RATE BEING REMOVED?**

17 A. Because the Boulders WWTP has ceased to operate and the Company no longer
18 has any effluent to sell.

19 **Q. THANK YOU. IS THE COMPANY PROPOSING ANY OTHER**
20 **SIGNIFICANT CHANGES TO THE RATE DESIGN?**

21 A. No, and all of the proposed rate increases were done by the same percentage.
22

23 _____
24 ¹² Exclusive of Tax Savings Surcredit.

25 ¹³ For commercial customers the commodity charge is based upon monthly water usage.

26 ¹⁴ Including Effluent Add-on charge. See the Company's current Tariff of Rates and Charges.

¹⁵ For commercial customers the commodity charge is based upon monthly water usage.

1 **Q. WHAT WILL BE THE RESIDENTIAL CUSTOMER MONTHLY BILL**
2 **UNDER THE NEW RATES?**

3 A. As shown on Schedule H-2, page 1, the monthly bill under proposed rates for a
4 residential customer is \$104.94 – a \$27.88 increase over the present monthly bill of
5 \$77.06 (including the tax savings credit) or a 36.18 percent increase.

6 **Q. DOES THIS INCLUDE THE RATE CASE EXPENSE SURCHARGE?**

7 A. No. The \$4.26 rate case expense surcharge is in addition to the \$104.94 monthly
8 rate. When taken together, a residential customer will pay \$109.20 (\$104.94 plus
9 \$4.26) – a \$32.14 increase over the present monthly bill or a 41.71 percent
10 increase.

11 **Q. DOES THE H-2 SCHEDULE SHOW THE IMPACT FOR COMMERCIAL**
12 **CLASS?**

13 A. Yes. At an average usage of 34,442 gallons the proposed bill would be \$344.98, an
14 \$86.24 increase over the current bill of \$258.74 (including the tax savings credit)
15 or a 33.33 percent increase.

16 **Q. DOES THIS INCLUDE THE RATE CASE EXPENSE SURCHARGE OR**
17 **THE PLANT CLOSURE SURCHARGE?**

18 A. Again, no. The \$4.26 rate case expense surcharge is in addition to the \$344.58
19 monthly bill at 34,442 gallons. When taken together, a commercial customer using
20 34,442 gallons will pay \$349.24 (\$344.98 plus \$4.26) – a \$90.50 increase over the
21 current bill or a 34.98 percent increase.

22 **Q. HOW MUCH OF THE PROPOSED REVENUES ARE RECOVERED**
23 **FROM THE RESIDENTIAL CLASS AND THE COMMERCIAL CLASS?**

24 A. About 84 percent and 16 percent, respectively, which is about the same as under
25 current rates (after factoring in the tax savings credits provided during the test
26 year).

1 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY ON RATE BASE,**
2 **INCOME STATEMENT AND RATE DESIGN?**

3 A. Yes.
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

EXHIBIT TJB-RB-DT1

RESUME OF THOMAS J. BOURASSA, CPA

EDUCATIONAL BACKGROUND

B.S. Northern Arizona University Chemistry/Accounting (1980)

M.B.A. University of Phoenix with Emphasis in Finance (1991)

C.P.A. State of Arizona (1995)

Continuing Professional Education – In areas of tax, accounting, management, economics, finance, business valuation, consulting, and ethics (80 hrs every two years)

MEMBERSHIPS

Arizona Society of CPAs

Water Utilities Association of Arizona

American Water Works Association

EMPLOYMENT EXPERIENCE

1995 – Present	<p>CPA - Self Employed</p> <p>Consultant to utilities on regulatory matters including all aspects of rate applications (rate base, income statement, cost of capital, cost of service, and rate design), rate reviews, certificates of convenience and necessity (CC&N), CC&N extensions, financing applications, accounting order applications, and off-site facilities hook-up fee applications. Provide expert testimony as required.</p> <p>Consult on various aspects of business, financial and accounting matters including best business practices, generally accepted accounting principles, generally accepted ratemaking principles, project analysis, cash flow analysis, regulatory treatment of certain expenditures and investments, business valuations, and rate reviews.</p> <p>Litigation support services.</p>
1992-1995	<p>Employed by High-Tech Institute, Phoenix, Arizona as Controller and C.F.O.</p>
1989-1992	<p>Employed by Alta Technical School, a division of University of Phoenix as Division Controller.</p>
1985-1989	<p>Employed by M.L.R. Builders, Tampa and Pensacola, Florida as Operations/Accounting Manager</p>
1982-1985	<p>Employed by and part owner in Area Sand and Clay Company, Pensacola, Florida.</p>

1981-1982

Employed by Purdue University, West Lafayette, Indiana as
Teaching Assistant.

SUMMARY OF REGULATORY WORK EXPERIENCE AS SELF EMPLOYED CONSULTANT

COMPANY/CLIENT

FUNCTION

(Liberty Utilities (CalPeco Electric) LLC
CPUC Application 18-12-001.

Cost of Capital. Prepared Cost of Capital analysis and testimony.

(Liberty Utilities (Park Water) Corp. and
Liberty Utilities (Apple Valley Ranchos
Water) Corp.
CPUC Applications 18-05-001, et al.

Cost of Capital. Prepared Cost of Capital analysis and testimony.

Truxton Water Company
ACC W-02168A-18-308

Permanent Rate Application –Water.
Prepared schedules and testified on Rate
Base, Plant, Income Statement, Revenue
Requirement, and Rate Design.

Payson Water Company
ACC W-03514A-18-0230

Permanent Rate Application – Prepared
schedules and testified on Rate Base,
Plant, Income Statement, Revenue
Requirement, Rate Design, and Cost of
Capital.

Farmers Water Company
ACC W-01654A-18-0083

Permanent Rate Application – Prepared
schedules and testified on Rate Base,
Plant, Income Statement, Revenue
Requirement, Rate Design, and Cost of
Capital.

Liberty Utilities (Silverleaf Water) Corp.
SOAH DOCKET NO. 473-18-3006.WS
Texas P.U.C. DOCKET NO. 47976

Permanent Rate Application – Water and
Wastewater. Prepared financing
application. Prepared schedules and
testified on Rate Base, Plant, Income
Statement, Revenue Requirement, Rate
Design, and Cost of Capital.

Generic Proceeding - Income Tax
“Savings” from reduction in Federal
Income Tax Rate
ACC AU-0000A-17-0379
ACC various dockets

Prepared computations of tax “savings”
from the reduction in federal income tax
rates and proposal for passing savings to
rate payers through bill credits.

Liberty Utilities (Woodmark Sewer) Corp.
Liberty Utilities (Tall Timbers Sewer)
Corp.
SOAH DOCKET NO. 473-17-1641.WS

Develop wastewater rates based upon
water usage.

COMPANY/CLIENT

Texas P.U.C. DOCKET NO. 46256

FUNCTION

Cerbat Water Company
ACC W-02391A-18-0018

Permanent Rate Application –Water.
Prepared financing application. Prepared
schedules and testified on Rate Base,
Plant, Income Statement, Revenue
Requirement, and Rate Design.

Ajo Improvement Company
ACC Docket No. WS-01025A-17-0361

Permanent Rate Application – Water,
Wastewater, and Electric. Prepared
schedules and testified on Rate Base,
Plant, Income Statement, Revenue
Requirement, and Rate Design,

East Slope Water Company
ACC Docket No. W-02031A-17-317

Permanent Rate Application –Water
Prepared short-form schedules on Rate
Base, Plant, Income Statement, Revenue
Requirement, and Rate Design.

Kachina Village Improvement District
Flagstaff, Arizona

Prepared rate studies and rate designs.
Participated in Board work sessions,
customer work sessions, and open houses.

Liberty Utilities (Litchfield Park Water &
Sewer) Corp.
ACC Docket No. W-01428AA-17-0059
ACC Docket No. SW-01428AA-17-0058

Permanent Rate Application – Water and
Wastewater. Prepared financing
application. Prepared schedules and
testified on Rate Base, Plant, Income
Statement, Revenue Requirement, Cost of
Service, Rate Design, and Cost of Capital.

Pima Utility Company
ACC Docket No. W-02199A-16-0421
ACC Docket No. SW-02199A-16-0422

Permanent Rate Application – Water and
Wastewater. Prepared financing
application. Prepared schedules and
testified on Rate Base, Plant, Income
Statement, Revenue Requirement, Rate
Design, and Cost of Capital.

Valley Pioneers Water Company
ACC Docket No. W-02033-16-0412

Permanent Rate Application –Water.
Prepared financing application. Prepared
schedules and testified on Rate Base,
Plant, Income Statement, Revenue
Requirement, and Rate Design.

Yarnell Water Co-Op
ACC Docket No. W-02255A-16-0153

Permanent Rate Application –Water
Prepared short-form schedules on Rate

COMPANY/CLIENT**FUNCTION**

Oak Creek Water Company No. 1
ACC Docket No. W-01392A-16-0161

Base, Plant, Income Statement, Revenue Requirement, and Rate Design.

Permanent Rate Application – Water
Prepared short-form schedules on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.

Epcor Water Arizona
ACC Docket No. W-01303A-16-0145

Permanent Rate Application –
Wastewater. Prepared Reconstruction
Cost New Less Depreciation Plant for use
in determining fair value rate base.
Testified in the matter investigating
whether Mountain Water Company's rates
are just and reasonable.

Turner Ranches Water and Sanitation
Company

ACC Docket No. W-01677A-16-0076

Permanent Rate Application – Water
Prepared short-form schedules on Rate
Base, Plant, Income Statement, Revenue
Requirement, and Rate Design.

Liberty Utilities (Entrada Del Oro Sewer)
Corp.
ACC Docket No. W-04316A-16-0078
ACC Docket No. W-04316A-16-0085

Permanent Rate Application – Wastewater.
Prepared financing application. Prepared
schedules and testified on Rate Base,
Original Cost Less Depreciation Plant,
Reconstruction Cost New less
Depreciation Plant, Income Statement,
Revenue Requirement, Rate Design, and
Cost of Capital.

Liberty Utilities (Rio Rico Water and
Sewer) Corp.
ACC Docket No. WS-02676A-15-0368
ACC Docket No. WS-02676A-15-0371

Permanent Rate Application – Water and
Wastewater. Prepared financing
application. Prepared schedules and
testified on Rate Base, Plant, Income
Statement, Revenue Requirement, Rate
Design, and Cost of Capital.

Liberty Utilities (Bella Vista Water) Corp.

ACC Docket No. W-02465A-15-0367
ACC Docket No. W-02465A-15-0370

Permanent Rate Application – Water.
Prepared financing application. Prepared
schedules and testified on Rate Base,
Plant, Income Statement, Revenue
Requirement, Rate Design, and Cost of
Capital.

COMPANY/CLIENT

Community Water of Green Valley
ACC Docket No. W-02304A-15-0263

Sahuarita Water Company
ACC Docket No. W-03718A-15-0213

Liberty Utilities (Black Mountain Sewer)
Corp.
ACC Docket No. SW-0236 1A- 15-0206
ACC Docket No. SW-0236 1A- 15-0207

Tierra Buena Water Company
ACC Docket No. W-02076A-15-013

Red Rock Utilities, LLC
ACC Docket No. W-04245A-14-0295

Quail Creek Water Company
ACC Docket No. W-02514A-14-0370

Tonto Basin Water Company
ACC Docket No. W-03515A-14-0310

Navajo Water
ACC Docket No. W-03511A-14-304

FUNCTION

Permanent Rate Application – Water.
Prepared schedules and testified on Rate
Base, Plant, Income Statement, Revenue
Requirement, and Rate Design.

Permanent Rate Application –Water.
Prepared schedules and testified on Rate
Base, Plant, Income Statement, Revenue
Requirement, Rate Design, and Cost of
Capital.

Permanent Rate Application –Wastewater.
Prepared financing application. Prepared
schedules and testified on Rate Base,
Plant, Income Statement, Revenue
Requirement, Cost of Service Study, Rate
Design, and Cost of Capital.

Permanent Rate Application – Water.
Assisted in preparation of short-form
schedules.

Permanent Rate Application – Water and
Wastewater. Prepared short-form
schedules and testified on Rate Base,
Plant, Income Statement, Revenue
Requirement, Rate Design, and Cost of
Capital.

Permanent Rate Application – Water.
Prepared schedules and testified on Rate
Base, Plant, Income Statement, Revenue
Requirement, Rate Design, and Cost of
Capital.

Permanent Rate Application – Water.
Prepared short-form schedules for Rate
Base, Income Statement, Plant, Bill
Counts, and Rate Design.

Permanent Rate Application – Water.
Prepared short-form schedules for Rate
Base, Income Statement, Plant, Bill
Counts, and Rate Design.

COMPANY/CLIENT

Alaska Power Company
Regulatory Commission of Alaska
Docket No. U-14-002

Anchorage Municipal Light & Power
Regulatory Commission of Alaska
Docket No. U-13-184

Liberty Utilities (Pine Bluff) Inc.
Arkansas Public Service Commission
Docket No. 14-020-U

Abra Water Company
ACC Docket No. W-01782A-14-0084

EPCOR Water Arizona, Inc.
ACC Docket No. W-01303A-14-0010

Liberty Utilities (Midstates Natural Gas),
Inc.
Missouri Public Service Commission
Case No. GR-2014-0152

Hydro Resources, LLC.
ACC Docket No. W-20770A-13-0313

Little Park Water Company
ACC Docket No. W-02192A-13-0336

Utility Source, LLC.

FUNCTION

Prepared schedules and testified on cost of capital.

Prepared schedules and testified on cost of capital.

Permanent Rate Application – Water.
Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Cost of Service, Rate Design, and Cost of Capital.

Permanent Rate Application – Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.

Permanent Rate Application – Prepared rate designs and cost of Service studies for Mohave Water District, Mohave Wastewater District, Paradise Valley Water District, Tubac Water District, and Sun City Water District.

Permanent Rate Application – Assist in preparing required rate application schedules for Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.

Certificate of Convenience and Necessity – Water. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, and initial rates.

Permanent Rate Application – Water. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.

Permanent Rate Application – Water and

COMPANY/CLIENT

ACC Docket No. WS-04235A-13-0331

Payson Water Company

ACC Docket No. W-03514A-13-0111

ACC Docket No. W-03514A-13-0142

Goodman Water Company

Verde Santa Fe Wastewater

ACC Docket No. SW-03437A-13-0292

Lago Del Oro Water Company

ACC Docket No. W-01944A-13-0215

Chaparral City Water Company

ACC Docket No. W-02113A-13-0118

Las Quintas Serenas Water Company

ACC Docket No. W-01583A-13-0117

Southwest Environmental Utilities, Inc.

ACC Docket No. WS-20878A-13-0065

Litchfield park Service Company

ACC Docket No. SW-01428A-13-0043

ACC Docket No. W-01428A-13-0042

FUNCTION

Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.

Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.

Financing Application. Prepared financial ratios and debt surcharge mechanism.

Valuation

Permanent Rate Application – Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.

Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Cost of Service, Rate Design, and Cost of Capital.

Permanent Rate Application – Prepared and testified on cost of service study.

Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.

Certificate of Convenience and Necessity – Water and Wastewater. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, and initial rates.

Permanent Rate Application – Water and Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement,

COMPANY/CLIENT**FUNCTION**

Beaver Dam Water Company
ACC Docket No. WS-03067A-12-0232

Revenue Requirement, Rate Design, Cost of Service, and Cost of Capital.

Permanent Rate Application. Prepared schedules on Plant, Income Statement, Revenue Requirement, and Rate Design.

Rio Rico Utilities
ACC Docket No. WS-02676A-12-0196

Permanent Rate Application – Water and Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Cost of Service, Rate Design, and Cost of Capital.

Vail Water Company
ACC Docket No. W-01651B-12-0339

Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Cost of Service, Rate Design, and Cost of Capital.

Avra Water Co-Op.
ACC Docket No. W-02126A-11-0480

Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Cost of Service, Rate Design, and Cost of Capital.

Pima Utility Company
ACC Docket No. W-02199A-11-0329
ACC Docket No. SW-02199A-11-0330

Permanent Rate Application – Water and Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Cost of Service, Rate Design, and Cost of Capital.

Work on financing application.

Liberty Utilities (CALPECO Electric), LLC)
Docket No. 11202020

Work on preparation of permanent rate application. Prepared schedules on Rate Base, Plant, Income Statement, Revenue Requirement.

Livco Water Company
ACC Docket No. SW-02563A-11-0213

Permanent Rate Application – Water and Sewer. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.

Orange Grove Water Company
ACC Docket No. W-02237A-11-0180

Permanent Rate Application. Prepared schedules on Plant, Income Statement,

COMPANY/CLIENT**FUNCTION**

Goodman Water Company
ACC Docket No. W-02500A-10-0382

Revenue Requirement, and Rate Design.

Permanent Rate Application – Water.
Prepared schedules and testified on Rate
Base, Plant, Income Statement, Revenue
Requirement, Rate Design, and Cost of
Capital.

Doney Park Water
ACC Docket No. W-01416A-10-0450

Permanent Rate Application – Water.
Prepared schedules and testified on Rate
Base, Plant, Income Statement, Revenue
Requirement, and Rate Design.

*Grimmelmann, et. al. v. Pulte Home
Corporation, et. al.*, case no. CV-08-1878-
PHX-FJM, the United States District Court
for the District of Arizona.

Consultant to defendant and expert
witness for defendant on rates and
ratemaking.

Southern Arizona Home Builders
Association

Consultant on ratemaking aspects to line
extension policies (electric).

H2O Water Company

Valuation

Tierra Linda HOA Water Company

Valuation

Las Quintas Serenas Water Company
ACC Docket No. W-01583A-09-0589

Permanent Rate Application – Water.
Prepared schedules and testified on Rate
Base, Plant, Income Statement, Revenue
Requirement, Rate Design, and Cost of
Capital.

Coronado Utilities
ACC Docket No. SW-04305A-09-0291

Permanent Rate Application –
Wastewater. Prepared schedules and
testified on Rate Base, Plant, Income
Statement, Revenue Requirement, Rate
Design, and Cost of Capital.

Little Park Water Company
ACC Docket No. W-02192A-09-0531

Permanent Rate Application. Prepared
schedules on Plant, Income Statement,
Revenue Requirement, and Rate Design.

Sahuarita Water Company
ACC Docket No. W-03718A-09-0359

Permanent Rate Application – Water.
Prepared schedules and testified on Rate
Base, Plant, Income Statement, Revenue
Requirement, Rate Design, Cost of

COMPANY/CLIENT**FUNCTION**

Bella Vista Water Company
Southern Sunrise Water Company
Northern Sunrise Water Company
ACC Docket No. W-02465A-09-0414
ACC Docket No. W-02453A-09-0414
ACC Docket No. W-02454A-09-0414

Service, and Cost of Capital.

Permanent Rate Application – Water.
Prepared schedules and testified on Rate
Base, Plant, Income Statement, Revenue
Requirement, Rate Design, Cost of
Service, and Cost of Capital.

Rio Rico Utilities, Inc
ACC Docket No. WS-02676A-09-0257

Permanent Rate Application – Water and
Sewer. Prepared schedules and testified
on Rate Base, Plant, Income Statement,
Revenue Requirement, Rate Design, and
Cost of Capital.

Litchfield park Service Company
ACC Docket No. SW-01428A-09-0103
ACC Docket No. W-01428A-09-0104

Permanent Rate Application – Water and
Sewer. Prepared schedules and testified
on Rate Base, Plant, Income Statement,
Revenue Requirement, Rate Design, Cost
of Service, and Cost of Capital.

Town of Thatcher v. City of Safford, CV
2007-240, Superior Court of Arizona

Consultant to plaintiff on ratemaking and
cost of service.

Valencia Water Company
California Public Utility Commission Case
No. 09-05-002

Cost of Capital

Valley Utilities
ACC Docket No. W-01412A-08-0586

Permanent Rate Application. Prepared
schedules and testified on Rate Base,
Plant, Income Statement, Revenue
Requirement, and Rate Design.

Black Mountain Sewer Company
ACC Docket No. SW-02361A-08-0609

Permanent Rate Application – Sewer.
Prepared schedules and testified on Rate
Base, Plant, Income Statement, Revenue
Requirement, Rate Design, and Cost of
Capital.

Far West Water and Sewer Company
ACC Docket No. WS-03478A-08-0608

Interim Rate Application (Emergency
Rates)

Farmers Water Company

Permanent Rate Application. Prepared

COMPANY/CLIENT

ACC Docket No. W-01654A-08-0502

Far West Water and Sewer Company
ACC Docket No. WS-03478A-08-0454

Ridgeline Water Company, LLC
ACC Docket No. W-20589A-08-0173

Sacramento Utilities, Inc.
ACC Docket No. SW-20576A-08-0067

Johnson Utilities
ACC Docket No. WS-02987A-08-0180

Orange Grove Water Company
ACC Docket No. W-02237A-08-0455

Far West Water and Sewer Company
ACC Docket No. WS-03478A-07-0442

Oak Creek Water No.1
ACC Docket No. W-01392A-07-0679

ICR Water Users Association
Docket W-02824-07-0388

FUNCTION

schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.

Permanent Rate Application. Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design and Cost of Capital.

Certificate of Convenience and Necessity – Water. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, financing, and initial rates.

Certificate of Convenience and Necessity – Wastewater. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, and financing.

Permanent Rate Application. Water and Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design and Cost of Capital.

Participate in 40-252 proceeding.

Permanent Rate Application. Prepared schedules on Plant, Income Statement, Revenue Requirement, and Rate Design.

Financing Application. Prepare schedules to support application.

Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.

Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.

COMPANY/CLIENT**FUNCTION**

Johnson Utilities

Valuation consultant in the matter of the sale of Johnson Utilities assets to the Town of Florence.

H2O, Inc
ACC Docket No. W-02234A-07-0550

Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.

Chaparral City Water Company
ACC Docket No. W-02113A-07-0551

Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.

Valley Utilities
ACC Docket No. W-01412A-07-0561

Financing Application. Prepare schedules to support application.

Valley Utilities
ACC Docket No. W-01412A-07-280

Emergency Rate Application. Prepare schedules to support application.

Valley Utilities
ACC Docket No. W-01412A-07-0278

Accounting Order. Assist in preparing definition and scope of costs for deferral for future regulatory consideration and treatment.

Litchfield Park Service Company
ACC Docket No. W-01427A-06-0807

Accounting Order. Assist in preparing definition and scope of costs for deferral for future regulatory consideration and treatment.

Golden Shores Water Company
ACC Docket No. W-01815A-07-0117

Permanent Rate Application. Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.

Diablo Village Water Company
ACC Docket No. W-02309A-07-0140

Off-site facilities hook-up fee application. Prepare schedules to support application.

Diablo Village Water Company

Permanent Rate Application (Class C).

COMPANY/CLIENT

ACC Docket No. W-02309A-07-0399

Sahuarita Water Company
(Rancho Sahuarita Water Co.)

ACC Docket No. W-03718A-07-0687

Utility Source, L.L.C.

ACC Docket No. WS-04235A-06-0303

Tierra Buena Water Company

Goodman Water Company

ACC Docket No. W-02500A-06-0281

Links at Coyote Wash Utilities

ACC Docket No. SW-04210A-06-0220

New River Utilities

ACC Docket No. W-0173A-06-0171

Johnson Utilities

ACC Docket No. WS-02987A-04-0501

Docket WS-02987A-04-0177

Bachmann Springs Utility

ACC Docket No. WS-03953A-07-0073

FUNCTION

Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.

Extension Certificate of Convenience and Necessity – Water. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, and financing.

Permanent Rate Application- Water and Wastewater. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.

Valuation of Tierra Buena Water Company for estate purposes.

Permanent Rate Application (Class C). Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, and Cost of Capital.

Certificate of Convenience and Necessity – Sewer. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, financing, and initial rate design.

Extension Certificate of Convenience and Necessity – Water. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, and financing.

Extension of Certificate of Convenience and Necessity – Sewer. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, financing, and initial rate design.

Permanent Rate Application – Water and Sewer. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.

COMPANY/CLIENT

FUNCTION

Avra Water Cooperative
ACC Docket No. W-02126A-06-0234

Permanent Rate Application – Water.
Prepared schedules and testified on Rate
Base, Plant, Income Statement, Revenue
Requirement, and Rate Design.

Gold Canyon Sewer Company
ACC Docket No. SW-025191A-06-0015

Permanent Rate Application – Sewer.
Prepared schedules and testified on Rate
Base, Plant, Income Statement, Revenue
Requirement, Rate Design, and Cost of
Capital.

*State of Arizona v. Far West Water and
Sewer*, No. 1 CA-CR 06-0160

Expert witness on behalf of defendant in
penalty phase of case.

Far West Water and Sewer Company
ACC Docket No. WS-03478A-05-0801

Permanent Rate Application – Sewer.
Prepared schedules and testified on Rate
Base, Plant, Income Statement, Revenue
Requirement, Rate Design, and Cost of
Capital.

Black Mountain Sewer Company
ACC Docket No. SW-02361A-05-0657

Permanent Rate Application – Sewer.
Prepared schedules and testified on Rate
Base, Plant, Income Statement, Revenue
Requirement, Rate Design, and Cost of
Capital.

Balterra Sewer Company
ACC Docket No. SW-02304A-05-0586

Certificate of Convenience and Necessity
– Sewer. Prepared pro-forma balance
sheets, income statements, plant
schedules, rate base, financing, and initial
rate design.

Community Water Company of Green
Valley
ACC Docket No. W-02304A-05-0830

Permanent Rate Application – Water.
Prepared schedules and testified on Rate
Base, Plant, Income Statement, Revenue
Requirement, and Rate Design.

McClain Water Systems
Northern Sunrise Water
Southern Sunrise Water
ACC Docket No. W-020453A-06-0251

Certificate of Convenience and Necessity
– Water. Prepared pro-forma balance
sheets, income statements, plant
schedules, rate base, financing, and initial
rate design.

Valley Utilities Water Company

Off-site facilities hook-up fee application.

COMPANY/CLIENT**FUNCTION**

ACC Docket No. W-01412A-04-0376

Prepare schedules to support application.

Valley Utilities Water Company

ACC Docket No. W-01412A-04-0376

Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, and Revenue Requirement. Assisted in preparation of Rate Design.

Beardsley Water Company

ACC Docket No. W-02074A-04-0358

Permanent Rate Application – Water. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.

Pine Water Company, Inc.

ACC Docket No. W-03512A-03-0279

Interim and Permanent Rate Application, Financing Application - Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Cost of Capital, and Rate Design.

Chaparral City Water Company

ACC Docket No. W-02113A-04-0616

Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, and Income Statement. Assisted in preparation Rate Design.

Tierra Linda Home Owners Association

ACC Docket No. W-0423A-04-0075

Certificate of Convenience and Necessity – Water. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, financing, and initial rate design.

Diamond Ventures - Red Rock Utilities

ACC Docket No. WS-04245A-04-0184

Certificate of Convenience and Necessity – Water and Sewer. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, financing, and initial rate design.

Arizona-American Water Company, Inc.

ACC Docket No. WS-01303A-02-0867

ACC Docket No. WS-01303A-02-0868

ACC Docket No. WS-01303A-02-0869

ACC Docket No. WS-01303A-02-0870

ACC Docket No. WS-01303A-02-0908

Permanent Rate Application Water and Sewer (10 divisions). Prepared schedules and testimony on Rate Base, Plant, Income Statement, and Revenue Requirement. Assisted in preparation of Rate Design.

COMPANY/CLIENT**FUNCTION**

Bella Vista Water Company, Inc.
ACC Docket No. W-02465A-01-0776

Permanent Rate Application - Water.
Prepared schedules and testimony on Rate Base, Plant, Income Statement, and Revenue Requirement. Assisted in preparation of Cost of Capital and Rate Design.

Green Valley Water Company
Docket (2000 Not Filed)

Permanent Rate Application. Prepared schedules and testimony on Rate Base, Plant, Income Statement, and Revenue Requirement. Assisted in preparation of Cost of Capital and Rate Design.

Gold Canyon Sewer Company
ACC Docket No. SW-02519A-00-0638

Permanent Rate Application - Sewer.
Prepared schedules and testimony on Rate Base, Plant, Revenue Requirement, and Income Statement. Assisted in preparation of Cost of Capital and Rate Design.

Rio Verde Utilities, Inc.
ACC Docket No. WS-02156A-00-0321

Permanent Rate Application – Water and Sewer. Prepared schedules and testimony on Rate Base, Plant, Revenue Requirement, and Income Statement. Assisted in preparation of Cost of Capital and Rate Design.

Livco Water Company
Livco Sewer Company
ACC Docket No. SW-02563A-05-0820

Permanent Rate Application – Water.
Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.

Livco Water Company
ACC Docket No. SW-02563A-07-0506

Permanent Rate Application – Water and Sewer. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.

Cave Creek Sewer Company

Revenue Requirement, Rate Adjustment and Rate Design - Sewer.

Avra Water Cooperative
ACC Docket No. W-02126A-00-0269

Permanent Rate Application – Water.
Assisted in preparation of Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.

COMPANY/CLIENT**FUNCTION**

Town of Oro Valley

Revenue Requirements, Water Rate
Adjustments and Rate Design.

Far West Water Company
ACC Docket No. WS-03478A-99-0144

Permanent Rate Application – Water.
Assisted in preparation of schedules for
Rate Base, Income Statement, Revenue
Requirement, Lead-Lag Study, Cost of
Capital, and Rate Design.

MHC Operating Limited Partnership
Sedona Venture Wastewater
ACC Docket No. W-

Permanent Rate Application – Sewer.
Assisted in preparation of schedules for
Rate Base, Plant, Income Statement, and
Rate Design.

Vail Water Company
ACC Docket No. W-01651B-99-0406

Permanent Rate Application. Assisted in
preparation of schedules for Rate Base,
Plant, Income Statement, and Rate Design.

E&T Water Company
ACC Docket No. W-01409A-95-0440

Permanent Rate Application - Water.
Assisted in preparation of schedules for
Rate Base, Plant, Income Statement, and
Rate Design.

New River Utility
ACC Docket No. W-01737A-99-0633

Permanent Rate Application - Water.
Assisted in preparation of schedules for
Rate Base, Plant, Income Statement, and
Rate Design.

Golden Shores Water
ACC Docket No. W-01815A-98-0645

Permanent Rate Application – Water.
Assisted in preparation of schedules for
Rate Base, Plant, Income Statement, and
Rate Design.

Ponderosa Utility Company
ACC Docket No. W-01717A-99-0572

Permanent Rate Application – Water.
Assisted in preparation of schedules for
Rate Base, Plant, Income Statement, and
Rate Design.

RATE BASE SCHEDULES

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Computation of Increase in Gross Revenue
Requirements As Adjusted

Exhibit
Schedule A-1
Page 1
Witness: Bourassa

Line
No.

1	Fair Value Rate Base	\$	14,408,605
2			
3	Adjusted Operating Income		397,226
4			
5	Current Rate of Return		2.76%
6			
7	Required Operating Income	\$	1,053,093
8			
9	Required Rate of Return on Fair Value Rate Base		7.31%
10			
11	Operating Income Deficiency	\$	655,867
12			
13	Gross Revenue Conversion Factor		1.3399
14			
15	Increase in Gross Revenue		
16	Requirement	\$	878,785
17			
18	Adjusted Test Year Revenues	\$	2,473,391
19	Increase in Gross Revenue Requirement	\$	878,785
20	Proposed Revenue Requirement	\$	3,352,176
21	% Increase		35.53%
22			

Customer Classification	Present Rates	Proposed Rates	Dollar Increase	Percent Increase
Residential	\$ 1,988,852	\$ 2,625,284	\$ 636,432	32.00%
Residential HOA (11 units)	10,494	13,852	3,358	32.00%
Residential HOA (12 units)	11,448	15,111	3,663	32.00%
Residential HOA (18 units)	17,172	22,667	5,495	32.00%
Residential HOA (25 units)	23,850	31,482	7,632	32.00%
Residential Apartment (8 units)	7,632	10,074	2,442	32.00%
Residential Apartment (10 units)	9,540	12,593	3,053	32.00%
Residential Apartment (66 units)	62,964	83,112	20,148	32.00%
Commercial	411,096	542,647	131,551	32.00%
Revenue Annualization	(11,392)	(15,038)	(3,645)	32%
Subtotal	\$ 2,531,656	\$ 3,341,786	\$ 810,130	32.00%
Miscellaneous Revenues	11,106	11,106	-	0.00%
Tax Savings Credit	(68,878)	-	68,878	-100.00%
Reconciling Amount	(493)	(715)	(222)	45.03%
			(1)	0.00%
Total of Water Revenues	\$ 2,473,391	\$ 3,352,176	\$ 878,785	35.53%

SUPPORTING SCHEDULES:

B-1
C-1
C-3
H-1

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Summary of Results of Operations

Exhibit
Schedule A-2
Page 1
Witness: Bourassa

Line No.	Description	Prior Years Ended		Test Year		Projected Year	
		12/31/2016	12/31/2017	Actual 12/31/2018	Adjusted 12/31/2018	Present Rates 12/31/2019	Proposed Rates 12/31/2019
1	Gross Revenues	\$ 2,534,794	\$ 2,558,143	\$ 2,491,430	\$ 2,473,391	\$ 2,473,391	\$ 3,352,176
2							
3	Revenue Deductions and	1,990,299	1,652,340	1,968,199	2,076,165	2,076,165	2,299,084
4	Operating Expenses						
5							
6	Operating Income	\$ 544,494	\$ 905,803	\$ 523,231	\$ 397,226	\$ 397,226	\$ 1,053,093
7							
8	Other Income and	(205,846)	15,288	27,880	27,880	27,880	27,880
9	Deductions						
10							
11	Interest Expense	(15,981)	(63,339)	(67,247)	(168,878)	(168,878)	(168,878)
12							
13	Net Income	\$ 322,668	\$ 857,752	\$ 483,864	\$ 256,228	\$ 256,228	\$ 912,094
14							
15	Common Shares	1,000	1,000	1,000	1,000	1,000	1,000
16							
17	Earned Per Average						
18	Common Share	322.67	857.75	483.86	256.23	256.23	912.09
19							
20	Dividends Paid	-	-	-	-	-	-
21							
22	Dividends Per						
23	Common Share	-	-	-	-	-	-
24							
25	Payout Ratio	-	-	-	-	-	-
26							
27	Return on Average						
28	Invested Capital	4.67%	11.55%	4.36%	1.67%	1.44%	5.13%
29							
30	Return on Year End						
31	Capital	4.60%	10.94%	3.37%	1.57%	1.33%	4.74%
32							
33	Return on Average						
34	Common Equity	6.55%	18.47%	11.01%	5.92%	3.97%	14.15%
35							
36	Return on Year End						
37	Common Equity	6.34%	20.41%	10.55%	5.75%	3.09%	10.98%
38							
39	Times Bond Interest Earned						
40	Before Income Taxes	34.07	14	12.61	2.04	2.04	7.84
41							
42	Times Total Interest and						
43	Preferred Dividends Earned						
44	After Income Taxes	33.23	15	9.59	3.42	3.42	5.96
45							
46							
47							
48							
49							
50	<u>SUPPORTING SCHEDULES</u>						
51	C-1						
52	E-2						
53	F-1						
54							

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Summary of Capital Structure

Exhibit
Schedule A-3
Page 1
Witness: Bourassa

Line No.	Description:	Prior Years Ended		Test Year	Projected Year
		12/31/2016	12/31/2017	12/31/2018	12/31/2019
1					
2					
3	Short-Term Debt	-	-	-	-
3					
4	Long-Term Debt	70,461	1,801,139	1,966,116	7,074,201
5					
6	Total Debt	\$ 70,461	\$ 1,801,139	\$ 1,966,116	\$ 7,074,201
7					
8					
9	Preferred Stock	-	-	-	-
10					
11	Common Equity	5,085,526	4,202,657	4,587,605	8,304,496
12					
13					
14	Total Capital & Debt	\$ 5,155,987	\$ 6,003,796	\$ 6,553,721	\$ 15,378,697
15					
16					
17	Capitalization Ratios:				
18					
19	Long-Term Debt	1.37%	30.00%	30.00%	46.00%
20					
21	Total Debt	1.37%	30.00%	30.00%	46.00%
22					
23					
24	Preferred Stock	-	-	-	-
25					
26	Common Equity	98.63%	70.00%	70.00%	54.00%
27					
28					
29	Total Capital	100.00%	100.00%	100.00%	100.00%
30					
31					
32	Weighted Cost of				
33	Senior Capital	0.00%	1.01%	1.01%	1.64%
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45	<u>SUPPORTING SCHEDULES:</u>				
46	E-1				
47	D-1				
48					
49					
50					

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Construction Expenditures
and Gross Utility Plant in Service

Exhibit
Schedule A-4
Page 1
Witness: Bourassa

Line No.		<u>Construction Expenditures</u>	<u>Net Plant Placed in Service</u>	<u>Gross Utility Plant in Service</u>
1				
2				
3				
4	Prior Year Ended 12/31/2016	(931,222)	(931,222)	13,939,311
5				
6	Prior Year Ended 12/31/2017	1,363,320	128,210	14,067,522
7				
8	Test Year Ended 12/31/2018	7,069,076	66,039	14,133,561
9				
10	Projected Year Ended 12/31/2019	87,481	6,518,059	20,651,620
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34	<u>SUPPORTING SCHEDULES:</u>			
35	B-2			
36	E-5			
37	F-3			
38				
39				
40				

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Summary Statements of Cash Flows

Exhibit
Schedule A-5
Page 1
Witness: Bourassa

Line
No.

	Prior Year Ended 12/31/2016	Prior Year Ended 12/31/2017	Test Year Ended 12/31/2018	Projected Year	
				Present Rates 12/31/2019	Proposed Rates 12/31/2019
5 Cash Flows from Operating Activities					
6 Net Income	\$ 322,668	\$ 857,752	\$ 483,864	\$ 256,228	\$ 912,094
7 Adjustments to reconcile net income to net cash					
8 provided by operating activities:					
9 Depreciation and Amortization	749,003	485,748	475,416	732,550	732,550
10 Other -Adjustments	(569,694)	(188,722)	(140,787)	(2,125,265)	(2,125,265)
11 Changes in Certain Assets and Liabilities:					
12 Restricted Cash	(118,306)	(15,787)	(31,101)	-	-
13 Accounts Receivable	(222,659)	54,447	24,412	-	-
14 Other Receivables	(129,579)	-	129,579	-	-
15 Materials and Supplies Inventory	-	-	-	-	-
16 Prepaid Expenses	(8,524)	2,489	5,751	-	-
17 Deferred Regulatory Assets/Liabilities	(1,050,703)	114,334	401,644	(2,956,596)	(2,956,596)
18 Deferred Income Taxes	-	-	(50,523)	-	-
19 Receivables/Payables to Associated Co.	485,551	(52,438)	5,599,498	(4,000,000)	(4,000,000)
20 Accounts Payable	602	-	-	-	-
21 Interest Payable	-	-	-	-	-
22 Customer Meter and Security Deposits	(51,112)	5,362	4,017	-	-
23 Taxes Payable	-	-	-	-	-
24 Other assets and liabilities	198,905	71,467	102,249	243,036	243,036
25 Rounding	(2)	2	1	1	1
26 Net Cash Flow provided by Operating Activities	\$ (393,850)	\$ 1,334,654	\$ 7,004,020	\$ (7,850,046)	\$ (7,194,179)
27 Cash Flow From Investing Activities:					
28 Capital Expenditures	931,222	(1,363,320)	(7,069,076)	(87,481)	(87,481)
29 Plant Held for Future Use	-	-	-	-	-
30 Changes in debt reserve fund	-	-	-	-	-
31 Net Cash Flows from Investing Activities	\$ 931,222	\$ (1,363,320)	\$ (7,069,076)	\$ (87,481)	\$ (87,481)
32 Cash Flow From Financing Activities					
33 Change in Restricted Cash	-	-	-	-	-
34 Proceeds from Long-Term Debt	(147,575)	1,730,678	164,977	-	-
35 Net receipt of contributions in aid of construction	883,712	153,475	7,500	-	-
36 Net receipts of advances in aid of construction	(1,130,412)	(128,683)	-	-	-
37 Long-Term Debt	-	-	-	5,108,085	5,108,085
38 Distributions/Dividends Paid	-	-	-	-	-
39 Deferred Financing Costs	-	-	-	-	-
40 Paid in Capital	-	(1,740,621)	(98,916)	3,460,663	2,804,799
41 Net Cash Flows Provided by Financing Activities	\$ (394,275)	\$ 14,849	\$ 73,561	\$ 8,568,748	\$ 7,912,884
42 Increase(decrease) in Cash and Cash Equivalents	143,097	(13,817)	8,505	631,221	631,224
43 Cash and Cash Equivalents at Beginning of Year	(140,055)	3,041	(10,776)	(2,271)	(2,271)
44 Cash and Cash Equivalents at End of Year	\$ 3,041	\$ (10,776)	\$ (2,271)	\$ 628,950	\$ 628,953

45
46
47
48
49 SUPPORTING SCHEDULES:

50 E-3

51 F-2

52

53

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Summary of Rate Base

Exhibit
Schedule B-1
Page 1
Witness: Bourassa

Line No.		Original Cost Rate base	Fair Value Rate Base
1			
2	Gross Utility Plant in Service	\$ 20,708,639	\$ 20,708,639
3	Less: Accumulated Depreciation	8,126,120	8,126,120
4			
5	Net Utility Plant in Service	\$ 12,582,518	\$ 12,582,518
6			
7	<u>Less:</u>		
8	Advances in Aid of Construction	-	-
9			
10	Contributions in Aid of Construction	6,957,144	6,957,144
11			
12	Accumulated Amortization of CIAC	(5,599,846)	(5,599,846)
13			
14	Customer Meter Deposits	21,507	21,507
15	Customer Security Deposits	-	-
16	Accumulated Deferred Income Tax	192,513	192,513
17	Deferred Regulatory Liability - Tax (EADIT)	313,801	313,801
18			
19	<u>Plus:</u>		
20	Deferred Reg. Asset - Plant Closure	3,762,697	3,762,697
21		-	-
22	Prepayments	8,309	8,309
23	Materials and Supplies	-	-
24	Cash Working Capital	(59,801)	(59,801)
25			
26			
27	Total Rate Base	\$ 14,408,605	\$ 14,408,605
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42	<u>SUPPORTING SCHEDULES:</u>		
43	B-2		
44	B-3		
45	B-5		
46	E-1		
47			
48			
49			
50			
51			

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments

Exhibit
Schedule B-2
Page 1
Witness: Bourassa

Line No.		Actual at End of Test Year	Proforma Adjustment	Adjusted at end of Test Year
1	Gross Utility			
2	Plant in Service	\$ 14,133,561	6,575,078	\$ 20,708,639
3				
4	Less:			
5	Accumulated			
6	Depreciation	10,001,351	(1,875,231)	8,126,120
7				
8				
9	Net Utility Plant			
10	in Service	\$ 4,132,210		\$ 12,582,518
11				
12	Less:			
13	Advances in Aid of			
14	Construction	(0)	0	-
15				
16	Contributions in Aid of			
17	Construction - Gross	6,957,144	0	6,957,144
18				
19	Accumulated Amortization of CIAC	(5,568,860)	(30,987)	(5,599,846)
20				
21	Customer Meter Deposits	21,507		21,507
22	Customer Security Deposits	-	-	-
23	Accumulated Deferred Income Tax	(50,523)	243,036	192,513
24	Deferred Regulatory Liability - Tax (EADIT)	313,801	-	313,801
25				-
26				
27	Plus:			
28	Deferred Reg. Asset - Plant Closure	806,101	2,956,596	3,762,697
29	Deferred Reg. Asset - Plant Closure Ph2	-	-	-
30	Prepayments	8,309	-	8,309
31	Materials and Supplies	-	-	-
32	Cash Working capital	-	(59,801)	(59,801)
33				-
34				
35	Total	\$ 3,273,551		\$ 14,408,605

46 SUPPORTING SCHEDULES:
47 B-2, pages 2
48 E-1

RECAP SCHEDULES:
B-1

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments

Exhibit
Schedule B-2
Page 2
Witness: Bourassa

Line No.	Actual at End of Test Year	1	2	Proforma Adjustments			6	7	Adjusted at end of Test Year
				3	4	5			
		Plant-in-Service	Accumulated Depreciation	CIAC	AIAC	Deferred Regulatory Assets	ADIT	Working Capital	
1	Gross Utility Plant in Service	14,133,561	6,575,078						\$ 20,708,639
2									
3									
4	Less:								
5	Accumulated Depreciation	10,001,351	(1,875,231)						8,126,120
6									
7									
8									
9	Net Utility Plant in Service	\$ 4,132,210	\$ 6,575,078	\$ 1,875,231	\$ -	\$ -	\$ -	\$ -	\$ 12,582,518
10									
11									
12	Less:								
13	Advances in Aid of Construction	(0)				0			-
14									
15									
16	Contributions in Aid of Construction (CIAC)	6,957,144		0					6,957,144
17									
18									
19	Accumulated Amort of CIAC	(5,568,860)		(30,987)					(5,599,846)
20									
21	Customer Deposits	21,507							21,507
22	Customer Security Deposits	-							-
23	Accumulated Deferred Income Taxes	(50,523)					243,036		192,513
24	Deferred Regulatory Liability - Tax (EADIT)	313,801							313,801
25									
26	Plus:								
27	Deferred Reg. Asset - Plant Closure	\$ 806,101				\$ 2,956,596			3,762,697
28									
29	Prepayments	8,309							8,309
30	Materials and Supplies	-							-
31	Cash Working Capital	-						(59,801)	(59,801)
32									
33	Total	\$ 3,273,551	\$ 6,575,078	\$ 30,987	\$ -	\$ (0)	\$ (243,036)	\$ (59,801)	\$ 14,408,605
34									
35									
36									
37									
38									
39									
40									
41									

RECAP SCHEDULES:
B-1

SUPPORTING SCHEDULES:
B-2, pages 3-5
E-1

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments
Adjustment Number 1

Exhibit
Schedule B-2
Page 3
Witness: Bourassa

Plant-in-Service

		Adjustments							
		A	B	C	D	E			
Line No.	Acct. No.	Description	Actual Original Cost	PTY Plant	Plant Closure	PTY Retirements	Allocated Corporate Plant	Adjustments to Reconcile Plant to Reconstruction	Adjusted Original Cost
1	106	Plant not Classified	-	-	-	-	-	-	-
2	351	Organization	-	-	-	-	-	-	-
3	352	Franchise	-	-	-	-	-	-	-
4	353	Land	472,524	-	13,987	-	-	(0)	486,511
5	354	Structures & Improvements	2,849,358	-	1,983,535	(784,276)	-	165,416	4,214,032
6	355	Power Generation	9,000	-	-	-	-	-	9,000
7	360	Collection Sewer Forced	1,199,215	-	4,304,298	(482,097)	-	(1,952)	5,019,464
8	361	Collection Sewers Gravity	4,760,938	89,169	824,080	(108,990)	-	27,055	5,592,253
9	362	Special Collecting Structures	3,052	-	855,550	(93,166)	-	-	765,437
10	363	Customer Services	264,495	-	-	-	-	(5,711)	258,784
11	364	Flow Measuring Devices	63,044	-	58,701	(53,163)	-	0	68,582
12	365	Flow Measuring Installations	180,051	-	-	-	-	-	180,051
13	366	Reuse Services	-	-	-	-	-	-	-
14	367	Reuse Meters And Installation	-	-	-	-	-	-	-
15	370	Receiving Wells	773,931	-	-	-	-	(0)	773,931
16	371	Pumping Equipment	1,104,255	1,868	452,709	(335,319)	-	3,946	1,227,460
17	374	Reuse Distribution Reservoirs	-	-	-	-	-	-	-
18	375	Reuse Trans. and Dist. System	-	-	-	-	-	-	-
19	380	Treatment & Disposal Equipment	340,043	-	58,947	(29,977)	-	59,758	428,771
20	381	Plant Sewers	116,917	-	24,561	(10,700)	-	4,028	134,805
21	382	Outfall Sewer Lines	-	-	-	-	-	-	-
22	389	Other Sewer Plant & Equipment	967,267	-	122,138	(59,992)	-	(26,804)	1,002,608
23	390	Office Furniture & Equipment	226,994	-	-	-	-	(142,253)	84,741
24	390.1	Computers and Software	68,954	-	-	(33,999)	-	15,090	50,044
25	391	Transportation Equipment	65,584	119,820	-	(7,845)	-	(10,642)	166,916
26	392	Stores Equipment	-	-	-	-	-	-	-
27	393	Tools, Shop And Garage Equip	36,243	-	-	(2,005)	-	(162)	34,076
28	394	Laboratory Equip	14,398	-	-	(616)	-	437	14,219
29	395	Power Operated Equip	-	-	-	-	-	-	-
30	396	Communication Equip	124,111	-	-	(1,699)	-	10,631	133,043
31	397	Miscellaneous Equip	6,892	-	-	-	-	-	6,892
32	398	Other Tangible Plant	486,294	-	-	(486,294)	-	-	-
33									
34		SUBTOTAL	14,133,561	210,857	8,698,506	(2,490,139)	-	98,836	20,651,620
35									
36									
37	903	Land and Land Rights	-	-	-	-	-	-	-
38	904	Structures and Improvements	-	-	-	-	12,847	-	12,847
39	940	Office Furniture & Equipment	-	-	-	-	359	-	359
40	940.1	Computers and Software	-	-	-	-	43,813	-	43,813
41									
42		Plant Held for Future Use							
43		TOTALS	\$ 14,133,561	\$ 210,857	\$ 8,698,506	\$ (2,490,139)	\$ 57,019	\$ 98,836	\$ 20,708,639
44									
45		Plant-in-Service per Books							\$ 14,133,561
46									
47		Increase (decrease) in Plant-in-Service							\$ 6,575,078
48									
49		Adjustment to Plant-in-Service							\$ 6,575,078

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments
Adjustment Number 1 - A
Post Test-Year Plant

Exhibit
Schedule B-2
Page 3.1
Witness: Bourassa

Line

<u>No.</u>	<u>Acct.</u>	<u>Description</u>	<u>Amount</u>
1	351	Organization	\$ -
2	352	Franchise	-
3	353	Land	-
4	354	Structures & Improvements	-
5	355	Power Generation	-
6	360	Collection Sewer Forced	-
7	361	Collection Sewers Gravity	89,169
8	362	Special Collecting Structures	-
9	363	Customer Services	-
10	364	Flow Measuring Devices	-
11	365	Flow Measuring Installations	-
12	366	Reuse Services	-
13	367	Reuse Meters And Installation	-
14	370	Receiving Wells	-
15	371	Pumping Equipment	1,868
16	374	Reuse Distribution Reservoirs	-
17	375	Reuse Trans. and Dist. System	-
18	380	Treatment & Disposal Equipment	-
19	381	Plant Sewers	-
20	382	Outfall Sewer Lines	-
21	389	Other Sewer Plant & Equipment	-
22	390	Office Furniture & Equipment	-
23	390.1	Computers and Software	-
24	391	Transportation Equipment	119,820
25	392	Stores Equipment	-
26	393	Tools, Shop And Garage Equip	-
27	394	Laboratory Equip	-
28	395	Power Operated Equip	-
29	396	Communication Equip	-
30	397	Miscellaneous Equip.	-
31	398	Other Tangible Plant	-
32			-
33		TOTAL	<u>\$ 210,857</u>
34			
35			
36			
37			
38			
39			
40			
41			
42			
43		<u>SUPPORTING SCHEDULE</u>	
44		Testimony	
45		Work papers	

Liberty Utilities (Black Mountain Sewer) Corp.
 Test Year Ended December 31, 2018
 Original Cost Rate Base Proforma Adjustments
 Adjustment Number 1 - B
 Plant Closure

Exhibit
 Schedule B-2
 Page 3.2
 Witness: Bourassa

Line	No.	Acct.	Description	Amount
1	351		Organization	\$ -
2	352		Franchise	-
3	353		Land	13,987
4	354		Structures & Improvements	1,983,535
5	355		Power Generation	-
6	360		Collection Sewer Forced	4,304,298
7	361		Collection Sewers Gravity	824,080
8	362		Special Collecting Structures	855,550
9	363		Customer Services	-
10	364		Flow Measuring Devices	58,701
11	365		Flow Measuring Installations	-
12	366		Reuse Services	-
13	367		Reuse Meters And Installation	-
14	370		Receiving Wells	-
15	371		Pumping Equipment	452,709
16	374		Reuse Distribution Reservoirs	-
17	375		Reuse Trans. and Dist. System	-
18	380		Treatment & Disposal Equipment	58,947
19	381		Plant Sewers	24,561
20	382		Outfall Sewer Lines	-
21	389		Other Sewer Plant & Equipment	122,138
22	390		Office Furniture & Equipment	-
23	390.1		Computers and Software	-
24	391		Transportation Equipment	-
25	392		Stores Equipment	-
26	393		Tools, Shop And Garage Equip	-
27	394		Laboratory Equip	-
28	395		Power Operated Equip	-
29	396		Communication Equip	-
30	397		Miscellaneous Equip.	-
31	398		Other Tangible Plant	-
32				-
33			TOTAL	<u>\$ 8,698,506</u>
34				
35				
36				
37				
38				
39				
40				
41				
42				
43			<u>SUPPORTING SCHEDULE</u>	
44			Testimony	
45			Work papers	

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments
Adjustment Number 1 - C
Post Test-Year Retirements

Exhibit
Schedule B-2
Page 3.3
Witness: Bourassa

Line	No.	Acct.	Description	Amount
	1	351	Organization	\$ -
	2	352	Franchise	-
	3	353	Land	-
	4	354	Structures & Improvements	(784,276)
	5	355	Power Generation	-
	6	360	Collection Sewer Forced	(482,097)
	7	361	Collection Sewers Gravity	(108,990)
	8	362	Special Collecting Structures	(93,166)
	9	363	Customer Services	-
	10	364	Flow Measuring Devices	(53,163)
	11	365	Flow Measuring Installations	-
	12	366	Reuse Services	-
	13	367	Reuse Meters And Installation	-
	14	370	Receiving Wells	-
	15	371	Pumping Equipment	(335,319)
	16	374	Reuse Distribution Reservoirs	-
	17	375	Reuse Trans. and Dist. System	-
	18	380	Treatment & Disposal Equipment	(29,977)
	19	381	Plant Sewers	(10,700)
	20	382	Outfall Sewer Lines	-
	21	389	Other Sewer Plant & Equipment	(59,992)
	22	390	Office Furniture & Equipment	-
	23	390.1	Computers and Software	(33,999)
	24	391	Transportation Equipment	(7,845)
	25	392	Stores Equipment	-
	26	393	Tools, Shop And Garage Equip	(2,005)
	27	394	Laboratory Equip	(616)
	28	395	Power Operated Equip	-
	29	396	Communication Equip	(1,699)
	30	397	Miscellaneous Equip.	-
	31	398	Other Tangible Plant	(486,294)
	32			-
	33		TOTAL	<u>\$ (2,490,139)</u>
	34			
	35			
	36			
	37			
	38			
	39			
	40			
	41			
	42			
	43		<u>SUPPORTING SCHEDULE</u>	
	44		Testimony	
	45		Work papers	

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments
Adjustment Number 1 - D
Allocated Corporate Plant

Exhibit
Schedule B-2
Page 3.4
Witness: Bourassa

Line	No.	Acct.	Description	Amount
	1	903	Land and Land Rights	\$ -
	2	904	Structures and Improvements	12,847
	3	940	Office Furniture & Equipment	359
	4	940.1	Computers and Software	43,813
	5			
	6			
	7			
	8			
	9			
	10			
	11			
	12			
	13			
	14			
	15			
	16			
	17			
	18			
	19			
	20			
	21			
	22			
	23			
	24			
	25			
	26			
	27			
	28			
	29			
	30			
	31			
	32			
	33		TOTAL	<u>\$ 57,019</u>
	34			
	35			
	36			
	37			
	38			
	39			
	40			
	41			
	42			
	43		<u>SUPPORTING SCHEDULE</u>	
	44		Testimony	
	45		Work papers	

Exhibit
Schedule B-2
Page 3.5
Witness: Bourassa

B-2, pages 3.6 through 3.10

		Decision 75510		2015									
Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2014		Adjusted Plant Additions	Adjusted Plant Retirements	Salvage A/D Only	Deprecation (Calculated)	Plant Balance	Accum. Deprec.	Net Plant	
				Per Decision Plant Balance	Per Decision Accum. Deprec.								
1	351	Organization	0.00%	-	-	-	-	-	-	-	-	-	
2	352	Franchises	0.00%	-	-	-	-	-	-	-	-	-	
3	353	Land and Land Rights	0.00%	-	-	-	-	-	-	-	-	-	
4	354	Structures and Improvements	3.33%	472,524	-	54,122	-	-	98,778	2,993,381	1,739,710	472,524	
5	355	Power Generation Equipment	5.00%	3,839	480	5,160	-	-	321	9,000	801	1,253,671	
6	360	Collection Sewers - Force	2.00%	1,130,430	344,633	-	535	-	22,603	1,129,895	366,701	8,199	
7	361	Collection Sewers - Gravity	2.00%	4,555,181	3,561,782	141,607	-	-	92,520	4,696,789	3,654,302	763,194	
8	362	Special Collecting Structures	2.00%	-	-	-	-	-	-	-	-	1,042,487	
9	363	Services to Customers	2.00%	260,435	172,651	-	-	-	5,209	260,435	177,860	-	
10	364	Flow Measuring Devices	10.00%	31,668	31,668	-	-	-	-	31,668	31,668	82,575	
11	365	Flow Measuring Installations	10.00%	180,051	165,638	-	-	-	14,134	180,051	179,772	0	
12	366	Reuse Services	2.00%	-	-	-	-	-	-	-	-	279	
13	367	Reuse Meters And Installation	8.33%	-	-	-	-	-	-	-	-	-	
14	370	Receiving Wells	3.33%	-	-	-	-	-	-	-	-	-	
15	371	Effluent Pumping Equipment	12.50%	1,028,182	505,000	(254,251)	-	(50,799)	30,005	773,931	484,206	289,725	
16	374	Reuse Distribution Reservoirs	2.50%	1,023,485	724,929	78,647	7,735	-	63,802	1,094,397	780,996	313,401	
17	375	Reuse Trans. and Dist. System	2.50%	-	-	-	-	-	-	-	-	-	
18	380	Treatment and Disposal Equipment	5.00%	320,285	109,926	17,285	-	-	16,446	337,571	126,373	211,198	
19	381	Plant Sewers	5.00%	124,527	124,527	(7,610)	-	-	(7,610)	116,917	116,917	0	
20	382	Outfall Sewer Lines	3.33%	-	-	-	-	-	-	-	-	-	
21	389	Other Plant and Misc. Equipment	6.67%	959,832	659,389	7,610	-	-	64,275	967,442	723,664	243,779	
22	390	Office Furniture and Equipment	6.67%	227,290	169,457	(317)	-	-	15,150	226,973	184,606	42,367	
23	390.1	Computers and Software	20.00%	62,224	18,667	317	-	-	12,477	62,541	31,144	31,397	
24	391	Transportation Equipment	20.00%	80,215	56,967	5,590	-	-	6,189	85,804	63,156	22,648	
25	392	Stores Equipment	4.00%	-	-	-	-	-	-	-	-	-	
26	393	Tools, Shop and Garage Equipment	5.00%	28,942	4,654	1,327	-	-	1,480	30,269	6,134	24,134	
27	394	Laboratory Equipment	10.00%	10,683	7,277	-	-	-	689	10,683	7,966	2,717	
28	395	Power Operated Equipment	5.00%	-	-	-	-	-	-	-	-	-	
29	396	Communication Equipment	10.00%	103,290	42,700	14,786	-	-	11,068	118,076	53,768	64,308	
30	397	Miscellaneous Equip.	10.00%	-	-	6,892	-	-	345	6,892	345	6,547	
31	398	Other Tangible Plant	10.00%	486,294	413,350	-	-	-	48,629	486,294	461,980	24,314	
32		TOTAL		14,028,638	8,754,626	71,165	8,271	(50,799)	496,510	14,091,532	9,192,067	4,899,465	

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2016						Net Plant
				Adjusted Plant Additions	Adjusted Plant Retirements	Salvage A/D Only	Depreciation (Calculated)	Plant Balance	Accum. Deprec.	
1	351	Organization	0.00%	-	-	-	-	-	-	-
2	352	Franchises	0.00%	-	-	-	-	-	-	-
3	353	Land and Land Rights	0.00%	-	-	-	-	472,524	-	472,524
4	354	Structures and Improvements	3.33%	20,823	7,783	-	99,897	3,006,421	1,831,824	1,174,597
5	355	Power Generation Equipment	5.00%	-	-	-	450	9,000	1,251	7,749
6	360	Collection Sewers - Force	2.00%	37,288	14,497	-	22,826	1,152,686	375,029	777,657
7	361	Collection Sewers - Gravity	2.00%	4,301	15,747	-	93,821	4,685,343	3,732,376	952,967
8	362	Special Collecting Structures	2.00%	3,052	-	-	31	3,052	31	3,021
9	363	Services to Customers	2.00%	4,400	6,050	-	5,192	258,784	177,001	81,783
10	364	Flow Measuring Devices	10.00%	34,489	21,224	-	1,724	44,933	12,168	32,765
11	365	Flow Measuring Installations	10.00%	-	-	-	43	180,051	179,815	236
12	366	Reuse Services	2.00%	-	-	-	-	-	-	-
13	367	Reuse Meters And Installation	8.33%	-	-	-	-	-	-	-
14	370	Receiving Wells	3.33%	-	-	-	-	-	-	-
15	371	Effluent Pumping Equipment	12.50%	79,643	133,759	-	25,772	773,931	509,977	263,953
16	374	Reuse Distribution Reservoirs	2.50%	-	-	-	-	-	-	-
17	375	Reuse Trans. and Dist. System	2.50%	-	-	-	-	-	-	-
18	380	Treatment and Disposal Equipment	5.00%	43,109	-	-	-	-	-	-
19	381	Plant Sewers	5.00%	4,028	-	-	17,956	380,679	144,329	236,350
20	382	Outfall Sewer Lines	3.33%	-	-	-	101	120,945	117,018	3,927
21	389	Other Plant and Misc. Equipment	6.67%	5,059	31,863	-	63,634	940,638	755,435	185,203
22	390	Office Furniture and Equipment	6.67%	-	142,232	-	10,396	84,741	52,770	31,971
23	390.1	Computers and Software	20.00%	-	-	-	12,508	62,541	43,652	18,889
24	391	Transportation Equipment	20.00%	7,358	38,221	-	7,484	54,942	32,420	22,522
25	392	Stores Equipment	4.00%	-	-	-	-	-	-	-
26	393	Tools, Shop and Garage Equipment	5.00%	527	-	-	1,527	30,796	7,661	23,135
27	394	Laboratory Equipment	10.00%	7,677	4,454	-	703	13,905	4,215	9,691
28	395	Power Operated Equipment	5.00%	-	-	-	-	-	-	-
29	396	Communication Equipment	10.00%	4,334	-	-	12,024	122,410	65,792	56,618
30	397	Miscellaneous Equip.	10.00%	-	-	-	689	6,892	1,034	5,858
31	398	Other Tangible Plant	10.00%	-	-	-	24,315	486,294	486,294	-
32		TOTAL		256,089	415,831	-	474,788	13,931,790	9,251,024	4,680,766

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2017						
				Adjusted Plant Additions	Adjusted Plant Retirements	Salvage A/D Only	Depreciation (Calculated)	Plant Balance	Accum. Deprec.	Net Plant
1	351	Organization	0.00%	-	-	-	-	-	-	-
2	352	Franchises	0.00%	-	-	-	-	-	-	-
3	353	Land and Land Rights	0.00%	-	-	-	-	472,524	-	472,524
4	354	Structures and Improvements	3.33%	820	79	-	100,126	3,007,162	1,931,871	1,075,291
5	355	Power Generation Equipment	5.00%	-	-	-	450	9,000	1,701	7,299
6	360	Collection Sewers - Force	2.00%	30,718	3,462	-	23,326	1,179,942	394,894	785,048
7	361	Collection Sewers - Gravity	2.00%	59,038	6,853	-	94,229	4,737,528	3,819,752	917,776
8	362	Special Collecting Structures	2.00%	-	-	-	61	3,052	92	2,960
9	363	Services to Customers	2.00%	-	-	-	5,176	258,784	182,177	76,607
10	364	Flow Measuring Devices	10.00%	18,111	-	-	4,354	63,044	16,523	46,521
11	365	Flow Measuring Installations	10.00%	-	-	-	43	180,051	179,858	193
12	366	Reuse Services	2.00%	-	-	-	-	-	-	-
13	367	Reuse Meters And Installation	8.33%	-	-	-	-	-	-	-
14	370	Receiving Wells	3.33%	-	-	-	25,772	773,931	535,749	238,181
15	371	Effluent Pumping Equipment	12.50%	50,127	32,895	-	81,172	1,057,513	769,209	288,304
16	374	Reuse Distribution Reservoirs	2.50%	-	-	-	-	-	-	-
17	375	Reuse Trans. and Dist. System	2.50%	-	-	-	-	-	-	-
18	380	Treatment and Disposal Equipment	5.00%	5,291	52	-	19,165	385,919	163,442	222,477
19	381	Plant Sewers	5.00%	-	-	-	201	120,945	117,219	3,726
20	382	Outfall Sewer Lines	3.33%	-	-	-	-	-	-	-
21	389	Other Plant and Misc. Equipment	6.67%	-	-	-	62,741	940,638	818,175	122,463
22	390	Office Furniture and Equipment	6.67%	-	-	-	5,652	84,741	58,422	26,319
23	390.1	Computers and Software	20.00%	6,434	-	-	13,152	68,975	56,804	12,171
24	391	Transportation Equipment	20.00%	-	-	-	7,698	54,942	40,117	14,825
25	392	Stores Equipment	4.00%	-	-	-	-	-	-	-
26	393	Tools, Shop and Garage Equipment.	5.00%	367	240	-	1,543	30,923	8,964	21,959
27	394	Laboratory Equipment	10.00%	-	-	-	1,087	13,905	5,302	8,603
28	395	Power Operated Equipment	5.00%	-	-	-	-	-	-	-
29	396	Communication Equipment	10.00%	2,110	1,223	-	12,285	123,296	76,854	46,442
30	397	Miscellaneous Equip.	10.00%	-	-	-	689	6,892	1,723	5,169
31	398	Other Tangible Plant	10.00%	-	-	-	-	486,294	486,294	-
32		TOTAL		173,015	44,804	-	458,923	14,060,000	9,665,142	4,394,858

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2018				
				Adjusted Plant Additions	Adjusted Plant Retirements	Salvage A/D Only	Depreciation (Calculated)	Plant Balance Before PTY ADJ
1	351	Organization	0.00%	-	-	-	-	-
2	352	Franchises	0.00%	-	-	-	-	-
3	353	Land and Land Rights	0.00%	-	-	-	-	-
4	354	Structures and Improvements	3.33%	7,612	-	-	100,265	472,524
5	355	Power Generation Equipment	5.00%	-	-	-	450	3,014,774
6	360	Collection Sewers - Force	2.00%	18,241	920	-	23,772	1,197,263
7	361	Collection Sewers - Gravity	2.00%	50,465	-	-	95,255	4,787,994
8	362	Special Collecting Structures	2.00%	-	-	-	61	3,052
9	363	Services to Customers	2.00%	0	-	-	5,176	258,784
10	364	Flow Measuring Devices	10.00%	-	-	-	5,260	63,044
11	365	Flow Measuring Installations	10.00%	-	-	-	43	180,051
12	366	Reuse Services	2.00%	-	-	-	-	-
13	367	Reuse Meters And Installation	8.33%	-	-	-	-	-
14	370	Receiving Wells	3.33%	-	-	-	-	-
15	371	Effluent Pumping Equipment	12.50%	53,976	3,287	-	25,772	773,931
16	374	Reuse Distribution Reservoirs	2.50%	-	-	-	78,413	1,108,201
17	375	Reuse Trans. and Dist. System	2.50%	-	-	-	-	-
18	380	Treatment and Disposal Equipment	5.00%	13,882	-	-	18,971	399,801
19	381	Plant Sewers	5.00%	-	-	-	201	120,945
20	382	Outfall Sewer Lines	3.33%	-	-	-	-	-
21	389	Other Plant and Misc. Equipment	6.67%	-	176	-	62,735	940,462
22	390	Office Furniture and Equipment	6.67%	-	-	-	5,652	84,741
23	390.1	Computers and Software	20.00%	15,069	-	-	9,079	84,044
24	391	Transportation Equipment	20.00%	-	-	-	7,176	54,942
25	392	Stores Equipment	4.00%	-	-	-	-	-
26	393	Tools, Shop and Garage Equipment	5.00%	5,159	-	-	1,675	36,081
27	394	Laboratory Equipment	10.00%	929	-	-	1,134	14,835
28	395	Power Operated Equipment	5.00%	-	-	-	-	-
29	396	Communication Equipment	10.00%	11,446	-	-	10,045	95,240
30	397	Miscellaneous Equip.	10.00%	-	-	-	689	6,892
31	398	Other Tangible Plant	10.00%	-	-	-	-	486,294
32		TOTAL		176,779	4,382	-	451,824	14,192,894

Line	NARUC Account No.	Description	Allowed Deprec. Rate	Post Test Year						Net Plant
				PTY Plant	Plant Closure	Plant Closure A/D	PTY Plant A/D	Plant Balance	Accum. Deprec.	
1	351	Organization	0.00%	-	-	-	-	-	-	-
2	352	Franchises	0.00%	-	-	-	-	-	-	-
3	353	Land and Land Rights	0.00%	-	13,987	-	-	486,511	-	486,511
4	354	Structures and Improvements	3.33%	-	1,983,535	-	-	4,214,032	1,335,709	2,878,323
5	355	Power Generation Equipment	5.00%	-	-	-	-	9,000	2,151	6,849
6	360	Collection Sewers - Force	2.00%	-	4,304,298	-	-	5,019,464	107,821	4,911,643
7	361	Collection Sewers - Gravity	2.00%	89,169	824,080	892	-	5,592,253	3,839,843	1,752,410
8	362	Special Collecting Structures	2.00%	-	855,550	-	-	765,437	(58,791)	824,228
9	363	Services to Customers	2.00%	-	-	-	-	258,784	187,353	71,431
10	364	Flow Measuring Devices	10.00%	-	58,701	-	-	68,582	(26,541)	95,123
11	365	Flow Measuring Installations	10.00%	-	-	-	-	180,051	179,901	150
12	366	Reuse Services	2.00%	-	-	-	-	-	-	-
13	367	Reuse Meters And Installation	8.33%	-	-	-	-	-	-	-
14	370	Receiving Wells	3.33%	-	-	-	-	773,931	561,521	212,410
15	371	Effluent Pumping Equipment	12.50%	1,868	452,709	117	-	1,227,460	617,882	609,578
16	374	Reuse Distribution Reservoirs	2.50%	-	-	-	-	-	-	-
17	375	Reuse Trans. and Dist. System	2.50%	-	-	-	-	-	-	-
18	380	Treatment and Disposal Equipment	5.00%	-	58,947	-	-	428,771	155,383	273,387
19	381	Plant Sewers	5.00%	-	24,561	-	-	134,805	107,948	26,857
20	382	Outfall Sewer Lines	3.33%	-	-	-	-	-	-	-
21	389	Other Plant and Misc. Equipment	6.67%	-	122,138	-	-	1,002,608	835,574	167,033
22	390	Office Furniture and Equipment	6.67%	-	-	-	-	84,741	64,075	20,667
23	390.1	Computers and Software	20.00%	-	-	-	-	50,044	31,884	18,160
24	391	Transportation Equipment	20.00%	119,820	-	-	11,982	166,916	51,429	115,487
25	392	Stores Equipment	4.00%	-	-	-	-	-	-	-
26	393	Tools, Shop and Garage Equipment	5.00%	-	-	-	-	34,076	8,634	25,442
27	394	Laboratory Equipment	10.00%	-	-	-	-	14,219	5,820	8,398
28	395	Power Operated Equipment	5.00%	-	-	-	-	-	-	-
29	396	Communication Equipment	10.00%	-	-	-	-	133,043	85,200	47,844
30	397	Miscellaneous Equip.	10.00%	-	-	-	-	6,892	2,412	4,480
31	398	Other Tangible Plant	10.00%	-	-	-	-	-	0	(0)
32		TOTAL		210,857	8,698,506	459,774	12,990	20,651,620	8,095,209	12,556,411

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments
Adjustment Number 2 - A
Post Test-Year Plant Depreciation

Exhibit
Schedule B-2
Page 4.1
Witness: Bourassa

Line	No.	Acct.	Description	Amount	Depr. Rate	Depreciation (1/2 yr conv.)
	1	351	Organization	\$ -	0.0%	\$ -
	2	352	Franchise	-	0.0%	-
	3	353	Land	-	0.0%	-
	4	354	Structures & Improvements	-	3.3%	-
	5	355	Power Generation	-	5.0%	-
	6	360	Collection Sewer Forced	-	2.0%	-
	7	361	Collection Sewers Gravity	89,169	2.0%	892
	8	362	Special Collecting Structures	-	2.0%	-
	9	363	Customer Services	-	2.0%	-
	10	364	Flow Measuring Devices	-	10.0%	-
	11	365	Flow Measuring Installations	-	10.0%	-
	12	366	Reuse Services	-	2.0%	-
	13	367	Reuse Meters And Installation	-	8.3%	-
	14	370	Receiving Wells	-	3.3%	-
	15	371	Pumping Equipment	1,868	12.5%	117
	16	374	Reuse Distribution Reservoirs	-	2.5%	-
	17	375	Reuse Trans. and Dist. System	-	2.5%	-
	18	380	Treatment & Disposal Equipment	-	5.0%	-
	19	381	Plant Sewers	-	5.0%	-
	20	382	Outfall Sewer Lines	-	3.3%	-
	21	389	Other Sewer Plant & Equipment	-	6.7%	-
	22	390	Office Furniture & Equipment	-	6.7%	-
	23	390.1	Computers and Software	-	20.0%	-
	24	391	Transportation Equipment	119,820	20.0%	11,982
	25	392	Stores Equipment	-	4.0%	-
	26	393	Tools, Shop And Garage Equip	-	5.0%	-
	27	394	Laboratory Equip	-	10.0%	-
	28	395	Power Operated Equip	-	5.0%	-
	29	396	Communication Equip	-	10.0%	-
	30	397	Miscellaneous Equip.	-	10.0%	-
	31	398	Other Tangible Plant	-	10.0%	-
	32					
	33		TOTAL	<u>\$ 210,857</u>		<u>\$ 12,990</u>
	34					
	35					
	36					
	37					
	38					
	39					
	40					
	41					
	42					
	43		<u>SUPPORTING SCHEDULE</u>			
	44		Testimony			
	45		Work papers			

Liberty Utilities (Black Mountain Sewer) Corp.
 Test Year Ended December 31, 2018
 Original Cost Rate Base Proforma Adjustments
 Adjustment Number 2 - B
 Post-Test Year Depreciation on Plant Closure Costs

Exhibit
 Schedule B-2
 Page 4.2
 Witness: Bourassa

Line No.	Acct.	Description	Amount	Depr. Rate	Post-inService Depreciation thru 2019 to 6/30/2020 (1/2 yr conv.)	Total A/D
1	351	Organization	\$ -	0.0%	\$ -	\$ -
2	352	Franchise	-	0.0%	-	-
3	353	Land	13,987	0.0%	-	-
4	354	Structures & Improvements	1,983,535	3.3%	87,850	87,850
5	355	Power Generation	-	5.0%	-	-
6	360	Collection Sewer Forced	4,304,298	2.0%	172,172	172,172
7	361	Collection Sewers Gravity	824,080	2.0%	32,934	32,934
8	362	Special Collecting Structures	855,550	2.0%	34,222	34,222
9	363	Customer Services	-	2.0%	-	-
10	364	Flow Measuring Devices	58,701	10.0%	4,839	4,839
11	365	Flow Measuring Installations	-	10.0%	-	-
12	366	Reuse Services	-	2.0%	-	-
13	367	Reuse Meters And Installation	-	8.3%	-	-
14	370	Receiving Wells	-	3.3%	-	-
15	371	Pumping Equipment	452,709	12.5%	108,749	108,749
16	374	Reuse Distribution Reservoirs	-	2.5%	-	-
17	375	Reuse Trans. and Dist. System	-	2.5%	-	-
18	380	Treatment & Disposal Equipment	58,947	5.0%	2,947	2,947
19	381	Plant Sewers	24,561	5.0%	1,228	1,228
20	382	Outfall Sewer Lines	-	3.3%	-	-
21	389	Other Sewer Plant & Equipment	122,138	6.7%	14,832	14,832
22	390	Office Furniture & Equipment	-	6.7%	-	-
23	390.1	Computers and Software	-	20.0%	-	-
24	391	Transportation Equipment	-	20.0%	-	-
25	392	Stores Equipment	-	4.0%	-	-
26	393	Tools, Shop And Garage Equip	-	5.0%	-	-
27	394	Laboratory Equip	-	10.0%	-	-
28	395	Power Operated Equip	-	5.0%	-	-
29	396	Communication Equip	-	10.0%	-	-
30	397	Miscellaneous Equip.	-	10.0%	-	-
31	398	Other Tangible Plant	-	10.0%	-	-
32			-	5.0%	-	-
33		TOTAL	\$ 8,698,506		\$ 459,774	\$ 459,774

39 SUPPORTING SCHEDULES
 40 Work papers

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments
Adjustment Number 2 - C
Post Test-Year Retirements

Exhibit
Schedule B-2
Page 4.3
Witness: Bourassa

Line			A/D
No.	Acct.	Description	Amount
1	351	Organization	\$ -
2	352	Franchise	-
3	353	Land	-
4	354	Structures & Improvements	(784,276)
5	355	Power Generation	-
6	360	Collection Sewer Forced	(482,097)
7	361	Collection Sewers Gravity	(108,990)
8	362	Special Collecting Structures	(93,166)
9	363	Customer Services	-
10	364	Flow Measuring Devices	(53,163)
11	365	Flow Measuring Installations	-
12	366	Reuse Services	-
13	367	Reuse Meters And Installation	-
14	370	Receiving Wells	-
15	371	Pumping Equipment	(335,319)
16	374	Reuse Distribution Reservoirs	-
17	375	Reuse Trans. and Dist. System	-
18	380	Treatment & Disposal Equipment	(29,977)
19	381	Plant Sewers	(10,700)
20	382	Outfall Sewer Lines	-
21	389	Other Sewer Plant & Equipment	(59,992)
22	390	Office Furniture & Equipment	-
23	390.1	Computers and Software	(33,999)
24	391	Transportation Equipment	(7,845)
25	392	Stores Equipment	-
26	393	Tools, Shop And Garage Equip	(2,005)
27	394	Laboratory Equip	(616)
28	395	Power Operated Equip	-
29	396	Communication Equip	(1,699)
30	397	Miscellaneous Equip.	-
31	398	Other Tangible Plant	(486,294)
32			-
33		TOTAL	<u>\$ (2,490,139)</u>
34			
35			
36			
37			
38			
39			
40			
41			
42			
43		<u>SUPPORTING SCHEDULE</u>	
44		Testimony	
45		Work papers	

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments
Adjustment Number 2 - D
Allocated Corporate Plant A/D

Exhibit
Schedule B-2
Page 4.4
Witness: Bourassa

Line	No.	Acct.	Description	Amount
	1	903	Land and Land Rights	
	2	904	Structures and Improvements	1,703
	3	940	Office Furniture & Equipment	142
	4	940 1	Computers and Software	29,067
	5			
	6			
	7			
	8			
	9			
	10			
	11			
	12			
	13			
	14			
	15			
	16			
	17			
	18			
	19			
	20			
	21			
	22			
	23			
	24			
	25			
	26			
	27			
	28			
	29			
	30			
	31			
	32			
	33		TOTAL	<u>\$ 30,911</u>
	34			
	35			
	36			
	37			
	38			
	39			
	40			
	41			
	42			
	43		<u>SUPPORTING SCHEDULE</u>	
	44		Testimony	
	45		Work papers	

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments
Adjustment Number 2 - E

Exhibit
Schedule B-2
Page 4.5
Witness: Bourassa

Line
No.

Reconciliation of A/D to A/D Reconstruction

Acct.	A/D Original Cost	B-2 Adjustments	Adjusted A/D Original Cost	A/D Per Reconstruction	Difference
No. Description					
351 Organization	\$ -	\$ -	\$ -	\$ -	\$ -
352 Franchise	-	-	-	-	-
353 Land	-	-	-	-	-
354 Structures & Improvements	1,957,228	(696,427)	1,260,802	1,335,709	74,907
355 Power Generation	2,131	-	2,131	2,151	20
360 Collection Sewer Forced	429,767	(309,926)	119,841	107,821	(12,020)
361 Collection Sewers Gravity	3,854,807	(75,165)	3,779,642	3,839,843	60,201
362 Special Collecting Structures	137	(58,944)	(58,806)	(58,791)	15
363 Customer Services	182,798	-	182,798	187,353	4,555
364 Flow Measuring Devices	19,832	(48,323)	(28,492)	(26,541)	1,951
365 Flow Measuring Installations	142,185	-	142,185	179,901	37,716
366 Reuse Services	-	-	-	-	-
367 Reuse Meters And Installation	564	-	564	-	(564)
370 Receiving Wells	710,973	-	710,973	561,521	(149,452)
371 Pumping Equipment	615,811	(226,453)	389,358	617,882	228,524
374 Reuse Distribution Reservoirs	-	-	-	-	-
375 Reuse Trans. and Dist. System	-	-	-	-	-
380 Treatment & Disposal Equipment	144,150	(27,030)	117,121	155,383	38,263
381 Plant Sewers	112,889	(9,472)	103,417	107,948	4,531
382 Outfall Sewer Lines	-	-	-	-	-
389 Other Sewer Plant & Equipment	800,417	(45,160)	755,257	835,574	80,317
390 Office Furniture & Equipment	202,933	-	202,933	64,075	(138,858)
390.1 Computers and Software	-	(33,999)	(33,999)	31,884	65,883
391 Transportation Equipment	24,437	4,137	28,574	51,429	22,856
392 Stores Equipment	-	-	-	-	-
393 Tools, Shop And Garage Equip	12,633	(2,005)	10,628	8,634	(1,994)
394 Laboratory Equip	4,976	(616)	4,361	5,820	1,460
395 Power Operated Equip	-	-	-	-	-
396 Communication Equip	82,576	(1,699)	80,876	85,200	4,323
397 Miscellaneous Equip	2,183	-	2,183	2,412	230
398 Other Tangible Plant	485,847	(486,294)	(447)	0	447
108 Accumulated Depreciation	212,076	-	212,076	-	(212,076)
Plant Held for Future Use					-
TOTALS	\$ 10,001,351	\$ (2,017,375)	\$ 7,983,976	\$ 8,095,209	\$ 111,233

SUPPORTING SCHEDULE

B-2, pages 4.1 through 4.4
B-2, pages 3.6 through 3.10

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments
Adjustment 3

Exhibit
Schedule B-2
Page 5
Witness: Bourassa

Contributions-in-Aid of Construction (CIAC) and Accumulated Amortization

Line
No.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

	Gross CIAC	Accumulated Amortization
Computed balance at end of Test Year	\$ 6,957,144	\$ 5,599,846
Book balance at end of Test Year	\$ 6,957,144	\$ 5,568,860
Increase (decrease)	\$ 0	\$ 30,987
Adjustment to CIAC/AA CIAC	\$ 0	\$ (30,987)
Label	3a	3b

SUPPORTING SCHEDULES

E-1

B-2, page 5.1

Line	No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
------	-----	---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments
Adjustment 4
Advances-in-Aid of Construction (AIAC)

Exhibit
Schedule B-2
Page 6
Witness: Bourassa

Line
No.

1

2

3

4 Computed balance at End OF Test Year

\$ -

5

6 Book balance at End of Test Year

\$ (0)

7

8 Increase (decrease)

\$ 0

9

10

11

12

13

14

15

16

17

18

19 SUPPORTING SCHEDULES

20 B-2, page 6.1

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Advances-in-Aid of Construction (AIAC)

Exhibit
Schedule B-2
Page 6.1
Witness: Bourassa

Line No.	Per Decision Balance 12/31/2014	2015		2016		2017		2018	
		Activity	Balance 12/31/2015	Activity	Balance 12/31/2016	Activity	Balance 12/31/2017	Activity	Balance 12/31/2018
5	520,749	(363,994)	156,755	(3,072)	153,683	(153,683)	0	-	0
Advances-on-Aid of Construction									
Total AIAC	520,749	(363,994)	156,755	(3,072)	153,683	(153,683)	0	-	0

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments
Adjustment 6
Deferred Regulatory Assets (DRA)

Exhibit
Schedule B-2
Page 7
Witness: Bourassa

Line No.		DRA Authorized in Prev. Decision	Amortization Thru 2018	Scottsdale Capacity	Amortization Thru July 2020	Post- In-Service AFUDC Thru July 2020	Post In-Service Depreciation Thru July 2020	Total
1	Def. Reg Assets - Phs 1	825,080	(106,573)					\$ 718,507
2	Scottsdale Capacity			1,200,080	(120,008)	\$ 254,216	\$ 120,008	1,454,296
3	Plant Closure					\$ 1,130,120	\$ 459,774	1,589,894
4	Total					\$ 1,384,336	\$ 579,782	\$ 3,762,697
5								
6	Test Year Deferred Regulatory Assets							806,101
7								
8	Increase (Decrease) in Deferred Regulatory Assets							\$ 2,956,596
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19	<u>SUPPORTING SCHEDULE</u>							
20	Testimony							
21	Work papers							

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments
Adjustment 6

Line No.	Deferred Income Tax as of December 31, 2014	Water & Sewer Adjusted Book Value	Water & Sewer Tax Value	Probability of Realization of Future Tax Benefit	Deductible TD (Taxable TD) Expected to be Realized	Effective Tax Rate	Future Tax Asset		Future Tax Liability	
							Current	Non Current	Current	Non Current
1										
2										
3										
4										
5										
6										
7	Plant-in-Service	\$ 19,901,080 ¹								
8	Accum. Deprec.	(8,085,201) ¹								
9	Deferred Regulatory Assets less AFUDC Equity	2,795,266								
10	CIAC	(1,357,298) ²								
11	Fed. Fixed Assets	\$ 13,253,847	\$ 12,102,574 ²	100.0%	\$ (1,151,273)	19.97%				(229,921)
12	State Fixed Assets	\$ 13,253,847	\$ 13,908,114 ²	100.0%	\$ 654,267	4.900%		32,059		-
13										
14	ed & Stat AIAC		21,507 ⁴	100.0%	\$ 21,507 ⁴	24.87%	\$	5,349		
15							\$	-	\$ 37,408	\$ -
16							\$	(192,513)	\$	(229,921)
17	Net Asset (Liability)									
18										
19	Allocated Corporate ADIT ⁵									
20										
21	Net Asset (Liability)						\$	(192,513)		
22										
23	Allocation Factor							1.0000		
24										
25	Net Asset (Liability)						\$	(192,513)		
26										
27	DIT Asset (Liability) per Books						\$	50,523		
28										
29	Adjustment to DIT						\$	243,036		
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										

Footnotes - See page 8.1

Line
No.

¹ Per adjusted book balances, land not included, coporate plant not included, AFUDC Equity not included
AFUDC Equity
Historical thru 2018 AFUDC Removed \$ (264,029)
A/D Historical thru 2018 AFUDC Removed \$ (10,009)

² Computation of Net Tax Value December 31, 2018

Based on 2017 Tax Depreciation report (December 31, 2017)
Unadjusted Cost at December 31, 2017 per federal and state tax depr. report
Reconciling items not on tax report:
2018 Additions
PTY plant
Plant Closure (excluding land)
2018 Retirements
PTY Retirements
Deferred Regulatory Assets (excluding AFUDC Equity)
Net Unadjusted Cost tax Basis at December 31, 2018

Reductions
Basis Reduction 2017 and Prior Years per federal and state tax depr. report
Accumulated Depreciation 2017 and prior per federal and state tax depr. report
Projected 2018 Depr. on 2017 and prior assets
2018 Additions A/D
PTY Plant A/D
Plant Closure A/D thru July 2020
2018 Retirements A/D
PTY Retirements A/D
Deferred Regulatory Assets AA

Net Reductions through December 31, 2014
Net tax value of plant-in-service at December 31, 2014

³ CIAC (including impact of change to probability of realization)

Gross CIAC per adjusted book balances
CIAC reductions/additions
AA per adjusted book balances

Net CIAC before unrealized AIAC

Unrealized AIAC Component
AIAC per adjusted book balances
Adjusted Net AIAC (see footnote 5 below)
Unrealized AIAC Component % (1-Realized AIAC Component)
Total realizable CIAC

⁴ AIAC (including impact of change in probability of realization)

AIAC per adjusted book balances
Less: Unrealized AIAC (from Note 3, above)
Subtotal
Meter and Service Line Installation Charges per adjusted book balances
Total realizable AIAC

⁵ See work papers

FEDERAL	STATE
\$ 11,169,818	\$ 11,169,818
176,779	176,779
210,857	
8,684,519	8,684,519
(4,382)	(4,382)
(2,490,139)	(2,490,139)
2,795,266	2,795,266
	\$ 20,331,860
\$ (3,078,004)	\$
(6,682,686)	(7,667,257)
(157,968)	(248,808)
(7,737)	(7,737)
(13,803)	
(723,710)	(723,710)
4,382	4,382
2,490,139	2,490,139
(270,755)	(270,755)
	(6,423,745)
	\$ 13,908,114

\$ 6,957,144

\$ (5,599,846)

(5,599,846)

\$ 1,357,298

\$

70.0%

\$ 1,357,298

\$

\$

\$ 21,507

\$ 21,507

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Cash Working Capital

Exhibit
Schedule B-5
Page 1
Witness: Bourassa

Line No.	Description	(A)	(B)	Proposed Test Year Amount ¹	Revenue Lag (Lead) Days	(C)	Expense Lag (Lead) Days	(D)	Net Lag (Lead) Days	Col. C - Col. D	Lead/Lag Factor	Col. E/365	Cash Working Capital Required Col. B * Col. F
										(E)	(F)	(G)	
7	OPERATING EXPENSES												
8	Salaries and Wages	\$	-	-	19.24	-	-	-	19.24	0.05271754	0.05271754	\$	-
9	Purchased Water		3,240	3,240	19.24	32.07	32.07	(12.83)	(12.83)	(0.03514547)	(0.03514547)	(114)	(114)
10	Purchased Wastewater Treatment		339,388	339,388	19.24	36.00	36.00	(16.76)	(16.76)	(0.04591259)	(0.04591259)	(15,582)	(15,582)
11	Sludge Removal		2,700	2,700	19.24	53.50	53.50	(34.26)	(34.26)	(0.09385780)	(0.09385780)	(253)	(253)
12	Purchased Power		65,592	65,592	19.24	33.04	33.04	(13.80)	(13.80)	(0.03780300)	(0.03780300)	(2,480)	(2,480)
13	Fuel for Power Production		-	-	19.24	-	-	19.24	19.24	0.05271754	0.05271754	-	-
14	Chemicals		12,019	12,019	19.24	6.94	6.94	12.30	12.30	0.03370384	0.03370384	405	405
15	Materials and Supplies		10,184	10,184	19.24	16.08	16.08	3.16	3.16	0.00866275	0.00866275	88	88
16	Contractual Services - Accounting		7,649	7,649	19.24	23.49	23.49	(4.25)	(4.25)	(0.01163862)	(0.01163862)	(89)	(89)
17	Contractual Services - Legal		1,801	1,801	19.24	23.49	23.49	(4.25)	(4.25)	(0.01163862)	(0.01163862)	(21)	(21)
18	Contractual Services - Management		346,637	346,637	19.24	20.00	20.00	(0.76)	(0.76)	(0.00207698)	(0.00207698)	(720)	(720)
19	Contractual Services - Testing		9,862	9,862	19.24	8.27	8.27	10.97	10.97	0.03006001	0.03006001	296	296
20	Contractual Services - Other		346,847	346,847	19.24	21.34	21.34	(2.10)	(2.10)	(0.00574821)	(0.00574821)	(1,994)	(1,994)
21	Equipment Rent		-	-	19.24	-	-	19.24	19.24	0.05271754	0.05271754	-	-
22	Building Rent		25,665	25,665	19.24	19.22	19.22	0.02	0.02	0.00006001	0.00006001	2	2
23	Transportation Expense		9,667	9,667	19.24	22.20	22.20	(2.96)	(2.96)	(0.00810437)	(0.00810437)	(78)	(78)
24	Insurance - Auto		2,132	2,132	19.24	(182.50)	(182.50)	201.74	201.74	0.55271754	0.55271754	1,178	1,178
25	Insurance - General Liability		7,086	7,086	19.24	(182.50)	(182.50)	201.74	201.74	0.55271754	0.55271754	3,917	3,917
26	Miscellaneous		42,449	42,449	19.24	16.22	16.22	3.02	3.02	0.00827919	0.00827919	351	351
27													
28													
29													
30	TAXES												
31	General Taxes-Property ¹	\$	59,140	59,140	19.24	213.96	213.96	(194.72)	(194.72)	(0.53346967)	(0.53346967)	\$	(31,550)
32	General Taxes-Other		-	-	19.24	-	-	19.24	19.24	0.05271754	0.05271754	-	-
33	Income Tax ¹		270,452	270,452	19.24	37.00	37.00	(17.76)	(17.76)	(0.04865232)	(0.04865232)	(13,158)	(13,158)
34													
35	OTHER												
36													
37													
38	TOTAL												
39													
40	Test Year Cash Working Capital												
41	Increase(decrease) in Cash Working Capital												
42													
43													
44													
45													
46													

¹At proposed rates.

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Income Statement

Exhibit
Schedule C-1
Page 1
Witness: Bourassa

Line No.		Test Year Book Results	Adjustment	Test Year Adjusted Results	Proposed Rate Increase	Adjusted with Rate Increase
1	Revenues					
2	Sewer Revenues	\$ 2,473,678	\$ (11,392)	\$ 2,462,286	\$ 878,785	\$ 3,341,071
3	Reclaimed Water Revenues	6,647	(6,647)	(0)		(0)
4	Other Sewer Revenues	11,106	-	11,106		11,106
5		<u>\$ 2,491,430</u>	<u>\$ (18,039)</u>	<u>\$ 2,473,391</u>	<u>\$ 878,785</u>	<u>\$ 3,352,176</u>
6	Operating Expenses					
7	Salaries and Wages	\$ -	-	\$ -		\$ -
8	Purchased Water	3,240	-	3,240		3,240
9	Purchased Wastewater Treatment	202,309	137,079	339,388		339,388
10	Sludge Removal	2,700	-	2,700		2,700
11	Purchased Power	65,592	-	65,592		65,592
12	Fuel for Power Production	-	-	-		-
13	Chemicals	12,019	-	12,019		12,019
14	Materials and Supplies	10,184	-	10,184		10,184
15	Contractual Services - Accounting	7,649	-	7,649		7,649
16	Contractual Services - Legal	1,801	-	1,801		1,801
17	Contractual Services - Management	365,425	(18,788)	346,637		346,637
18	Contractual Services - Testing	9,862	-	9,862		9,862
19	Contractual Services - Other	345,046	1,801	346,847		346,847
20	Equipment Rent	-	-	-		-
21	Building Rent	25,665	-	25,665		25,665
22	Transportation Expense	9,667	-	9,667		9,667
23	Insurance - Auto	2,132	-	2,132		2,132
24	Insurance - General Liability	7,086	-	7,086		7,086
25	Regulatory Commission Expense	-	-	-		-
26	Miscellaneous	42,449	-	42,449		42,449
27	Depreciation and Amortization	475,416	257,134	732,550		732,550
28	Bad Debt Expense	4,497	-	4,497	(474)	4,023
29	Taxes Other Than Income	-	-	-		-
30	Property Taxes	50,713	2,155	52,868	6,272	59,140
31	Income Taxes	324,746	(271,414)	53,332	217,121	270,452
32						
33	Total Operating Expenses	<u>\$ 1,968,199</u>	<u>\$ 107,966</u>	<u>\$ 2,076,165</u>	<u>\$ 222,919</u>	<u>\$ 2,299,084</u>
34	Operating Income	<u>\$ 523,231</u>	<u>\$ (126,005)</u>	<u>\$ 397,226</u>	<u>\$ 655,867</u>	<u>\$ 1,053,093</u>
35	Other Income (Expense)					
36	Interest and Dividend Income	-	-	-		-
37	AFUDC Income	121,802	-	121,802		121,802
38	Miscellaneous Non-Utility Expenses	(93,922)	-	(93,922)		(93,922)
39	Interest Expense	(67,247)	(101,631)	(168,878)		(168,878)
40						
41	Total Other Income (Expense)	<u>\$ (39,367)</u>	<u>\$ (101,631)</u>	<u>\$ (140,998)</u>	<u>\$ -</u>	<u>\$ (140,998)</u>
42	Net Profit (Loss)	<u><u>\$ 483,864</u></u>	<u><u>\$ (227,636)</u></u>	<u><u>\$ 256,228</u></u>	<u><u>\$ 655,867</u></u>	<u><u>\$ 912,094</u></u>

43
44 SUPPORTING SCHEDULES:
45 C-1, page 2
46 E-2
47

RECAP SCHEDULES:
A-1

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Income Statement

Exhibit
Schedule C-1
Page 2.1
Witness: Bourassa

Line No.	1	2	3	4	5	6	7	8	9
	Test Year Book Results	Depreciation	Property Taxes	Rate Case Expense	Revenue Annualization	Reclaimed Water Sales	Corporate Allocations	Purchased WW Treatment	Intentionally Left Blank
1	Revenues								
2	Sewer Revenues	2,473,678			(11,392)				
3	Reclaimed Water Revenues	6,647				(6,647)			
4	Other Sewer Revenues	11,106							
5		\$ 2,491,430	\$ -	\$ -	\$ (11,392)	\$ (6,647)	\$ -	\$ -	\$ -
6	Operating Expenses								
7	Salaries and Wages	-							
8	Purchased Water	3,240							
9	Purchased Wastewater Treatment	202,309						137,079	
10	Sludge Removal	2,700							
11	Purchased Power	65,592							
12	Fuel for Power Production	-							
13	Chemicals	12,019							
14	Materials and Supplies	10,184							
15	Contractual Services - Accounting	7,649							
16	Contractual Services - Legal	1,801							
17	Contractual Services - Management	365,425					(18,788)		
18	Contractual Services - Testing	9,862							
19	Contractual Services - Other	345,046					1,801		
20	Equipment Rent	-							
21	Building Rent	25,665							
22	Transportation Expense	9,667							
23	Insurance - Auto	2,132							
24	Insurance - General Liability	7,086							
25	Regulatory Commission Expense	-							
26	Miscellaneous	42,449							
27	Depreciation and Amortization	475,416	257,134						
28	Bad Debt Expense	4,497							
29	Taxes Other Than Income	-							
30	Property Taxes	50,713	2,155						
31	Income Taxes	324,746							
32									
33	Total Operating Expenses	\$ 1,968,199	\$ 257,134	\$ 2,155	\$ -	\$ -	\$ (16,987)	\$ 137,079	\$ -
34	Operating Income	\$ 523,231	\$ (257,134)	\$ (2,155)	\$ -	\$ (6,647)	\$ 16,987	\$ (137,079)	\$ -
35	Other Income (Expense)								
36	Interest and Dividend Income	-							
37	AFUDC Income	121,802							
38	Miscellaneous Non-Utility Expenses	(93,922)							
39	Interest Expense	(67,247)							
40									
41	Total Other Income (Expense)	\$ (39,367)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
42	Net Profit (Loss)	\$ 483,864	\$ (257,134)	\$ (2,155)	\$ (11,392)	\$ (6,647)	\$ 16,987	\$ (137,079)	\$ -
43									
44	SUPPORTING SCHEDULES:								
45	C-2								
46	E-2								

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Income Statement

Exhibit
Schedule C-1
Page 2.2
Witness: Bourassa

Line No.		10 Intentionally Left Blank	11 Intentionally Left Blank	12 Intentionally Left Blank	13 Interest Synch.	14 Income Taxes	Test Year Adjusted Results	Proposed Rate Increase	Adjusted with Rate Increase
1	Revenues								
2	Sewer Revenues						2,462,286	\$ 878,785	\$ 3,341,071
3	Reclaimed Water Revenues						(0)		(0)
4	Other Sewer Revenues						11,106		11,106
5		\$ -	\$ -	\$ -	\$ -	\$ -	2,473,391	\$ 878,785	\$ 3,352,176
6	Operating Expenses								
7	Salaries and Wages							\$ -	
8	Purchased Water						3,240		3,240
9	Purchased Wastewater Treatment						339,388		339,388
10	Sludge Removal						2,700		2,700
11	Purchased Power						65,592		65,592
12	Fuel for Power Production						-		-
13	Chemicals						12,019		12,019
14	Materials and Supplies						10,184		10,184
15	Contractual Services - Accounting						7,649		7,649
16	Contractual Services - Legal						1,801		1,801
17	Contractual Services - Management						346,637		346,637
18	Contractual Services - Testing						9,862		9,862
19	Contractual Services - Other						346,847		346,847
20	Equipment Rent						-		-
21	Building Rent						25,665		25,665
22	Transportation Expense						9,667		9,667
23	Insurance - Auto						2,132		2,132
24	Insurance - General Liability						7,086		7,086
25	Regulatory Commission Expense						-		-
26	Miscellaneous						42,449		42,449
27	Depreciation and Amortization						732,550		732,550
28	Bad Debt Expense						4,497	(474)	4,023
29	Taxes Other Than Income						-		-
30	Property Taxes						52,868	6,272	59,140
31	Income Taxes					(271,414)	53,332	217,121	270,452
32									
33	Total Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ (271,414)	2,076,165	\$ 222,919	\$ 2,299,084
34	Operating Income	\$ -	\$ -	\$ -	\$ -	\$ 271,414	397,226	\$ 655,867	\$ 1,053,093
35	Other Income (Expense)								
36	Interest and Dividend Income								
37	AFUDC Income						121,802		121,802
38	Miscellaneous Non-Utility Expenses						(93,922)		(93,922)
39	Interest Expense				(101,631)		(168,878)		(168,878)
40									
41	Total Other Income (Expense)	\$ -	\$ -	\$ -	\$ (101,631)	\$ -	(140,998)	\$ -	\$ (140,998)
42	Net Profit (Loss)	\$ -	\$ -	\$ -	\$ (101,631)	\$ 271,414	256,228	\$ 655,867	\$ 912,094
43									

RECAP SCHEDULES:
C-1, page 1

SUPPORTING SCHEDULES:
C-2
E-2

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Adjustments to Revenues and Expenses

Exhibit
Schedule C-2
Page 1
Witness: Bourassa

Line No.	<u>Adjustments to Revenues and Expenses</u>						<u>Subtotal</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	
	<u>Depreciation</u>	<u>Property Taxes</u>	<u>Rate Case Expense</u>	<u>Revenue Annualization</u>	<u>Reclaimed Water Sales</u>	<u>Corporate Allocations</u>	
Revenues	-	-	-	(11,392)	(6,647)	-	(18,039)
Expenses	257,134	2,155	-	-	-	(16,987)	242,301
Operating Income	(257,134)	(2,155)	-	(11,392)	(6,647)	16,987	(260,340)
Interest Expense							-
Other Income / Expense							-
Net Income	(257,134)	(2,155)	-	(11,392)	(6,647)	16,987	(260,340)

	<u>Adjustments to Revenues and Expenses</u>						<u>Subtotal</u>
	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	
	<u>Purchased WW Treatment</u>	<u>Intentionally Left Blank</u>	<u>Intentionally Left Blank</u>	<u>Intentionally Left Blank</u>	<u>Intentionally Left Blank</u>	<u>Intentionally Left Blank</u>	
Revenues	-	-	-	-	-	-	(18,039)
Expenses	137,079	-	-	-	-	-	379,380
Operating Income	(137,079)	-	-	-	-	-	(397,419)
Interest Expense	-						-
Other Income / Expense							-
Net Income	(137,079)	-	-	-	-	-	(397,419)

	<u>Adjustments to Revenues and Expenses</u>		<u>Total</u>
	<u>13</u>	<u>14</u>	
	<u>Interest Synch.</u>	<u>Income Taxes</u>	
Revenues	-	-	(18,039)
Expenses	-	(271,414)	107,966
Operating Income	-	271,414	(126,005)
Interest Expense	(168,878)		(168,878)
Other Income / Expense		-	-
Net Income	(168,878)	271,414	(294,883)

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Adjustments to Revenues and Expenses
Adjustment Number 1

Exhibit
Schedule C-2
Page 2
Witness: Bourassa

Depreciation Expense

Line	Acct.		Adjusted Original Cost	Non-Depr. or Fully Depr. Plant	Depr Original Cost	Proposed Rates	Depreciation Expense
No.	No.	Description	\$		\$		\$
1	351	Organization	-		-	0.00%	-
2	352	Franchise	-		-	0.00%	-
3	353	Land	486,511	(486,511)	-	0.00%	-
4	354	Structures & Improvements	4,214,032		4,214,032	3.33%	140,327
5	355	Power Generation	9,000		9,000	5.00%	450
6	360	Collection Sewer Forced	5,019,464		5,019,464	2.00%	100,389
7	361	Collection Sewers Gravity	5,592,253		5,592,253	2.00%	111,845
8	362	Special Collecting Structures	765,437		765,437	2.00%	15,309
9	363	Customer Services	258,784		258,784	2.00%	5,176
10	364	Flow Measuring Devices	68,582		68,582	10.00%	6,858
11	365	Flow Measuring Installations	180,051	(179,622)	430	10.00%	43
12	366	Reuse Services	-		-	2.00%	-
13	367	Reuse Meters And Installation	-		-	8.33%	-
14	370	Receiving Wells	773,931		773,931	3.33%	25,772
15	371	Pumping Equipment	1,227,460	(188,714)	1,038,746	12.50%	129,843
16	374	Reuse Distribution Reservoirs	-		-	2.50%	-
17	375	Reuse Trans. and Dist. System	-		-	2.50%	-
18	380	Treatment & Disposal Equipment	428,771	(46,322)	382,449	5.00%	19,122
19	381	Plant Sewers	134,805	(106,217)	28,588	5.00%	1,429
20	382	Outfall Sewer Lines	-		-	3.33%	-
21	389	Other Sewer Plant & Equipment	1,002,608		1,002,608	6.67%	66,874
22	390	Office Furniture & Equipment	84,741		84,741	6.67%	5,652
23	390.1	Computers and Software	50,044	(28,225)	21,819	20.00%	4,364
24	391	Transportation Equipment	166,916	(11,219)	155,698	20.00%	31,140
25	392	Stores Equipment	-		-	4.00%	-
26	393	Tools, Shop And Garage Equip	34,076		34,076	5.00%	1,704
27	394	Laboratory Equip	14,219	(2,416)	11,802	10.00%	1,180
28	395	Power Operated Equip	-		-	5.00%	-
29	396	Communication Equip	133,043	(37,803)	95,240	10.00%	9,524
30	397	Miscellaneous Equip.	6,892		6,892	10.00%	689
31	398	Other Tangible Plant	-		-	10.00%	-
32			-		-	5.00%	-
33	903	Land and Land Rights	-		-	0.00%	-
34	904	Structures and Improvments	12,847		12,847	3.33%	428
35	940	Office Furniture & Equipment	359		359	6.67%	24
36	940.1	Computers and Software	43,813		43,813	20.00%	8,763
37							
38		TOTALS	\$ 20,708,639	\$ (1,087,048)	\$ 19,621,591		\$ 686,905
39							
40		Plus: Deferred Reg. Asset - Plant Closure Amort.	\$ 3,762,697		\$ 3,762,697	5.00%	\$ 188,135
41		Less: Deferred Liability Tax (EADIT) Amort.	\$ 313,801		\$ 313,801	26.16%	\$ (82,102)
42							
43							
44			Gross CIAC	Fully Amortized CIAC	Net CIAC	Amort. Rate	
45		Less: Contributions-in-Aid of Construction Amortization	\$ 6,957,144	\$ (5,232,139)	\$ 1,725,005	3.5008%	\$ (60,388)
46							
47			\$ 6,957,144	\$ (5,232,139)	\$ 1,725,005		
48		Total Depreciation Expense					\$ 732,550
49							
50		Adjusted Test Year Depreciation Expense					\$ 475,416
51							
52		Increase (decrease) in Depreciation Expense					\$ 257,134
53							
54		Adjustment to Revenues and/or Expenses					\$ 257,134
55							
56		<u>SUPPORTING SCHEDULE</u>					
57		B-2, page 3					

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Adjustment to Revenues and Expenses
Adjustment Number 2

Exhibit
Schedule C-2
Page 3
Witness: Bourassa

Property Taxes

Line No.	DESCRIPTION	Test Year as adjusted	Company Recommended
1	Company Adjusted Test Year Revenues	\$ 2,473,391	\$ 2,473,391
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	4,946,782	4,946,782
4	Company Recommended Revenue	2,473,391	3,352,176
5	Subtotal (Line 4 + Line 5)	7,420,174	8,298,959
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	2,473,391	2,766,320
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	4,946,782	5,532,639
10	Plus: 10% of CWIP (intentionally excluded)	-	-
11	Less: Net Book Value of Licensed Vehicles	8,398	8,398
12	Full Cash Value (Line 9 + Line 10 - Line 11)	4,938,384	5,524,241
13	Assessment Ratio	18.0%	18.0%
14	Assessment Value (Line 12 * Line 13)	888,909	994,363
15	Composite Property Tax Rate - Obtained from ADOR	5.9475%	5.9475%
16	Test Year Adjusted Property Tax Expense (Line 14 * Line 15)	\$ 52,868	\$ 59,140
17	Tax on Parcels	-	-
18	Total Property Taxes (Line 16 + Line 17)	\$ 52,868	
19	Test Year Property Taxes	\$ 50,713	
20	Adjustment to Test Year Property Taxes (Line 18 - Line 19)	<u>\$ 2,155</u>	
21			
22	Property Tax on Company Recommended Revenue (Line 16 + Line 17)		\$ 59,140
23	Company Test Year Adjusted Property Tax Expense (Line 18)		\$ 52,868
24	Increase in Property Tax Due to Increase in Revenue Requirement		<u>\$ 6,272</u>
25			
26	Increase in Property Tax Due to Increase in Revenue Requirement (Line 24)		\$ 6,272
27	Increase in Revenue Requirement		\$ 878,785
28	Increase in Property Tax Per Dollar Increase in Revenue (Line 26 / Line 27)		0.71371%
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Adjustment to Revenues and Expenses
Adjustment Number 3

Exhibit
Schedule C-2
Page 4
Witness: Bourassa

INTENTIONALLY LEFT BLANK

Line
No.
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Adjustment to Revenues and Expenses
Adjustment Number 4

Exhibit
Schedule C-2
Page 5
Witness: Bourassa

Revenue Annualization

Line
No.

1

2

3

4 Revenue Annualization

(11,392)

5

6

7

8 Total Revenue from Annualization

\$ (11,392)

9

10

11 Adjustment to Revenue and/or Expense

\$ (11,392)

12

13 SUPPORTING SCHEDULES

14 H-1

15 Work papers

16

17

18

19

20

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Adjustment to Revenues and Expenses
Adjustment Number 5

Exhibit
Schedule C-2
Page 6
Witness: Bourassa

Remove Reclaimed Water Sales

Line

No.

1

2 Test Year Reclaimed Water Sales

\$ (6,647)

3

4

5

6 Adjustment to Revenues and/or Expense

\$ (6,647)

7

8

9

10

11

12

13

14

15

16

17 Reference

18 Testimony

19

20

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Adjustment to Revenues and Expenses
Adjustment Number 6

Exhibit
Schedule C-2
Page 7
Witness: Bourassa

Allocated Corporate Cost Adjustment

Line
No.

1		
2	Contractual Services - Management	\$ (18,788)
3	Contractual Services - Other	1,801
4		
5		
6	Adjustment to Contractual Services - Professional	<u>\$ (18,788)</u>
7		
8		
9	Adjustment to Revenue and/or Expense	<u>(18,788)</u>
10		
11		
12		
13		
14		
15		
16		
17	<u>Reference</u>	
18	Testimony	
19	Work papers	
20		

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Adjustment to Revenues and Expenses
Adjustment Number 7

Exhibit
Schedule C-2
Page 8
Witness: Bourassa

Purchased Wastewater Treatment

Line

No.

1

2 Projected 2019 Wastewater Treatment Expense \$ 339,388

3 Test Year Wastewater Treatment Expense 202,309

4 Increase(decrease) in Purchased Wastewater Treatment Expense \$ 137,079

5

6

7

8

9 Adjustment to Revenue and/or Expense \$ 137,079

10

11

12

13

14 Reference

15 Testimony

16 Work papers

17

18

19

20

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Adjustment to Revenues and Expenses
Adjustment Number 8

Exhibit
Schedule C-2
Page 9
Witness: Bourassa

INTENTIONALLY LEFT BLANK

Line
No.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Adjustment to Revenues and Expenses
Adjustment Number 9

Exhibit
Schedule C-2
Page 10
Witness: Bourassa

INTENTIONALLY LEFT BLANK

Line

No.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Adjustment to Revenues and Expenses
Adjustment Number 10

Exhibit
Schedule C-2
Page 11
Witness Bourassa

INTENTIONALLY LEFT BLANK

Line

No.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Adjustment to Revenues and Expenses
Adjustment Number 11

Exhibit
Schedule C-2
Page 12
Witness: Bourassa

INTENTIONALLY LEFT BLANK

Line
No.
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Adjustment to Revenues and Expenses
Adjustment Number 12

Exhibit
Schedule C-2
Page 13
Witness: Bourassa

INTENTIONALLY LEFT BLANK

Line
No.
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Adjustment to Revenues and Expenses
Adjustment Number 13

Exhibit
Schedule C-2
Page 14
Witness: Bourassa

Interest Synchronization

Line
No.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30

Fair Value Rate Base	\$	14,408,605	
Weighted Cost of Debt		1.64%	
Interest Expense	\$	236,125	
Test Year Interest Expense	\$	67,247	
Increase (decrease) in Interest Expense		168,878	
Adjustment to Revenue and/or Expense	\$	(168,878)	

Weighted Cost of Debt Computation

Pro forma Capital Structure

	<u>Percent</u>	<u>Cost</u>	<u>Weighted Cost</u>
Debt	46.00%	3.56%	1.64%
Equity	54.00%	10.50%	5.67%
Total	100.00%		7.31%

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Adjustment to Revenues and/or Expenses
Adjustment Number 14

Exhibit
Schedule C-2
Page 15
Witness: Bourassa

Line

No.

1 Income Taxes

2

3

4 Computed Income Tax

5 Test Year Income tax Expense

6 Adjustment to Income Tax Expense

7

8

9

10

11

12

13 SUPPORTING SCHEDULE

14 C-3, page 2

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

Test Year
at Present Rates

\$ 53,332

-

\$ 53,332

Test Year
at Proposed Rates

\$ 270,452

53,332

\$ 217,121

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Computation of Gross Revenue Conversion Factor

Exhibit
Schedule C-3
Page 1
Witness: Bourassa

Line No.	Description	Percentage of Incremental Gross Revenues
1	Federal Effective Income Tax Rate	19.9710%
2		
3	State Effective Income Tax Rate	4.9000%
4		
5	Uncollectible Rate	-0.0405%
6		
7	Property Taxes	0.5362%
8		
9		
10	Total Tax Percentage	25.367%
11		
12	Operating Income % = 100% - Tax Percentage	74.633%
13		
14		
15		
16		
17	<u>1</u> = Gross Revenue Conversion Factor	
18	Operating Income %	1.3399
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29	<u>SUPPORTING SCHEDULES:</u>	<u>RECAP SCHEDULES:</u>
30	C-3, page 2	A-1
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		

GROSS REVENUE CONVERSION FACTOR

Line No.	Description	(A)	(B)	(C)	(D)	(E)	(F)
<u>Calculation of Gross Revenue Conversion Factor:</u>							
1	Revenue	100.0000%					
2	Uncollectible Factor (Line 11)	0.0000%					
3	Revenues (L1 - L2)	100.0000%					
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	25.3667%					
5	Subtotal (L3 - L4)	74.6333%					
6	Revenue Conversion Factor (L1 / L5)	1.339884					
<u>Calculation of Uncollectible Factor:</u>							
7	Unity	100.0000%					
8	Combined Federal and State Tax Rate (L17)	24.8710%					
9	One Minus Combined Income Tax Rate (L7 - L8)	75.1290%					
10	Uncollectible Rate	-0.0539%					
11	Uncollectible Factor (L9 * L10)		-0.0405%				
<u>Calculation of Effective Tax Rate:</u>							
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%					
13	Arizona State Income Tax Rate	4.9000%					
14	Federal Taxable Income (L12 - L13)	95.1000%					
15	Applicable Federal Income Tax Rate (L55, Col E)	21.0000%					
16	Effective Federal Income Tax Rate (L14 x L15)	19.9710%					
17	Combined Federal and State Income Tax Rate (L13 +L16)		24.8710%				
<u>Calculation of Effective Property Tax Factor</u>							
18	Unity	100.0000%					
19	Combined Federal and State Income Tax Rate (L17)	24.8710%					
20	One Minus Combined Income Tax Rate (L18-L19)	75.1290%					
21	Property Tax Factor	0.7137%					
22	Effective Property Tax Factor (L20*L21)		0.5362%				
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)			25.3667%			

24	Required Operating Income	\$ 1,053,093					
25	Adjusted Test Year Operating Income (Loss)	\$ 397,226					
26	Required Increase in Operating Income (L24 - L25)		\$ 655,867				
27	Income Taxes on Recommended Revenue (Col. (E), L52)	\$ 270,452					
28	Income Taxes on Test Year Revenue (Col. (B), L54)	\$ 53,332					
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		\$ 217,121				
30	Recommended Revenue Requirement	\$ 3,352,176					
31	Uncollectible Rate	0.1200%					
32	Uncollectible Expense on Recommended Revenue (L24 * L25)	\$ 4,023					
33	Adjusted Test Year Uncollectible Expense	\$ 4,497					
34	Required Increase in Revenue to Provide for Uncollectible Exp.		\$ (474)				
35	Property Tax with Recommended Revenue	\$ 59,140					
36	Property Tax on Test Year Revenue	\$ 52,868					
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)		\$ 6,272				
38	Total Required Increase in Revenue (L26 + L29 + L37)		\$ 878,785				

	(A)	(B)	(C)	(D)	(E)	(F)
<u>Calculation of Income Tax:</u>						
39	Revenue	\$ 2,473,391	\$ 2,473,391	\$ 3,352,176	\$ 3,352,176	
40	Operating Expenses Excluding Income Taxes	\$ 2,022,834	\$ 2,022,834	\$ 2,028,631	\$ 2,028,631	
41	Synchronized Interest (L47)	\$ 236,125	\$ 236,125	\$ 236,125	\$ 236,125	
42	Arizona Taxable Income (L39 - L40 - L41)	\$ 214,433	\$ 214,433	\$ 1,087,420	\$ 1,087,420	
43	Arizona State Effective Income Tax Rate (see work papers)	4.9000%	4.9000%	4.9000%	4.9000%	
44	Arizona Income Tax (L42 x L43)	\$ 10,507	\$ 10,507	\$ 53,284	\$ 53,284	
45	Federal Taxable Income (L42- L44)	\$ 203,926	\$ 203,926	\$ 1,034,137	\$ 1,034,137	
46						
47	Federal Taxes at 21%	\$ 42,824	\$ 42,824	\$ 217,169	\$ 217,169	
48						
49						
50						
51						
52						
53	Total Federal Income Tax	\$ 42,824	\$ 42,824	\$ 217,169	\$ 217,169	
54	Combined Federal and State Income Tax (L35 + L42)	\$ 53,332	\$ 53,332	\$ 270,452	\$ 270,452	

55	COMBINED Applicable Federal Income Tax Rate [Col. (D), L53 - Col. (A), L53] / [Col. (D), L45 - Col. (A), L45]	21.0000%				
56	WASTEWATER Applicable Federal Income Tax Rate [Col. (E), L53 - Col. (B), L53] / [Col. (E), L45 - Col. (B), L45]		21.0000%			
57	WATER Applicable Federal Income Tax Rate [Col. (F), L53 - Col. (C), L53] / [Col. (F), L45 - Col. (C), L45]			0.0000%		

<u>Calculation of Interest Synchronization:</u>		
58	Rate Base	\$ 14,408,605
59	Weighted Average Cost of Debt	1.6388%
60	Synchronized Interest (L45 X L46)	\$ 236,125

Line No.		Test Year Ended 12/31/2018	Year Ended 12/31/2017	Year Ended 12/31/2016
1	ASSETS			
2	Plant in Service	\$ 14,133,561	\$ 14,067,522	\$ 13,939,311
3	Non-Utility Plant	-	-	-
4	Construction Work in Progress	8,738,855	1,735,818	500,709
5	Property Held for Future Use	(10,001,351)	(9,601,166)	(9,242,554)
6	Less: Accumulated Depreciation			
7	Net Plant	\$ 12,871,065	\$ 6,202,174	\$ 5,197,466
8				
9	CURRENT ASSETS			
10	Cash and Equivalents	\$ (2,271)	\$ (10,777)	\$ 3,042
11	Restricted Cash	359,131	327,030	311,243
12	Accounts Receivable, Net	215,504	239,916	294,363
13	Inter-Company Receivable	-	-	-
14	Other Receivables	-	129,579	129,579
15	Notes Receivable	-	-	-
16	Materials and Supplies Inventory	-	-	-
17	Prepayments	8,309	14,060	16,549
18	Deposits	-	-	-
19	Other Current Assets	-	-	-
20	Total Current Assets	\$ 579,673	\$ 699,809	\$ 754,776
21				
22	OTHER ASSETS			
23	Deferred Regulatory Assets	\$ 108,667	\$ 181,382	\$ 254,462
24	Deferred Regulatory Assets - Tax	-	-	-
25	Deferred Regulatory Assets - Closure	718,507	759,761	801,015
26	Deferred Regulatory Assets - Closure - Ph2	87,594	-	-
27	Deferred Debts	\$ 914,768	\$ 941,143	\$ 1,055,477
28				
29	TOTAL ASSETS	\$ 14,365,505	\$ 7,843,127	\$ 7,007,719
30				
31	LIABILITIES AND STOCKHOLDER EQUITY			
32				
33	Stockholder's Equity	\$ 4,587,605	\$ 4,202,657	\$ 5,085,526
34				
35	Long-Term Debt*	\$ 1,966,116	\$ 1,801,139	\$ 70,461
36				
37	CURRENT LIABILITIES			
38	Accounts Payable	-	-	-
39	Current Portion of Long-Term Debt	-	-	-
40	Payables to Associated Companies	4,964,183	(635,315)	(582,877)
41	Security Deposits	-	-	-
42	Customer Meter Deposits, Current	-	-	-
43	Current Portion of AIAC	-	-	297,107
44	Accrued Taxes	-	-	-
45	Accrued Interest	-	-	-
46	Other Current Liabilities	917,725	815,476	744,009
47	Total Current Liabilities	\$ 5,881,908	\$ 180,162	\$ 458,238
48				
49	DEFERRED CREDITS			
50	Customer Meter Deposits, less current	\$ 21,507	\$ 17,490	\$ 12,128
51	Advances in Aid of Construction	(0)	(0)	(143,424)
52	AIAC in-progress	187,839	187,839	162,839
53	Accumulated Deferred Investment Tax Credits	(50,523)	-	-
54	Accumulated Deferred Income Taxes	313,801	-	-
55	Deferred Regulatory Liabilities - Tax (EADIT)	61,468	-	-
56	Deferred Regulatory Liabilities - Tax Gross-up	6,957,144	6,957,144	6,803,669
57	Contributions in Aid of Construction	(5,568,860)	(5,503,304)	(5,441,718)
58	AIAC in-progress	7,500	-	-
59	Other Deferred Credits	-	-	-
60	Total Deferred Credits	\$ 1,929,876	\$ 1,659,169	\$ 1,393,494
61				
62	Total Liabilities & Common Equity	\$ 14,365,505	\$ 7,843,127	\$ 7,007,719
63				
64				
65				
66				
67				
68	SUPPORTING SCHEDULES			
69	Work papers			
70				
71	* Proforma Equity and Debt for 2017 and 2018 to achieve 30% debt and 70% equity in capital structure per prior Prior Decision 75510			
72				

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Comparative Income Statements

Exhibit
Schedule E-2
Page 1
Witness: Bourassa

Line No.		Test Year Ended 12/31/2018	Prior Year Ended 12/31/2017	Prior Year Ended 12/31/2016
1	Revenues			
2	Sewer Revenues	\$ 2,473,678	\$ 2,570,769	\$ 2,477,123
3	Reclaimed Water Revenues	6,647	(22,567)	49,374
4	Other Sewer Revenues	11,106	9,941	8,296
5	Total Revenues	\$ 2,491,430	\$ 2,558,143	\$ 2,534,794
6	Operating Expenses			
7	Salaries and Wages	\$ -	\$ -	\$ -
8	Purchased Water	3,240	3,402	3,556
9	Purchased Wastewater Treatment	202,309	210,528	260,260
10	Sludge Removal	2,700	1,350	3,375
11	Purchased Power	65,592	65,482	64,369
12	Fuel for Power Production	-	-	-
13	Chemicals	12,019	19,374	14,568
14	Materials and Supplies	10,184	25,076	15,319
15	Contractual Services - Accounting	7,649	6,800	(167)
16	Contractual Services - Legal	1,801	350	(49,999)
17	Contractual Services - Management	365,425	360,728	439,913
18	Contractual Services - Testing	9,862	10,315	10,050
19	Contractual Services - Other	345,046	306,716	332,656
20	Equipment Rent	-	-	-
21	Building Rent	25,665	26,783	23,505
22	Transportation Expense	9,667	11,725	11,269
23	Insurance - Auto	2,132	2,036	1,803
24	Insurance - General Liability	7,086	9,694	6,928
25	Regulatory Commission Expense	-	-	-
26	Miscellaneous	42,449	53,785	48,474
27	Depreciation and Amortization	475,416	485,748	749,003
28	Bad Debt Expense	4,497	1,763	2,925
29	Taxes Other Than Income	-	-	-
30	Property Taxes	50,713	50,684	52,492
31	Income Taxes	324,746	-	-
32				
33	Total Operating Expenses	\$ 1,968,199	\$ 1,652,340	\$ 1,990,299
34	Operating Income	\$ 523,231	\$ 905,803	\$ 544,494
35	Other Income (Expense)			
36	Interest and Dividend Income	-	-	-
37	AFUDC Income	121,802	15,217	(13,447)
38	Other Income (expense)	(93,922)	72	(192,398)
39	Interest Expense*	(67,247)	(63,339)	(15,981)
40				
41	Total Other Income (Expense)	\$ (39,367)	\$ (48,051)	\$ (221,827)
42	Net Profit (Loss)	\$ 483,864	\$ 857,752	\$ 322,668

* Proforma interest expense for 2017 and 2018 on proforma debt. See E-1.

SUPPORTING SCHEDULES:

Work papers

RECAP SCHEDULES:

A-2

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Comparative Statements of Cash Flows

Exhibit
Schedule E-3
Page 1
Witness: Bourassa

Line No.	Test Year Ended <u>12/31/2018</u>	Prior Year Ended <u>12/31/2017</u>	Prior Year Ended <u>12/31/2016</u>
3	Cash Flows from Operating Activities		
4	Net Income	\$ 483,864	\$ 857,752
5	Adjustments to reconcile net income to net cash		\$ 322,668
6	provided by operating activities:		
7	Depreciation and Amortization	475,416	485,748
8	Depreciation and Amortization Adjustments	(140,787)	(188,722)
9	Changes in Certain Assets and Liabilities:		
10	Restricted Cash	(31,101)	(15,787)
11	Accounts Receivable	24,412	54,447
12	Other Receivables	129,579	(129,579)
13	Materials and Supplies Inventory		
14	Prepaid Expenses	5,751	2,489
15	Deferred Regulatory Assets/Liabilities	401,644	114,334
16	Deferred Income Taxes	(50,523)	(1,050,703)
17	Receivables/Payables to Associated Co.	5,599,498	(52,438)
18	Accounts Payable		602
19	Interest Payable		
20	Customer Meter and Security Deposits	4,017	5,362
21	Taxes Payable		(51,112)
22	Other assets and liabilities	102,249	71,467
23	Rounding	1	2
24	Net Cash Flow provided by Operating Activities	\$ 7,004,020	\$ 1,334,654
25	Cash Flow From Investing Activities:		\$ (393,850)
26	Capital Expenditures	(7,069,076)	(1,363,320)
27	Plant Held for Future Use		931,222
28	Changes in Special Funds		-
29	Net Cash Flows from Investing Activities	\$ (7,069,076)	\$ (1,363,320)
30	Cash Flow From Financing Activities		\$ 931,222
31	Change in Restricted Cash		
32	Proceeds from Long-Term Debt	164,977	1,730,678
33	Net receipt of contributions in aid of construction	7,500	153,475
34	Net receipts of advances in aid of construction		883,712
35	Repayments of Long-Term Debt		(128,683)
36	Distributions		(1,130,412)
37	Deferred Financing Costs		
38	Paid in Capital	(98,916)	(1,740,621)
39	Net Cash Flows Provided by Financing Activities	\$ 73,561	\$ 14,849
40	Increase(decrease) in Cash and Cash Equivalents	8,505	(13,817)
41	Cash and Cash Equivalents at Beginning of Year	(10,776)	3,041
42	Cash and Cash Equivalents at End of Year	\$ (2,271)	\$ (10,776)
43			\$ 3,041
44			
45	<u>SUPPORTING SCHEDULES:</u>	<u>RECAP SCHEDULES:</u>	
46	Work papers	A-5	
47	E1		
48	E-2		

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Statement of Changes in Stockholder's Equity

Exhibit
Schedule E-4
Page 1
Witness: Bourassa

Line

No.

		Stockholder's Equity	Retained Earnings	Total
1				
2				
3				
4	Balance, December 31, 2016	\$ 4,762,858	\$ -	\$ 4,762,858
5	Addnl Paid In Capital Adjustment	-		-
6	Distributions			-
7	Net Income		322,668	322,668
8				
9	Balance, December 31, 2017	\$ 4,762,858	\$ 322,668	\$ 5,085,526
10	Addnl Paid In Capital Adjustment	(1,740,621)		(1,740,621)
11	Distributions			-
12	Net Income		857,752	857,752
13				
14	Balance, December 31, 2018	\$ 3,022,237	\$ 1,180,420	\$ 4,202,657
15	Addnl Paid In Capital Adjustment	(98,916)		(98,916)
16	Distributions			-
17	Net Income		483,864	483,864
18				
19	Balance, December, 2018	\$ 2,923,321	\$ 1,664,283	\$ 4,587,604

20

21

22

23

24

25

26 SUPPORTING SCHEDULES:

27

28

29

30

RECAP SCHEDULES:

E-1

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Detail of Plant in Service

Exhibit
Schedule E-5
Page 1
Witness: Bourassa

Line No.	Acct. No.	Plant Description	Plant Balance at 12/31/2017	Plant Additions, Reclass- ifications or Retirements	Plant Balance at 12/31/2018
1					
2	106	Plant Not Classified	\$ -	\$ -	\$ -
3	351	Organization	-	-	-
4	352	Franchise	-	-	-
5	353	Land	472,524	-	472,524
6	354	Structures & Improvements	2,849,358	-	2,849,358
7	355	Power Generation	9,000	-	9,000
8	360	Collection Sewer Forced	1,191,996	7,219	1,199,215
9	361	Collection Sewers Gravity	4,746,109	14,829	4,760,938
10	362	Special Collecting Structures	3,052	-	3,052
11	363	Customer Services	264,495	-	264,495
12	364	Flow Measuring Devices	63,044	-	63,044
13	365	Flow Measuring Installations	180,051	-	180,051
14	366	Reuse Services	-	-	-
15	367	Reuse Meters And Installation	-	-	-
16	370	Receiving Wells	773,931	-	773,931
17	371	Pumping Equipment	1,078,662	25,593	1,104,255
18	374	Reuse Distribution Reservoirs	-	-	-
19	375	Reuse Trans. and Dist. System	-	-	-
20	380	Treatment & Disposal Equipment	330,351	9,692	340,043
21	381	Plant Sewers	116,917	-	116,917
22	382	Outfall Sewer Lines	-	-	-
23	389	Other Sewer Plant & Equipment	967,442	(176)	967,267
24	390	Office Furniture & Equipment	226,994	-	226,994
25	390.1	Computers and Software	68,954	-	68,954
26	391	Transportation Equipment	65,584	-	65,584
27	392	Stores Equipment	-	-	-
28	393	Tools, Shop And Garage Equip	36,243	-	36,243
29	394	Laboratory Equip	14,398	-	14,398
30	395	Power Operated Equip	-	-	-
31	396	Communication Equip	115,229	8,882	124,111
32	397	Miscellaneous Equip.	6,892	-	6,892
33	398	Other Tangible Plant	486,294	-	486,294
34					
35					-
36					-
37					
38					-
39		TOTAL WATER PLANT	\$ 14,067,522	\$ 66,039	\$ 14,133,561
40					
41		<u>SUPPORTING SCHEDULES</u>		<u>RECAP SCHEDULES:</u>	
42		Work papers		A-4	
43				E-1	
44					

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Operating Statistics

Exhibit
Schedule E-7
Page 1
Witness: Bourassa

Line No.		Test Year Ended <u>12/31/2018</u>	Prior Year Ended <u>12/31/2017</u>	Prior Year Ended <u>12/31/2016</u>
1	<u>WASTEWATER STATISTICS:</u>			
2				
3				
4				
5	Total Gallons Treated (in Thousands)	69,842	68,989	84,929
6				
7				
8				
9	Wastewater Revenues from Customers:	\$ 2,491,430	\$ 2,558,143	\$ 2,534,794
10				
11				
12				
13				
14	Year End Number of Customers	2,210	2,207	2,177
15				
16				
17	Annual Gallons (in Thousands)			
18	Treated Per Year End Customer	32	31	39
19				
20				
21				
22	Annual Revenue per Year End Customer	\$ 1,127.34	\$ 1,159.10	\$ 1,164.35
23				
24	Pumping Cost Per 1,000 Gallons	\$ 0.9392	\$ 0.9492	\$ 0.7579
25	Purchased Wastewater Cost per 1,000 Gallons	\$ 2.8967	\$ 3.0516	\$ 3.0644
26				
27				
28				

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Taxes Charged to Operations

Exhibit
Schedule E-8
Page 1
Witness Bourassa

Line No.		Test Year Ended 12/31/2018	Prior Year Ended 12/31/2017	Prior Year Ended 12/31/2016
1	<u>Description</u>			
2				
3	State Income Taxes	\$ 64,855	\$ -	\$ -
4	Federal Income Taxes	259,891	-	-
5	Payroll Taxes	-	-	-
6	Property Taxes	50,713	50,684	52,492
7				
8	Totals	<u>\$ 375,459</u>	<u>\$ 50,684</u>	<u>\$ 52,492</u>
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Notes To Financial Statements

Exhibit
Schedule E-9
Page 1
Witness: Bourassa

Line

No.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

The Company does not conduct independent audits, reviews and/or compilations. Accordingly, there are no notes which are typically associated with these financial statements. Management makes the following notations to the financial statements contained herein:

Significant Accounting Policies - The Company prepares its financial statements in accordance with accounting principles generally accepted in the United States of America and the accounting records of the are maintained in accordance with the uniform system of accounts as prescribed by the National Association of Regulatory Utility Commissioners (USOA 1996). Significant accounting policies are as follows:

Utility Plant - Property, plant and equipment is stated at cost less accumulated depreciation provided on a straight-line basis.

Depreciation rates for asset classes of utility property, plant and equipment are established by the Commission. The cost of additions, including betterments and replacements of units of utility fixed assets are charged to utility property, plant and equipment. When units of utility property are replaced, renewed or retired, their cost plus removal or disposal costs, less salvage proceeds, is charged to accumulated depreciation.

Revenue Recognition - Revenues are recognized on the accrual method. Under this method, revenue is recognized when earned rather than when collected, and expenses are recognized when incurred rather than when paid.

Contributions in Aid of Construction - Contributions in aid of construction (CIAC) are nonrefundable contributions by developers and customers for plant expansion. In addition, this amount includes the remaining balance, if any, of advances in aid of construction at the end of the repayment period. The contributions in aid of construction are being amortized at a rate equal to the rate allowed for depreciation, as a reduction of depreciation expense

Advances in Aid of Construction - Customer advances for construction are subject to refund in accordance with agreements approved by the Arizona Corporation Commission. Agreements provide for refunds which are typically equal to 10 percent of annual water revenue generated from the expansion. The repayments are for a maximum agreed upon period or until repaid in full. Any balance remaining at the end of the agreed-upon period for repayment becomes a contribution in aid of construction.

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Projected Income Statements - Present & Proposed Rates

Exhibit
Schedule F-1
Page 1
Witness: Bourassa

Line No.		Test Year Actual Results	At Present Rates Year Ended 12/31/2019	At Proposed Rates Year Ended 12/31/2019
1	Revenues			
2	Metered Water Revenues	\$ 2,473,678	\$ 2,462,286	\$ 3,341,071
3	Unmetered Water Revenues	6,647	(0)	(0)
4	Other Water Revenues	11,106	11,106	11,106
5		<u>\$ 2,491,430</u>	<u>\$ 2,473,391</u>	<u>\$ 3,352,176</u>
6	Operating Expenses			
7	Salaries and Wages	\$ -	\$ -	\$ -
8	Purchased Water	3,240	3,240	3,240
	Purchased Wastewater Treatment	202,309	339,388	339,388
	Sludge Removal	2,700	2,700	2,700
	Purchased Power	65,592	65,592	65,592
	Fuel for Power Production	-	-	-
	Chemicals	12,019	12,019	12,019
9	Materials and Supplies	10,184	10,184	10,184
10	Contractual Services - Accounting	7,649	7,649	7,649
11	Contractual Services - Legal	1,801	1,801	1,801
12	Contractual Services - Management	365,425	346,637	346,637
13	Contractual Services - Testing	9,862	9,862	9,862
14	Contractual Services - Other	345,046	346,847	346,847
15	Equipment Rent	-	-	-
16	Building Rent	25,665	25,665	25,665
17	Transportation Expense	9,667	9,667	9,667
18	Insurance - Auto	2,132	2,132	2,132
19	Insurance - General Liability	7,086	7,086	7,086
20	Regulatory Commission Expense	-	-	-
21	Miscellaneous	42,449	42,449	42,449
22	Depreciation and Amortization	475,416	732,550	732,550
23	Bad Debt Expense	4,497	4,497	4,023
24	Taxes Other Than Income	-	-	-
25	Property Taxes	50,713	52,868	59,140
26	Income Taxes	324,746	53,332	270,452
27	Total Operating Expenses	<u>\$ 1,968,199</u>	<u>\$ 2,076,165</u>	<u>\$ 2,299,084</u>
28	Operating Income	<u>\$ 523,231</u>	<u>\$ 397,226</u>	<u>\$ 1,053,093</u>
29	Other Income (Expense)			
30	Interest and Dividend Income	-	-	-
31	AFUDC Income	121,802	121,802	121,802
32	Miscellaneous Non-Utility Expenses	(93,922)	(93,922)	(93,922)
33	Interest Expense	(67,247)	(168,878)	(168,878)
34				
35	Total Other Income (Expense)	<u>\$ (39,367)</u>	<u>\$ (140,998)</u>	<u>\$ (140,998)</u>
36	Net Profit (Loss)	<u>\$ 483,864</u>	<u>\$ 256,228</u>	<u>\$ 912,094</u>

SUPPORTING SCHEDULES:

C-1

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Projected Statements of Changes in Financial Position
Present and Proposed Rates

Exhibit
Schedule F-2
Page 1
Witness: Bourassa

Line No.		Test Year Ended 12/31/2018	At Present Rates Year Ended 12/31/2019	At Proposed Rates Year Ended 12/31/2019
1				
2				
3				
4				
5	Cash Flows from Operating Activities			
6	Net Income	\$ 483,864	\$ 256,228	\$ 912,094
7	Adjustments to reconcile net income to net cash			
8	provided by operating activities:			
9	Depreciation and Amortization	475,416	732,550	732,550
10	Depreciation Adjustments	(140,787)	(2,125,265)	(2,125,265)
11	Changes in Certain Assets and Liabilities:			
12	Restricted Cash	(31,101)		
13	Accounts Receivable	24,412		
14	Other Receivables	129,579		
15	Materials and Supplies Inventory	-		
16	Prepaid Expenses	5,751		
17	Deferred Regulatory Assets/Liabilities	401,644	(2,956,596)	(2,956,596)
18	Deferred Income Taxes	(50,523)		
19	Receivables/Payables to Associated Co.	5,599,498	(4,000,000)	(4,000,000)
20	Accounts Payable	-		
21	Interest Payable	-		
22	Customer Meter and Security Deposits	4,017		
23	Taxes Payable	-		
24	Other assets and liabilities	102,249	243,036	243,036
25	Rounding	1	1	(2)
26	Net Cash Flow provided by Operating Activities	\$ 7,004,020	\$ (7,850,046)	\$ (7,194,182)
27	Cash Flow From Investing Activities:			
28	Capital Expenditures	(7,069,076)	(87,481)	(87,481)
29	Plant Held for Future Use	-		
30	Changes in debt reserve fund	-		
31	Net Cash Flows from Investing Activities	\$ (7,069,076)	\$ (87,481)	\$ (87,481)
32	Cash Flow From Financing Activities			
33	Change in Restricted Cash	-		
34	Change in net amounts due to parent and affiliates	164,977		
35	Net Receipt contributions in aid of construction	7,500		
36	Net receipts of advances in aid of construction	-		
37	Long-Term Debt	-	5,108,085	5,108,085
38	Dividends Paid	-		
39	Deferred Financing Costs	-		
40	Paid in Capital	(98,916)	3,460,663	2,804,799
41	Net Cash Flows Provided by Financing Activities	\$ 73,561	\$ 8,568,748	\$ 7,912,884
42	Increase(decrease) in Cash and Cash Equivalents	8,505	631,221	631,221
43	Cash and Cash Equivalents at Beginning of Year	(10,776)	(2,271)	(2,271)
44	Cash and Cash Equivalents at End of Year	\$ (2,271)	\$ 628,950	\$ 628,950

SUPPORTING SCHEDULES:

E-3

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Projected Construction Requirements

Exhibit
Schedule F-3
Page 1
Witness: Bourassa

Line No.	Account				
1					
2					
3	<u>Number</u>	<u>Plant Asset:</u>	<u>Test Year</u>	<u>2019</u>	<u>2020</u>
4	351	Organization	\$ -	\$ -	\$ -
5	352	Franchise	-	-	-
6	353	Land	-	-	-
7	354	Structures & Improvements	-	-	-
8	355	Power Generation	-	-	-
9	360	Collection Sewer Forced	7,219	387,500	345,000
10	361	Collection Sewers Gravity	14,829	100,000	100,000
11	362	Special Collecting Structures	-	-	-
12	363	Customer Services	-	-	-
13	364	Flow Measuring Devices	-	-	-
14	365	Flow Measuring Installations	-	-	-
15	366	Reuse Services	-	-	-
16	367	Reuse Meters And Installation	-	-	-
17	370	Receiving Wells	25,593	-	-
18	371	Pumping Equipment	-	100,950	92,950
19	374	Reuse Distribution Reservoirs	-	-	-
20	375	Reuse Trans. and Dist. System	9,692	-	-
21	380	Treatment & Disposal Equipment	-	1,000,000	-
22	381	Plant Sewers	-	-	-
23	382	Outfall Sewer Lines	(176)	-	-
24	389	Other Sewer Plant & Equipment	-	-	-
25	390	Office Furniture & Equipment	-	-	-
26	390.1	Computers and Software	-	45,000	-
27	391	Transportation Equipment	-	-	-
28	392	Stores Equipment	-	-	-
29	393	Tools, Shop And Garage Equip	-	972	900
30	394	Laboratory Equip	-	-	-
31	395	Power Operated Equip	8,882	-	-
32	396	Communication Equip	-	35,000	25,000
33	397	Miscellaneous Equip.	-	-	-
34	398	Other Tangible Plant	-	-	-
35	398.1	Other Tangible Plant - Scottsdale Capacity	-	-	-
36					
37	Total		\$ 66,039	\$ 1,669,422	\$ 563,850
38					
39					
40					

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Assumptions Used in Rate Filing

Exhibit
Schedule F-4
Page 1
Witness: Bourassa

Line

No.

- 1 Property Taxes were computed using the method used by the Arizona Department
- 2 of Revenue modified for ratemaking.
- 3
- 4 Projected construction expenditures are shown on Schedule A-4.
- 5
- 6 Expense adjustments are shown on Schedule C2, and are explained in the testimony.
- 7
- 8 Income taxes were computed using statutory state and federal income tax rates.
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30
- 31
- 32
- 33
- 34
- 35
- 36
- 37
- 38
- 39
- 40

Liberty Utilities (Black Mountain Sewer) Corp.
Revenue Summary
With Annualized Revenues to Year End Number of Customers
Test Year Ended December 31, 2018

Exhibit
Schedule H-1
Witness: Bourassa

Line No.	Customer Classification	Present Revenues	Proposed Revenues	Dollar Change	Percent Change	Percent of Present Sewer Revenues	Percent of Proposed Sewer Revenues
1	Residential	1,988,852	2,625,284	636,432	32.00%	80.41%	78.32%
2	Residential HOA (11 units)	10,494	13,852	3,358	32.00%	0.42%	0.41%
3	Residential HOA (12 units)	11,448	15,111	3,663	32.00%	0.46%	0.45%
4	Residential HOA (18 units)	17,172	22,667	5,495	32.00%	0.69%	0.68%
5	Residential HOA (25 units)	23,850	31,482	7,632	32.00%	0.96%	0.94%
6	Residential Apartment (8 units)	7,632	10,074	2,442	32.00%	0.31%	0.30%
7	Residential Apartment (10 units)	9,540	12,593	3,053	32.00%	0.39%	0.38%
8	Residential Apartment (66 units)	62,964	83,112	20,148	32.00%	2.55%	2.48%
9	Commercial	411,096	542,647	131,551	32.00%	16.62%	16.19%
10							
11							
12	Subtotal	\$ 2,543,048	\$ 3,356,823	\$ 813,775	32.00%	102.82%	100.14%
13							
14	<u>Revenue Annualization</u>						
15	Residential	\$ (11,210)	\$ (14,797)	\$ (3,587)	32.00%	-0.45%	-0.44%
16	Commercial	(183)	(241)	(58)	32.00%	-0.01%	-0.01%
17	Total Revenue Annualization	\$ (11,392)	\$ (15,038)	\$ (3,645)	32.00%	-0.46%	-0.45%
18							
19	<u>Misc Service Revenues</u>						
20	Misc Revenues	11,106	11,106	-	0.00%	0.45%	0.33%
21	Tax Savings Credits	(68,878)	-	68,878	-100.00%	-2.78%	0.00%
22	Reconciling Amount to C-1	(493)	(715)	(222)	45.03%	-0.02%	-0.02%
23	Totals	\$ 2,473,391	\$ 3,352,176	\$ 878,786	35.53%	100.00%	100.00%
24							
25							
26							
27							
28							
29							
30							

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Analysis of Revenue by Detailed Class

Line No.	Customer Classification	Average Number of Customers at 12/31/2014 ¹	Average Usage Gallons (1,000's)	Present Rates	Tax Savings Credit*	Average Bill		Proposed Rates		Proposed Increase	
						Adj. Present Rates	Proposed Rates	Dollar Amount	Percent Amount		
1	Residential	2,073	N/A	\$ 79.50	\$ (2.44)	\$ 77.06	\$ 104.94	\$ 27.88	36.18%		
2	Residential HOA (11 units)	1	N/A	874.50	(26.84)	847.66	1,154.34	306.68	36.18%		
3	Residential HOA (12 units)	1	N/A	954.00	(29.28)	924.72	1,259.28	334.56	36.18%		
4	Residential HOA (18 units)		N/A	1,431.00	(43.92)	1,387.08	1,888.92	501.84	36.18%		
5	Residential HOA (25 units)	1	N/A	1,987.50	(61.00)	1,926.50	2,623.50	697.00	36.18%		
6	Residential Apartment (8 units)	1	N/A	636.00	(19.52)	616.48	839.52	223.04	36.18%		
7	Residential Apartment (10 units)	1	N/A	795.00	(24.40)	770.60	1,049.40	278.80	36.18%		
8	Residential Apartment (66 units)	1	N/A	5,247.00	(161.04)	5,085.96	6,926.04	1,840.08	36.18%		
9											
10	Commercial	131	34,442	261.35	(2.61)	258.74	344.98	86.24	33.33%		
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24	Total										
25											
26											
27											
28											
29											

*Per Decision 76804, tax savings credit was \$2.44 for residential customers (per unit for multi-unit) and \$2.61 for commercial customers.

Liberty Utilities (Black Mountain Sewer) Corp.
Present and Proposed Rates
Test Year Ended December 31, 2018

Exhibit
Schedule H-3
Page 1
Witness: Bourassa

Line
No.

	<u>Present Rates</u>		<u>Proposed Rates</u>	<u>Dollar Change</u>	<u>Percent Change</u>
1					
2	<u>Customer Classification</u>				
3					
4	<u>Monthly Service Charge:</u>				
5	Residential, per single family unit	\$ 79.50	\$ 104.94	\$ 25.44	32.00%
6					
7	Commercial	\$ 85.00	\$ 112.20	\$ 27.20	32.00%
8					
9	<u>Commodity Rate:</u>				
10					
11	Commercial, per 1,000 gals[1]	5.120	\$ 6.758	\$ 1.64	32.00%
12					
13		<u>per acre foot</u>	<u>per 1,000 gals</u>	<u>per acre foot</u>	<u>per 1,000 gals</u>
14	Effluent Charge	\$ 150.00	\$ 0.460512	Remove	Remove
15					
16	Effluent Add-on Charge [2]	\$ 393.00	\$ 1.206073	Remove	Remove
17					
18	Total Effluent Charge	\$ 543.00	1.666585	Remove	Remove
19					
20					
21					
22					
23					
24					
25					
26	NT = no tariff				
27					
28					
29					
30	[1] Monthly water usage provided by Town of Carfree and City of Scottsdale.				
31	[2] Effluent Add-on charge is for recovery of approximately \$108,804 of plant closure costs not recognized in residential and commercial rates and				
32	will be discontinued after the amount is recovered.				
33					
34					
35					
36					
37					
38					

Liberty Utilities (Black Mountain Sewer) Corp.
Present and Proposed Rates
Test Year Ended December 31, 2018

Exhibit
Schedule H-3
Page 2
Witness: Bourassa

Line No.	Other Service Charges	Present Rates	Proposed Rates
1	Establishment	\$ 25.00	\$ 25.00
2	Re-establishment	[1]	[1]
3	Re-connection, Delinquent	[2]	[2]
4	After hours service [4]	\$ 50.00	\$ 50.00
5	Min Deposit Requirement (Residential)	[3]	[3]
6	Min Deposit Requirement (Non-Residential)	[3]	[3]
7	Deposit Interest	6%	6%
8	NSF Check	10.00	25.00
9	Deferred Payment finance charge, Per Month	1.50%	1.50%
10	Late Payment Charge, Per Month	Greater of \$5.00 or 1.50% per month on unpaid balance.	Greater of \$5.00 or 1.50% per month on unpaid balance.
11			
12	Main Extension Tariff	Cost[5]	Cost[5]
13	Off-Site Facilities Hook-up Fee	per Tariff	per Tariff
14			
15			
16	[1] Per A.A.C. R14-2-603.D, Within 12 months. Residential and non-residential customers shall pay the applicable minimum charge		
17	times the number of months disconnected.		
18			
19	[2] Customer shall pay the actual cost of physical disconnection and establishment (if same customer) and		
20	there shall be no charge for disconnection if no physical work is performed.		
21			
22	[3] Per A.A.C. R14-2-603.B Residential - two times the average bill. Non-residential - two and one-half times the average bill.		
23			
24	[4] After Hours Service Charge applies to all services performed after regular business hours at the customer's request or for the customer's		
25	convenience.		
26			
27	[5] Per A.A.C. R14-2-606.B		
28			
29			
30			
31			
32			
33			
34			
35	IN ADDITION TO THE COLLECTION OF REGULAR RATES, THE UTILITY WILL COLLECT FROM		
36	ITS CUSTOMERS A PROPORTIONATE SHARE OF ANY PRIVILEGE, SALES, USE, AND FRANCHISE		
37	TAX. PER COMMISSION RULE (14-2-608.D 5).		
38	ALL ADVANCES AND/OR CONTRIBUTIONS ARE TO INCLUDE LABOR, MATERIALS, OVERHEADS,		
39	AND ALL APPLICABLE TAXES, INCLUDING ALL GROSS-UP TAXES FOR INCOME TAXES.		
40	COST TO INCLUDE LABOR, MATERIALS AND PARTS, OVERHEADS AND ALL APPLICABLE TAXES.		
41			

Exhibit
Schedule H-3
Page 3
Witness: Bourassa

1

3

5

6

37

8

9

10

11

13

13

14

12
15

16

17

18

10

20

20

Liberty Utilities (Black Mountain Sewer) Corp.
Bill Comparison
Customer Classification
Residential

Exhibit
Schedule H-4
Page 1
Witness: Bourassa

Present <u>Bill</u>	Proposed <u>Bill</u>	Dollar <u>Increase</u>	Percent <u>Increase</u>
\$ 79.50	\$ 104.94	\$ 25.44	32.00%

Present Rates:
Monthly Charge: \$ 79.50

Proposed Rates:
Monthly Charge: \$ 104.94

Liberty Utilities (Black Mountain Sewer) Corp.
Bill Comparison
Customer Classification
Residential - HOA 11 Units

Exhibit
Schedule H-4
Page 2
Witness: Bourassa

Present <u>Bill</u>	Proposed <u>Bill</u>	Dollar <u>Increase</u>	Percent <u>Increase</u>
\$ 874.50	\$ 1,154.34	\$ 279.84	32.00%

# of Units	11
Rate Per Units	\$ 79.50
Present Rates:	
Monthly Charge:	\$ 874.50

# of Units	11
Rate Per Units	\$ 104.94
Proposed Rates:	
Monthly Charge:	\$ 1,154.34

Liberty Utilities (Black Mountain Sewer) Corp.
Bill Comparison
Customer Classification
Residential - HOA 12 Units

Exhibit
Schedule H-4
Page 3
Witness: Bourassa

Present <u>Bill</u>	Proposed <u>Bill</u>	Dollar <u>Increase</u>	Percent <u>Increase</u>
\$ 954.00	\$ 1,259.28	\$ 305.28	32.00%

# of Units	12
Rate Per Units	\$ 79.50
Present Rates:	
Monthly Charge:	\$ 954.00

# of Units	12
Rate Per Units	\$ 104.94
Proposed Rates:	
Monthly Charge:	\$ 1,259.28

Liberty Utilities (Black Mountain Sewer) Corp.
Bill Comparison
Customer Classification
Residential - HOA 18 Units

Exhibit
Schedule H-4
Page 4
Witness: Bourassa

Present <u>Bill</u>	Proposed <u>Bill</u>	Dollar <u>Increase</u>	Percent <u>Increase</u>
\$ 1,431.00	\$ 1,888.92	\$ 457.92	32.00%

# of Units	18
Rate Per Units	\$ 79.50
Present Rates:	
Monthly Charge:	\$ 1,431.00

# of Units	18
Rate Per Units	\$ 104.94
Proposed Rates:	
Monthly Charge:	\$ 1,888.92

Liberty Utilities (Black Mountain Sewer) Corp
Bill Comparison
Customer Classification
Residential - HOA 25 Units

Exhibit
Schedule H-4
Page 5
Witness: Bourassa

Present <u>Bill</u>	Proposed <u>Bill</u>	Dollar <u>Increase</u>	Percent <u>Increase</u>
\$ 1,987.50	\$ 2,623.50	\$ 636.00	32.00%

# of Units	25
Rate Per Units	\$ 79.50
Present Rates:	
Monthly Charge:	\$ 1,987.50

# of Units	25
Rate Per Units	\$ 104.94
Proposed Rates:	
Monthly Charge:	\$ 2,623.50

Liberty Utilities (Black Mountain Sewer) Corp.
Bill Comparison
Customer Classification
Residential - Apartment 8 Units

Exhibit
Schedule H-4
Page 6
Witness: Bourassa
Revised

Present <u>Bill</u>	Proposed <u>Bill</u>	Dollar <u>Increase</u>	Percent <u>Increase</u>
\$ 636.00	\$ 839.52	\$ 203.52	32.00%

# of Units	8
Rate Per Units	\$ 79.50
Present Rates:	
Monthly Charge:	\$ 636.00

# of Units	8
Rate Per Units	\$ 104.94
Proposed Rates:	
Monthly Charge:	\$ 839.52

Liberty Utilities (Black Mountain Sewer) Corp.
Bill Comparison
Customer Classification
Residential - Apartments 10 Units

Exhibit
Schedule H-4
Page 7
Witness: Bourassa

Present <u>Bill</u>	Proposed <u>Bill</u>	Dollar <u>Increase</u>	Percent <u>Increase</u>
\$ 795.00	\$ 1,049.40	\$ 254.40	32.00%

# of Units	10
Rate Per Units	\$ 79.50
Present Rates:	
Monthly Charge:	\$ 795.00

# of Units	10
Rate Per Units	\$ 104.94
Proposed Rates:	
Monthly Charge:	\$ 1,049.40

Liberty Utilities (Black Mountain Sewer) Corp.
Bill Comparison
Customer Classification
Residential - Apartments 66 Units

Exhibit
Schedule H-4
Page 8
Witness: Bourassa
Revised

Present <u>Bill</u>	Proposed <u>Bill</u>	Dollar <u>Increase</u>	Percent <u>Increase</u>
\$ 5,247.00	\$ 6,926.04	\$ 1,679.04	32.00%

# of Units	66
Rate Per Units	\$ 79.50
Present Rates:	
Monthly Charge:	\$ 5,247.00

# of Units	66
Rate Per Units	\$ 104.94
Proposed Rates:	
Monthly Charge:	\$ 6,926.04

Liberty Utilities (Black Mountain Sewer) Corp.
 Bill Comparison
 Customer Classification
 Commercial

Exhibit
 Schedule H-4
 Page 9
 Witness: Bourassa

	Present <u>Bill</u>	Proposed <u>Bill</u>	Dollar <u>Increase</u>	Percent <u>Increase</u>	
-	\$ 85.00	\$ 112.20	\$ 27.20	32.00%	
1,000	\$ 90.12	\$ 118.96	\$ 28.84	32.00%	Present Rates:
2,000	\$ 95.24	\$ 125.72	\$ 30.48	32.00%	
3,000	\$ 100.36	\$ 132.48	\$ 32.12	32.00%	Monthly Charge: \$ 85.00
4,000	\$ 105.48	\$ 139.23	\$ 33.75	32.00%	
5,000	\$ 110.60	\$ 145.99	\$ 35.39	32.00%	
6,000	\$ 115.72	\$ 152.75	\$ 37.03	32.00%	Charger per \$ 5.120
7,000	\$ 120.84	\$ 159.51	\$ 38.67	32.00%	
8,000	\$ 125.96	\$ 166.27	\$ 40.31	32.00%	
9,000	\$ 131.08	\$ 173.03	\$ 41.95	32.00%	
10,000	\$ 136.20	\$ 179.78	\$ 43.58	32.00%	
12,000	\$ 146.44	\$ 193.30	\$ 46.86	32.00%	
14,000	\$ 156.68	\$ 206.82	\$ 50.14	32.00%	Proposed Rates:
16,000	\$ 166.92	\$ 220.33	\$ 53.41	32.00%	Monthly Charge: \$ 112.20
18,000	\$ 177.16	\$ 233.85	\$ 56.69	32.00%	
20,000	\$ 187.40	\$ 247.37	\$ 59.97	32.00%	
25,000	\$ 213.00	\$ 281.16	\$ 68.16	32.00%	Charger per \$ 6.758
30,000	\$ 238.60	\$ 314.95	\$ 76.35	32.00%	
35,000	\$ 264.20	\$ 348.74	\$ 84.54	32.00%	
40,000	\$ 289.80	\$ 382.54	\$ 92.74	32.00%	
45,000	\$ 315.40	\$ 416.33	\$ 100.93	32.00%	
50,000	\$ 341.00	\$ 450.12	\$ 109.12	32.00%	
60,000	\$ 392.20	\$ 517.70	\$ 125.50	32.00%	
70,000	\$ 443.40	\$ 585.29	\$ 141.89	32.00%	
80,000	\$ 494.60	\$ 652.87	\$ 158.27	32.00%	
90,000	\$ 545.80	\$ 720.46	\$ 174.66	32.00%	
100,000	\$ 597.00	\$ 788.04	\$ 191.04	32.00%	
Average Usage					
34,442	\$ 261.35	\$ 344.98	\$ 83.63	32.00%	
Median Usage					
5,500	\$ 113.16	\$ 149.37	\$ 36.21	32.00%	

Residential

Witness: Bourassa

[illegible]

Residential - HOA 11 Units

Exhibit
Schedule H-5

Page 2
Witness: Bourassa

[illegible]

Residential - HOA 12 Units

Exhibit
Schedule H-5
Page 3
Witness: Bourassa

[illegible]

Exhibit
Schedule H-5
Page 4
Witness: Bourassa

[illegible]

Residential - HOA 25 Units

Witness: Bourassa

[illegible]

Residential Flat Rate

Exhibit
Schedule H-5
Page 6
Witness: Bourassa
Revised

Month	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total Year
-	1	1	1	1	1	1	1	1	1	1	1	1	12
-													-
-													-
-													-
-													-
-													-
-													-
-													-
-													-
-													-
Totals	1	1	1	1	1	1	1	1	1	1	1	1	12
									Average Flow				N/A
									Median Flow				N/A
									Average # Customers				1

Residential Flat Rate

Witness: Bourassa

[illegible]

Residential Flat Rate

Exhibit
Schedule H-5
Page 8
Witness: Bourassa
Revised

Month	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total Year
-	1	1	1	1	1	1	1	1	1	1	1	1	12
-													-
-													-
-													-
-													-
-													-
-													-
-													-
-													-
-													-
Totals	1	1	1	1	1	1	1	1	1	1	1	1	12
									Average Flow				N/A
									Median Flow				N/A
									Average # Customers				1

Liberty Utilities (Black Mountain Sewer) Corp.

Test Year Ended December 31, 2018

Customer Classification

Commercial

Water Usage

Exhibit

Schedule H-5

Page 9

Witness: Bourassa

Usage From:	Usage To:	Month Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total Year	Cumulative Billing	Cumulative Usage (1000's)
-	-	2	4	2	2	2	2	3	4	5	3	4	3	36	36	-
1,001	1,000	26	20	20	18	15	16	19	18	23	21	20	19	235	271	136
2,001	2,000	16	22	26	19	19	15	19	21	17	19	14	19	226	497	881
3,001	3,000	10	9	4	12	6	17	8	6	7	8	13	9	109	606	2,397
4,001	4,000	7	6	7	9	9	4	7	7	4	4	4	7	75	681	4,780
5,001	5,000	3	2	9	8	8	6	6	5	7	7	6	8	75	756	8,183
6,001	6,000	5	4	4	1	3	5	4	4	7	3	5	4	49	805	12,611
7,001	7,000	6	6	3	4	4	3	2	3	1	2	4	2	43	848	18,123
8,001	8,000	4	3	3	1	-	1	3	2	-	2	-	2	33	881	24,731
9,001	9,000	3	2	2	3	3	2	1	3	4	3	3	2	29	910	32,466
10,001	10,000	3	2	2	4	2	3	5	5	-	4	4	4	32	942	41,416
11,001	11,000	1	2	2	1	1	1	1	4	3	4	2	4	28	1,010	53,343
12,001	12,000	2	2	1	2	4	3	2	1	1	1	3	-	23	1,033	76,256
13,001	13,000	4	-	3	2	3	3	1	1	1	4	1	1	26	1,059	90,553
14,001	14,000	2	3	-	2	4	5	2	2	1	2	4	1	28	1,087	106,315
15,001	15,000	3	5	2	3	3	4	1	-	2	1	2	5	31	1,118	123,645
16,001	16,000	-	5	1	3	1	2	-	1	1	-	1	3	18	1,136	142,389
17,001	17,000	-	1	2	1	2	-	-	1	1	2	-	-	11	1,147	162,462
18,001	18,000	-	1	3	1	-	1	2	-	3	-	3	2	16	1,163	183,978
19,001	19,000	-	-	-	2	-	1	2	-	-	-	1	3	10	1,173	206,852
20,001	20,000	2	-	1	-	4	-	1	1	3	3	1	-	16	1,189	231,228
21,001	21,000	-	1	-	-	-	-	-	3	1	1	-	-	6	1,195	256,921
22,001	22,000	-	-	-	-	-	3	-	1	-	1	2	-	9	1,204	284,011
23,001	23,000	-	-	-	-	-	-	2	1	-	-	-	-	9	1,213	312,517
24,001	24,000	1	2	1	-	1	2	1	1	-	2	1	-	9	1,222	342,457
25,001	25,000	1	-	-	-	-	-	-	-	2	-	-	-	5	1,227	373,746
26,001	26,000	-	1	1	-	-	1	-	-	-	-	-	2	8	1,235	406,474
27,001	27,000	-	1	-	-	2	-	-	-	1	1	2	1	10	1,245	440,712
28,001	28,000	-	1	3	2	-	-	-	1	-	-	2	-	5	1,250	476,338
29,001	29,000	-	-	-	-	2	2	1	-	-	-	-	-	5	1,255	513,361
30,001	30,000	-	-	-	1	-	1	1	1	-	-	-	-	5	1,260	551,792
31,001	31,000	1	-	-	1	-	-	-	1	1	-	1	-	15	1,275	591,955
32,001	32,000	2	2	1	-	1	1	2	-	2	3	1	-	7	1,282	633,620
33,001	33,000	1	-	1	-	-	-	-	2	1	-	-	2	7	1,289	676,803
34,001	34,000	-	-	-	-	-	2	1	-	-	-	-	-	4	1,293	721,412
35,001	35,000	-	-	-	2	1	-	-	-	-	1	-	-	5	1,298	767,491
36,001	36,000	-	2	-	-	1	1	-	-	1	-	1	-	6	1,304	815,088
37,001	37,000	-	1	-	-	-	-	1	-	1	-	-	-	2	1,306	864,064
38,001	38,000	-	-	-	-	1	-	-	-	2	1	-	1	6	1,312	914,576
39,001	39,000	-	-	-	-	1	-	1	-	2	3	-	-	9	1,321	966,757
40,001	40,000	-	-	-	1	-	-	-	2	2	3	-	-	8	1,329	1,020,582
41,001	41,000	-	-	-	1	-	-	1	-	1	3	1	-	3	1,332	1,075,860
42,001	42,000	1	-	-	-	-	1	-	1	-	-	-	-			

Liberty Utilities (Black Mountain Sewer) Corp.

Test Year Ended December 31, 2018

Customer Classification

Commercial

Water Usage

Exhibit

Schedule H-5

Page 9

Witness: Bourassa

Usage From.	Usage To.	Month Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total Year	Cumulative Billing	Cumulative Usage (1000's)
42,001	43,000	1	-	1	1	-	-	-	-	3	-	-	-	6	1,338	1,132,726
43,001	44,000	-	-	2	-	-	-	1	2	-	-	-	-	5	1,343	1,191,147
44,001	45,000	1	-	-	-	-	-	1	-	-	1	-	-	3	1,346	1,251,045
45,001	46,000	-	1	1	-	-	-	-	1	-	1	1	1	6	1,352	1,312,562
46,001	47,000	-	-	-	-	-	1	-	-	1	-	1	1	4	1,356	1,375,616
47,001	48,000	-	-	-	-	-	2	2	-	-	-	-	-	5	1,361	1,440,264
48,001	49,000	1	-	-	-	-	-	-	1	1	-	1	1	4	1,365	1,506,468
49,001	50,000	-	-	-	1	-	-	-	2	-	-	-	-	4	1,369	1,574,234
50,001	51,000	1	-	-	-	-	-	-	-	1	1	1	-	4	1,373	1,643,571
51,001	52,000	-	-	1	-	-	1	-	-	-	-	-	-	2	1,375	1,714,384
52,001	53,000	-	-	-	-	-	1	-	-	-	-	-	-	1	1,376	1,786,625
53,001	54,000	-	1	-	-	-	-	-	-	-	-	-	-	6	1,382	1,860,563
54,001	55,000	-	-	-	-	-	1	2	-	-	1	-	3	4	1,386	1,936,100
55,001	56,000	-	-	-	-	-	-	-	-	-	-	-	-	3	1,389	2,013,190
56,001	57,000	1	1	1	1	-	1	-	2	1	-	-	-	6	1,395	2,092,009
57,001	58,000	-	-	1	-	-	-	-	1	-	-	-	-	2	1,397	2,172,337
58,001	59,000	-	1	-	-	-	-	-	-	-	-	-	-	1	1,398	2,254,120
59,001	60,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,398	2,337,302
60,001	61,000	1	-	-	1	-	-	-	1	-	-	1	1	5	1,403	2,422,184
61,001	62,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,403	2,508,470
62,001	63,000	-	-	-	-	1	-	1	-	-	-	-	-	2	1,405	2,596,283
63,001	64,000	-	-	-	-	-	-	-	-	-	-	-	-	1	1,406	2,685,564
64,001	65,000	-	1	1	-	-	-	-	-	-	1	-	1	4	1,410	2,776,510
65,001	66,000	-	1	1	2	-	1	-	-	1	-	-	-	6	1,416	2,869,259
66,001	67,000	1	-	-	1	-	1	-	1	-	-	-	-	3	1,419	2,963,623
67,001	68,000	-	-	-	-	-	-	-	-	-	-	-	-	1	1,420	3,059,474
68,001	69,000	-	-	-	-	-	-	-	-	-	-	1	-	1	1,421	3,156,813
69,001	70,000	-	1	-	-	-	1	-	-	-	-	-	-	2	1,423	3,255,712
70,001	71,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,423	3,356,034
71,001	72,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,423	3,457,780
72,001	73,000	-	-	-	1	-	-	-	-	-	-	-	-	1	1,424	3,561,020
73,001	74,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,424	3,665,685
74,001	75,000	1	-	-	-	-	-	1	-	-	-	-	2	4	1,428	3,772,072
75,001	76,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,428	3,879,887
76,001	77,000	-	1	-	-	-	-	-	-	-	-	-	-	1	1,429	3,989,206
77,001	78,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,429	4,099,954
78,001	79,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,429	4,212,131
79,001	80,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,429	4,325,817
80,001	81,000	-	-	-	-	-	-	-	1	-	-	-	-	1	1,430	4,440,933
81,001	82,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,431	4,557,560
82,001	83,000	-	-	-	-	-	-	-	-	-	-	1	-	1	1,431	4,675,618
83,001	84,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,431	4,795,107
84,001	85,000	-	1	-	-	-	-	-	-	-	-	-	1	2	1,433	4,916,196

Liberty Utilities (Black Mountain Sewer) Corp.

Test Year Ended December 31, 2018

Customer Classification

Commercial

Water Usage

Exhibit

Schedule H-5

Page 9

Witness: Bourassa

Usage From:	Usage To:	Month Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total Year	Cumul- ative Billing	Cumul- ative Usage (1000's)
85,001	86,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,433	5,038,719
86,001	87,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,433	5,162,674
87,001	88,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,433	5,288,062
88,001	89,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,433	5,414,883
89,001	90,000	-	-	-	-	-	1	-	-	1	-	1	-	3	1,436	5,543,406
90,001	91,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,436	5,673,365
91,001	92,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,437	5,804,851
92,001	93,000	-	-	-	-	-	1	-	-	-	1	2	-	3	1,440	5,938,052
93,001	94,000	-	-	-	-	1	-	-	-	-	-	-	-	1	1,441	6,072,786
94,001	95,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,441	6,208,961
95,001	96,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,441	6,346,577
96,001	97,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,442	6,485,731
97,001	98,000	-	-	-	-	-	1	-	-	-	-	-	-	1	1,443	6,626,424
98,001	99,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,443	6,768,561
99,001	100,000	-	-	-	-	-	-	-	-	-	-	1	-	1	1,444	6,912,239
100,389	100,389	-	-	-	-	-	1	-	-	-	-	-	-	1	1,445	7,057,301
101,300	101,300	1	-	-	-	-	-	-	-	-	-	-	-	1	1,446	7,203,781
101,980	101,980	-	-	-	-	-	-	-	1	-	-	-	-	1	1,447	7,351,346
104,590	104,590	-	-	1	-	-	-	-	-	-	-	-	-	1	1,448	7,502,793
106,390	106,390	1	-	-	-	-	-	-	-	-	-	-	-	1	1,449	7,656,952
106,510	106,510	-	-	-	-	-	-	-	-	-	-	-	-	1	1,450	7,811,391
112,987	112,987	-	-	-	-	-	-	-	-	-	-	1	-	1	1,451	7,975,335
113,766	113,766	-	-	-	-	-	-	1	-	-	-	-	-	1	1,452	8,140,524
118,000	118,000	-	1	-	-	-	-	-	-	-	-	-	-	1	1,453	8,311,978
118,800	118,800	-	-	-	-	-	-	-	-	-	-	-	-	1	1,454	8,484,713
119,000	119,000	-	-	-	-	-	-	-	-	-	-	-	-	1	1,455	8,657,858
119,800	119,800	-	-	-	-	-	-	-	-	-	-	1	-	1	1,456	8,832,287
120,330	120,330	-	-	-	-	-	-	-	-	-	-	-	-	1	1,457	9,007,607
123,100	123,100	-	-	-	-	1	-	-	-	-	-	-	-	1	1,458	9,187,087
123,200	123,200	1	-	-	-	-	-	-	-	-	-	-	-	1	1,459	9,366,836
123,670	123,670	-	1	-	-	-	-	-	-	-	-	-	-	1	1,460	9,547,394
127,300	127,300	-	-	-	-	-	-	-	-	-	-	-	-	1	1,461	9,733,379
128,930	128,930	-	-	-	-	-	-	1	-	-	-	-	-	1	1,462	9,921,875
132,500	132,500	-	-	-	-	-	-	-	-	-	-	-	-	1	1,463	10,115,723
136,110	136,110	-	-	-	-	-	-	-	-	-	-	-	-	1	1,464	10,314,988
137,095	137,095	-	-	-	-	-	-	-	-	-	-	-	-	1	1,465	10,515,832
137,180	137,180	-	-	-	-	-	-	1	-	-	-	-	-	1	1,466	10,716,938
137,700	137,700	-	-	-	-	-	-	-	-	-	-	-	-	1	1,467	10,918,944
142,363	142,363	-	-	-	-	-	1	-	-	-	-	-	-	1	1,468	11,127,932
143,732	143,732	-	-	-	-	-	-	-	-	-	-	-	-	1	1,469	11,339,075
144,780	144,780	-	-	-	-	1	-	-	-	-	-	-	-	1	1,470	11,551,901
145,760	145,760	-	-	-	-	-	-	-	-	-	-	-	-	1	1,471	11,766,314
149,000	149,000	-	1	-	-	-	-	-	-	-	-	-	-	1	1,472	11,985,642

Liberty Utilities (Black Mountain Sewer) Corp.

Test Year Ended December 31, 2018

Customer Classification

Commercial

Water Usage

Exhibit
Schedule H-5

Page 9

Witness: Bourassa

Usage From:	Usage To:	Month	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total Year	Cumulative Billing	Cumulative Usage (1000's)
150,050	150,050	Jan-18	1	-	-	-	-	-	-	-	-	-	-	1	1,473	12,206,666
160,386	160,386	-	-	-	-	-	-	-	-	1	-	-	-	1	1,474	12,443,075
160,640	160,640	-	-	-	-	-	-	-	-	1	-	-	-	1	1,475	12,680,019
161,700	161,700	-	-	-	-	-	-	-	-	-	-	1	-	1	1,476	12,918,688
164,700	164,700	-	-	-	-	-	1	-	-	-	-	-	-	1	1,477	13,161,950
165,600	165,600	-	-	-	-	-	-	-	-	1	-	-	-	1	1,478	13,406,707
175,603	175,603	-	-	-	-	-	-	-	1	-	-	-	-	1	1,479	13,666,424
176,740	176,740	-	-	-	-	-	-	-	-	-	-	1	-	1	1,480	13,927,999
177,590	177,590	-	-	-	-	-	-	-	1	-	-	-	-	1	1,481	14,191,010
177,650	177,650	-	1	-	-	-	-	-	-	-	-	-	-	1	1,482	14,454,287
177,804	177,804	-	-	-	-	-	-	-	-	-	1	-	-	1	1,483	14,717,970
179,700	179,700	-	-	-	-	1	-	-	-	-	-	-	-	1	1,484	14,984,645
181,480	181,480	-	-	-	-	-	-	-	-	-	-	-	-	1	1,485	15,254,143
182,000	182,000	-	-	-	-	-	-	-	-	-	-	-	-	1	1,486	15,524,595
185,410	185,410	-	-	-	-	-	-	1	-	-	-	-	-	1	1,487	15,800,300
189,400	189,400	1	-	-	-	-	-	-	-	-	-	-	-	1	1,488	16,082,127
189,900	189,900	-	-	-	-	-	-	-	-	-	1	-	-	1	1,489	16,364,888
191,020	191,020	-	-	-	-	-	-	-	-	-	-	-	-	1	1,490	16,649,508
196,700	196,700	-	-	-	1	-	-	-	-	-	-	-	-	1	1,491	16,942,787
197,170	197,170	-	-	-	-	-	-	-	-	-	-	-	-	1	1,492	17,236,965
202,300	202,300	-	-	-	-	-	-	1	-	-	-	-	-	1	1,493	17,538,999
203,000	203,000	-	-	-	-	-	-	-	-	-	-	-	-	1	1,494	17,842,281
211,200	211,200	-	-	-	-	-	-	-	-	-	-	-	-	1	1,495	18,158,025
211,870	211,870	-	-	-	-	-	-	1	-	-	-	-	-	1	1,496	18,474,982
217,500	217,500	-	-	1	-	-	-	-	1	-	-	-	-	1	1,497	18,800,580
218,000	218,000	-	-	-	-	-	-	-	-	-	-	-	-	1	1,498	19,127,144
218,100	218,100	-	-	-	-	-	-	1	-	-	-	-	-	1	1,499	19,454,076
221,100	221,100	-	-	-	-	-	-	-	-	-	-	-	-	1	1,500	19,785,726
224,200	224,200	-	-	-	-	-	-	-	1	-	-	-	-	1	1,501	20,122,250
224,500	224,500	-	-	-	-	1	-	-	-	-	-	-	-	1	1,502	20,459,449
225,200	225,200	-	-	-	-	-	-	-	-	-	-	-	-	1	1,503	20,797,925
229,400	229,400	-	-	-	-	-	-	-	-	-	-	-	-	1	1,504	21,142,942
232,400	232,400	-	-	-	-	-	-	-	-	-	-	-	-	1	1,505	21,492,704
232,600	232,600	-	-	-	-	-	-	-	1	-	-	-	-	2	1,507	21,843,232
236,300	236,300	-	-	-	1	-	-	-	-	-	-	-	-	1	1,508	22,199,573
237,090	237,090	-	-	-	-	-	-	-	-	-	-	-	-	1	1,509	22,557,342
237,200	237,200	-	-	-	-	-	-	-	-	-	1	-	-	1	1,510	22,915,514
237,700	237,700	-	-	1	-	-	-	-	1	-	-	-	-	1	1,511	23,274,678
238,500	238,500	-	-	-	-	-	-	-	-	-	-	-	-	1	1,512	23,635,290
240,600	240,600	-	-	-	-	-	-	1	-	-	-	-	-	2	1,514	23,999,559
244,680	244,680	-	-	-	-	-	-	-	-	1	-	-	-	1	1,515	24,370,249
251,200	251,200	-	-	-	-	-	-	-	-	-	-	-	-	1	1,516	24,751,068
258,500	258,500	-	-	-	-	1	-	-	-	-	-	-	-	1	1,517	25,143,213

Liberty Utilities (Black Mountain Sewer) Corp.

Test Year Ended December 31, 2018

Customer Classification

Commercial

Water Usage

Exhibit

Schedule H-5

Page 9

Witness: Bourassa

Usage From.	Usage To.	Month Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total Year	Cumulative Billing	Cumulative Usage (1000's)
261,100	261,100	-	-	-	-	-	-	-	-	-	1	-	-	1	1,518	25,539,562
263,000	263,000	-	-	-	1	-	-	-	-	-	-	-	-	1	1,519	25,939,059
268,700	268,700	-	-	-	-	-	-	-	1	-	-	-	-	1	1,520	26,347,483
270,500	270,500	-	-	1	-	-	-	-	-	-	-	-	-	1	1,521	26,758,914
270,800	270,800	-	-	-	-	1	-	-	-	-	-	-	-	1	1,522	27,171,072
272,500	272,500	-	-	1	-	-	-	-	-	-	-	-	-	1	1,523	27,586,089
274,500	274,500	-	-	-	-	-	-	-	-	1	-	-	-	1	1,524	28,004,427
275,400	275,400	-	-	-	-	-	-	-	-	-	-	-	-	1	1,525	28,424,412
279,200	279,200	-	-	-	1	-	-	-	-	-	-	-	-	1	1,526	28,850,471
280,800	280,800	-	-	-	-	-	-	1	-	-	-	-	-	1	1,527	29,279,253
284,900	284,900	-	1	-	-	-	-	-	-	-	-	-	-	1	1,528	29,714,580
287,500	287,500	-	-	1	-	-	-	-	-	-	-	-	-	1	1,529	30,154,168
288,200	288,200	-	-	-	-	-	-	-	-	-	-	1	-	1	1,530	30,595,114
289,500	289,500	-	-	-	1	-	-	-	-	-	-	-	-	1	1,531	31,038,338
290,000	290,000	-	-	-	-	-	-	-	-	1	-	-	-	1	1,532	31,482,618
294,500	294,500	-	1	-	-	-	-	-	-	-	-	-	-	1	1,533	31,934,087
299,700	299,700	-	-	-	-	-	-	-	-	-	-	1	-	1	1,534	32,393,826
303,800	303,800	-	-	1	-	-	-	-	-	-	-	-	-	1	1,535	32,860,159
307,200	307,200	-	-	-	-	-	-	-	-	-	-	-	1	1	1,536	33,332,019
309,800	309,800	1	-	-	-	-	-	-	-	-	-	-	-	1	1,537	33,808,181
309,900	309,900	-	-	-	-	-	-	-	-	-	-	-	-	1	1,538	34,284,807
310,400	310,400	-	-	-	-	-	-	-	-	1	-	-	-	1	1,539	34,762,513
316,407	316,407	-	-	-	-	-	-	-	-	-	-	1	-	1	1,540	35,249,780
316,801	316,801	-	-	-	-	-	-	-	-	-	-	-	-	1	1,541	35,737,970
321,000	321,000	-	-	-	-	-	1	-	-	-	-	-	-	1	1,542	36,232,952
322,600	322,600	1	-	-	-	-	-	-	-	-	-	-	-	1	1,543	36,730,724
326,000	326,000	-	-	-	-	-	-	-	-	-	-	-	-	1	1,544	37,234,068
337,900	337,900	1	-	-	-	-	-	-	-	-	-	-	-	1	1,545	37,756,123
341,600	341,600	1	-	-	-	-	-	-	-	-	-	-	-	1	1,546	38,284,237
342,000	342,000	-	-	-	-	-	-	-	1	-	-	-	-	1	1,547	38,813,311
346,800	346,800	-	-	-	-	-	-	-	-	1	-	-	-	1	1,548	39,350,157
357,100	357,100	-	-	-	-	-	-	-	1	-	-	-	-	1	1,549	39,903,305
361,300	361,300	-	-	-	-	-	1	-	-	-	-	-	-	1	1,550	40,463,320
367,981	367,981	-	-	-	-	-	-	-	-	-	-	-	-	1	1,551	41,034,059
368,600	368,600	-	-	-	-	1	-	-	-	-	-	-	-	1	1,552	41,606,126
370,200	370,200	-	-	-	-	-	-	-	-	-	1	-	-	1	1,553	42,181,047
379,506	379,506	-	-	-	-	-	-	-	-	-	-	-	-	1	1,554	42,770,799
381,800	381,800	-	-	-	-	-	-	-	-	1	-	-	-	1	1,555	43,364,498
388,000	388,000	-	-	-	-	-	-	-	-	-	-	-	-	1	1,556	43,968,226
392,300	392,300	-	-	-	-	-	-	1	-	-	1	-	-	1	1,557	44,579,037
418,804	418,804	-	-	1	-	-	-	-	-	-	-	-	-	1	1,558	45,231,534
424,328	424,328	-	-	-	1	-	-	-	-	-	-	-	-	1	1,559	45,893,061
438,000	438,000	-	-	-	-	-	-	-	-	1	-	-	-	1	1,560	46,576,341

Liberty Utilities (Black Mountain Sewer) Corp.

Test Year Ended December 31, 2018

Customer Classification

Commercial

Water Usage

Exhibit
Schedule H-5

Page 9

Witness: Bourassa

Usage From	Usage To	Month Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total Year	Cumulative Billing	Cumulative Usage (1000's)
495,136	495,136	-	-	-	-	-	1	-	-	-	-	-	-	1	1,561	47,349,248
503,293	503,293	-	-	-	-	1	-	-	-	-	-	-	-	1	1,562	48,135,392
528,458	528,458	-	-	-	-	-	-	1	-	-	-	-	-	1	1,563	48,961,372
544,840	544,840	1	-	-	-	-	-	-	-	-	-	-	-	1	1,564	49,813,502
566,062	566,062	-	-	-	-	-	-	-	1	-	-	-	-	1	1,565	50,699,389
605,848	605,848	-	-	1	-	-	-	-	-	-	-	-	-	1	1,566	51,648,147
823,000	823,000	-	-	-	1	-	-	-	-	-	-	-	-	1	1,567	52,937,788
839,000	839,000	-	-	-	-	-	-	-	-	-	-	-	-	1	1,568	54,253,340
977,000	977,000	-	-	-	-	-	-	-	-	-	-	-	-	1	1,569	55,786,253
1,021,000	1,021,000	1	-	-	-	-	1	-	-	-	-	-	-	1	1,570	57,389,223
1,030,000	1,030,000	-	-	1	-	-	-	-	-	-	-	-	-	1	1,571	59,007,353
1,063,000	1,063,000	-	-	-	-	1	-	-	-	-	-	-	-	1	1,572	60,678,389
1,187,000	1,187,000	-	-	-	-	-	-	1	-	-	-	-	-	1	1,573	62,545,540
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,573	62,545,540
Totals		133	133	132	132	130	130	129	131	131	131	130	131	1,573		
														34,442		
														5,500		
														131		
															Average Usage	
															Median Usage	
															Average # Customers	

1 SHAPIRO LAW FIRM, P.C.
Jay L. Shapiro (No. 014650)
2 1819 E. Morten Avenue, Suite 280
Phoenix, Arizona 85020
3 Telephone (602) 559-9575
jay@shapslawaz.com

4 LIBERTY UTILITIES
5 Todd C. Wiley (No. 015358)
12725 W. Indian School Road, Suite D-101
6 Avondale, Arizona 85392
Todd.Wiley@LibertyUtilities.com

7 Attorneys for Liberty Utilities (Black Mountain Sewer) Corp.
8

9 **BEFORE THE ARIZONA CORPORATION COMMISSION**

10
11 IN THE MATTER OF THE APPLICATION
12 OF LIBERTY UTILITIES (BLACK
MOUNTAIN SEWER) CORP., AN
13 ARIZONA CORPORATION, FOR A
DETERMINATION OF THE FAIR VALUE
14 OF ITS UTILITY PLANTS AND
PROPERTY AND FOR INCREASES IN ITS
15 RATES AND CHARGES FOR UTILITY
SERVICE BASED THEREON.

DOCKET NO: SW-02361A-19-

16
17
18 **DIRECT TESTIMONY**
19 **OF**
20 **THOMAS J. BOURASSA**

21
22 **COST OF CAPITAL**

23
24 **June 27, 2019**
25
26

TABLE OF CONTENTS

I.	INTRODUCTION AND PURPOSE OF TESTIMONY	1
II.	SUMMARY ON FINDINGS ON COST OF CAPITAL	2
III.	THE LEGAL AND ECONOMIC FOUNDATIONS OF A FAIR AND REASONABLE RATE OF RETURN	4
IV.	THE PUBLICLY TRADED UTILITIES THAT COMPRISE THE SAMPLE GROUP USED TO ESTIMATE THE COST OF EQUITY	15
V.	OVERVIEW OF THE DCF AND RISK PREMIUM METHODS	23
	A. Introduction	23
	B. Explanation of the DCF Model and Its Inputs	25
	C. Explanation of the Risk Premium and Its Inputs	33
VI.	RECOMMENDED RISK PREMIUM FOR LIBERTY BLACK MOUNTAIN	45
VII.	SUMMARY AND CONCLUSIONS	48

1 **I. INTRODUCTION AND PURPOSE OF TESTIMONY.**

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

3 A. My name is Thomas J. Bourassa. My business address is 139 W. Wood Drive,
4 Phoenix, Arizona 85029.

5 **Q. WHAT IS THE PURPOSE OF THIS DIRECT TESTIMONY?**

6 A. In this volume of my direct testimony, I will testify in support of the proposed capital
7 structure and rate of return on Applicant Liberty Utilities (Black Mountain Sewer)
8 Corp.'s ("Liberty Black Mountain" or "Company") fair value rate base ("FVRB").
9 In connection with this testimony I am sponsoring the D Schedules, which are
10 attached to this testimony, along with my cost of capital tables and exhibits discussed
11 herein. In a separate volume of my direct testimony, I have prepared testimony on
12 rate base, income statement, revenue requirement and rate design, along with the A-
13 C, E-F and H schedules for Liberty Black Mountain. Testimony regarding my
14 background and qualifications is contained in that volume of my direct testimony.

15 **Q. HAVE YOU PREPARED ANY TABLES AND EXHIBITS TO ACCOMPANY**
16 **YOUR TESTIMONY ON THE COST OF CAPITAL?**

17 A. Yes. I have prepared 10 tables that support my cost of capital testimony. I also
18 sponsor exhibits **TJB-COC-DT1, TJB-COC-DT2, TJB-COC-DT3, and TJB-**
19 **COC-DT4** that also support this testimony.

20 **Q. PLEASE DESCRIBE HOW THIS VOLUME OF YOUR DIRECT**
21 **TESTIMONY IS ORGANIZED.**

22 A. In Section II, I summarize my findings on cost of capital for Liberty Black Mountain.
23 In Section III, I discuss the legal and economic bases underlying the requirement that
24 rates be just and reasonable. In Section IV, I discuss the sample of six publicly traded
25 water utilities in my sample group and provide a comparison to Liberty Black
26 Mountain. I then discuss recent developments in the water utility industry and the

1 impact on investments. In Section V, I provide an overview of each of the methods
2 (Discounted Cash Flow (“DCF”), and Risk Premium (or “RP”) (including the
3 Capital Asset Pricing Model (“CAPM”)) that I employ in my analysis. In Section
4 VI, I discuss the additional business risks faced by Liberty Black Mountain, my
5 comparative risk study, and my recommended risk premium for Liberty Black
6 Mountain. Finally, in Section VII, I provide a summary of my findings and
7 recommendations for the equity costs of Liberty Black Mountain.

8 **II. SUMMARY OF FINDINGS ON COST OF CAPITAL.**

9 **Q. PLEASE BRIEFLY SUMMARIZE YOUR FINDINGS CONCERNING**
10 **LIBERTY BLACK MOUNTAIN’S COST OF COMMON EQUITY.**

11 A. I have determined that the cost of equity for the publicly traded water utilities falls
12 in the range of 9.0 percent to 10.8 percent with an average of 9.7 percent. After
13 considering differences in financial risk and business risk between Liberty Black
14 Mountain and the publicly traded water utilities, I have determined the cost of equity
15 for Liberty Black Mountain falls in the range of 9.7 percent to 11.60 percent with an
16 average of 10.5 percent. I am recommending the adoption of a minimum ROE of
17 10.5 percent for Liberty Black Mountain.

18 **Q. CAN YOU ALSO SUMMARIZE THE BASIS FOR YOUR RECOMMENDED**
19 **ROE?**

20 A. My recommendation is based on consideration of (i) cost of equity estimates using a
21 market-based DCF and two market-based risk premium methods, (the CAPM is one
22 of the risk premium methods) using a sample group of publicly traded water utilities,
23 (ii) my review of the economic conditions expected to prevail during the period in
24 which new rates will be in effect, (iii) my judgments about the risks associated with
25 relatively small utilities like Liberty Black Mountain that are not captured by the
26 market data of publicly traded water utilities, (iv) the financial risk associated with

1 the level of debt in Liberty Black Mountain's recommended capital structure, and
2 (v) additional, specific business and operational risks faced by Liberty Black
3 Mountain. The results of the market-based DCF and risk premium methodologies
4 were adjusted upward by 80 basis points to account for Liberty Black Mountain's
5 higher than average business risk compared to the proxy group.

6 **Q. WHAT IS THE RECOMMENDED CAPITAL STRUCTURE FOR LIBERTY**
7 **BLACK MOUNTAIN FOR RATE MAKING PURPOSES?**

8 A. I am using a capital structure consisting of 46 percent debt and 54 percent equity for
9 setting base rates in the instant case. In the Company's 2015 rate case, the
10 Commission authorized a capital structure of 70 percent equity and 30 percent debt.
11 However, the Company intends to file a financing application for approval of
12 additional debt in order to maintain a capital structure of 46 percent debt and
13 54 percent equity.

14 **Q. WHY A 46 PERCENT DEBT AND 54 PERCENT EQUITY CAPITAL**
15 **STRUCTURE?**

16 A. In a recent rate case for Liberty Utilities (Litchfield Park Water and Sewer), Corp.,
17 Liberty Utilities informally agreed with the parties to that case to file the next Liberty
18 Utilities rate case in Arizona using a capital structure of 46 percent debt and
19 54 percent equity. I do not generally advise regulated utilities to agree in advance to
20 a specific capital structure because it ignores too many factors like the cost of debt
21 and other market conditions, but I also understand how utilities in Arizona have
22 grown weary of criticism that they are not using enough debt. Liberty Black
23 Mountain has to balance all of these factors and made a business decision to use this
24 capital structure for this rate case.

25 **Q. WHAT IS THE COMPANY'S PROPOSED WEIGHTED COST OF DEBT?**

26 A. 3.56 percent. For borrowing up to \$3.4 million per Decision No. 75510 (April 22,

1 2016) the cost of debt is the current 10-year U.S. Treasury yield (for 2021) of
2 2.06 percent plus 130 basis points. For borrowing above \$3.4 million the cost of
3 debt is based upon a 15-year U.S. Treasury plus 160 basis points as will be proposed
4 in the Company's financing application. The actual interest rate may be higher or
5 lower depending on the prevailing U.S. Treasury yields at the time the debt is issued.

6 **Q. PLEASE SUMMARIZE THE APPROACH YOU USED TO ESTIMATE THE**
7 **COST OF EQUITY FOR THE COMPANY.**

8 A. The cost of equity for Liberty Black Mountain cannot be estimated directly because
9 the Company's equity is not in the form of a publicly traded security so there is no
10 market data for Liberty Black Mountain. Consequently, I have assessed the market-
11 based common equity cost rates of companies of similar, but not necessarily identical
12 risk, for insight into a recommended common equity cost rate applicable to Liberty
13 Black Mountain. Analysis of a proxy group serves as a starting point because no
14 proxy group can be selected to be identical in risk to Liberty Black Mountain.
15 Therefore, the proxy group's results must be adjusted to reflect the unique, relative
16 financial and/or business risks of Liberty Black Mountain, as I will discuss in detail.
17 I have also assessed the book-based equity returns on companies with comparable
18 risk using a set of comparable risk factors.

19 **III. THE LEGAL AND ECONOMIC FOUNDATIONS OF A FAIR AND**
20 **REASONABLE RATE OF RETURN.**

21 **Q. HAVE THE COURTS SET FORTH ANY CRITERIA THAT GOVERN THE**
22 **RATE OF RETURN THAT A UTILITY'S RATES SHOULD PRODUCE?**

23 A. Yes. In 1923, the U.S. Supreme Court set forth the following criteria for determining
24 whether a rate of return is reasonable in *Bluefield Water Works and Improvement*
25 *Co. v. Public Service Commission of West Virginia*, 262 U.S. 679, 692-93 (1923):
26

1 A public utility is entitled to such rates as will permit it to earn
2 a return on the value of the property which it employs for the
3 convenience of the public equal to that generally being made
4 at the same time and in the same general part of the country on
5 investments in other business undertakings which are attended
6 by corresponding risks and uncertainties ... The return should
7 be reasonably sufficient to assure confidence in the financial
8 soundness of the utility, and should be adequate, under
9 efficient and economical management, to maintain and support
10 its credit and enable it to raise the money necessary for the
11 proper discharge of its public duties. A rate of return may be
12 reasonable at one time and become too high or too low by
13 changes affecting opportunities for investment, the money
14 market, and business conditions generally.

15
16 Then, in *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944),
17 the U.S. Supreme Court stated the following regarding the return to owners of an
18 entity:

19 [T]he return to the equity owner should be commensurate with
20 returns on investments in other enterprises having
21 corresponding risks. That return, moreover, should be
22 sufficient to assure confidence in the financial integrity of the
23 enterprise, so as to maintain its credit and to attract capital.
24 320 U.S. at 603.

25 In summary, under *Hope* and *Bluefield* the rate of return should be: (1) similar to the
26 return in businesses with similar or comparable risks; (2) sufficient to ensure the
confidence in the financial integrity of the utility; and (3) sufficient to maintain and
support the utility's credit.

From the *Hope* and *Bluefield* decisions, two standards emerge: a Capital
Attraction standard and a Comparable Earnings standard. The Capital Attraction
standard focuses on investor's required returns, which are derived from market-
based methods such as the DCF and risk premium.¹ The Comparable Earnings
standard focuses on earned returns on book equity based on an interpretation of the

¹ Morin, Roger A., *New Regulatory Finance* (Vienna, Virginia, Public Utility Reports, Inc. 2006) ("Morin"),
p. 381.

1 *Hope* decision that returns are defined as book rates of return on equity.²

2 **Q. HAVE THESE CRITERIA BEEN APPLIED IN REGULATORY**
3 **PROCEEDINGS?**

4 A. Yes, but the application of the “reasonableness” criteria laid down by the Supreme
5 Court has resulted in controversy. The typical method of computing the overall cost
6 of capital is quite straightforward; it is the composite, weighted cost of the various
7 classes of capital (debt, preferred stock, and common equity) used by the utility.
8 Calculating the proportion that each class of capital bears to total capital does the
9 weighting. However, there is no consensus regarding the best method of estimating
10 the cost of equity capital. The increasing regulatory use of market-based finance
11 models in equity return determinations has not, at least to date, led to a universally
12 accepted means of estimating the ROE. In addition, the market-based results are too
13 often applied to a book-value investment base, which, as I will discuss later in my
14 testimony, understates the return expected by investors who invest in actual markets
15 based on market values.

16 With respect to the Capital Attraction standard, the cost of capital is based on
17 the concept of opportunity cost, i.e., the prospective return to investors must be
18 comparable to investments of similar risk. If a utility’s return is less than the returns
19 on investments with similar risk, investors can and will invest elsewhere. As
20 explained by Dr. Roger Morin in his book, *New Regulatory Finance*:

21 The concept of cost of capital is firmly anchored in the
22 opportunity cost notion of economics. The cost of a specific
23 source of capital is basically determined by the riskiness of that
24 investment in light of alternative opportunities and equals
25 investor’s current opportunity cost of investing in the securities
 of that utility. A rational investor is maximizing the
 performance of his or her portfolio only if returns expected on

26 ² *Id.*

1 investor investments of comparable risk are the same. If not,
2 the investor will switch out of those investments yielding low
3 returns at a given risk level in favor of those investments
4 offering higher returns for the same degree of risk. This implies
5 that a utility will be unable to attract capital unless it can offer
returns to capital suppliers comparable to those achieved on
alternate competing investments of similar risk.³

6 The *Bluefield* decision suggests that opportunity cost is an appropriate measure of
7 the actual cost of common equity for a utility. This necessarily involves the direct
8 observation of returns on equity actually earned by firms with comparable risk to
9 ensure that the authorized rate of return is equivalent to the returns those firms are
10 earning.

11 **Q. HOW IS THE COST OF EQUITY TYPICALLY ANALYZED FROM A**
12 **CAPITAL ATTRACTION OR MARKET-BASED PERSPECTIVE?**

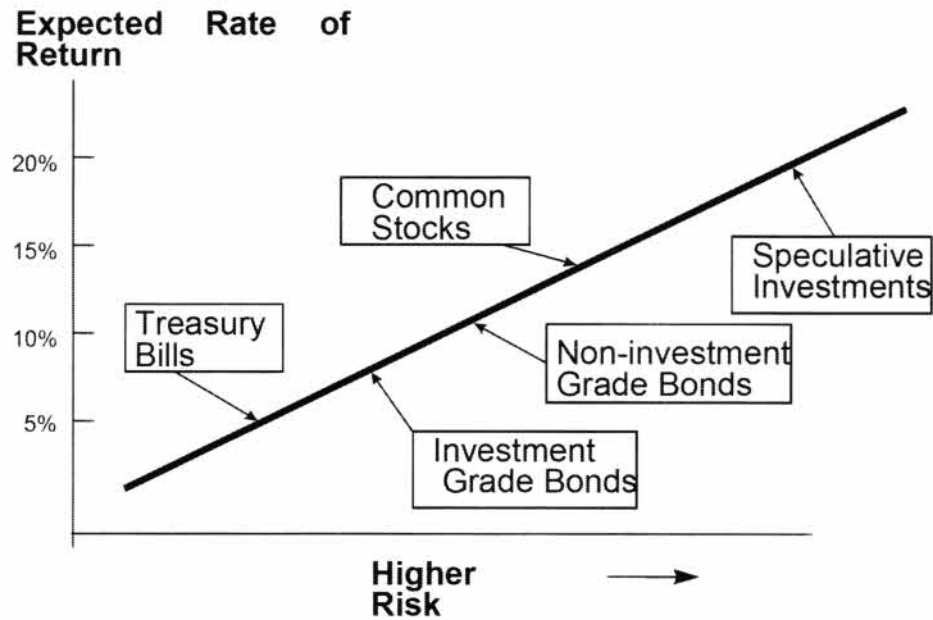
13 A. The cost of equity is the rate of return that equity investors expect to receive on their
14 investment. Investors can choose from numerous investment options, not simply
15 publicly traded stocks. Investments have varying degrees of risk, ranging from
16 relatively low risk assets such as Treasury securities to somewhat higher risk
17 corporate bonds to even higher risk common stocks. As the level of risk increases,
18 investors require higher returns on their investment. Finance models used to estimate
19 the cost of equity often rely on this basic concept.

20 **Q. CAN YOU ILLUSTRATE THE CAPITAL MARKET RISK-RETURN**
21 **CONCEPT?**

22 A. Yes. The following graph depicts the risk-return relationship that has become widely
23 known as the Capital Market Line (“CML”). The CML illustrates in a general way
24 the risk-return relationship.

25
26 ³ Morin, pp. 21-22.

The Capital Market Line (CML)



The CML can be viewed as a continuum of the available investment opportunities for investors. Investment risk increases move upward and to the right along the CML. Again, the return required by investors increases with the risk.

Q. HOW DOES THE RISK-RETURN TRADE OFF CONCEPT WORK IN THE CAPITAL MARKET?

- A. As shown by the CML, the allocation of capital in a free market economy is based upon the relative risk of, and expected return from, an investment. In general, investors rank investment opportunities in the order of their relative risks. Investment alternatives in which the expected return is commensurate with the perceived risk become viable investment options. If all other factors remain equal, the greater the risk, the higher the rate of return investors will require to compensate

1 them for the possibility of loss of either the principal amount invested or the expected
2 annual income from such investment.

3 Short-term Treasury bills provide a high degree of certainty and in nominal
4 terms (after considering inflation) are considered virtually risk free. Long-term
5 bonds and preferred stocks, having priority claims to assets and fixed income
6 payments, are relatively low risk, but are not risk free. The market values of long-
7 term bonds often fluctuate when government policies or other factors cause interest
8 rates to change. Common stocks are higher and to the right on the CML continuum,
9 because they have greater investment risk. Common stock risk is impacted by the
10 nature of the underlying business and the financial strength of the issuing corporation
11 and market-wide factors, such as general changes in capital costs.

12 The capital markets reflect investor expectations and requirements each day
13 through market prices. Prices for stocks and bonds change to reflect investor
14 expectations and the attractiveness of one investment relative to others. While the
15 example provided above seems straightforward, returns on common stocks are not
16 directly observable in advance as compared to debt or preferred stocks with fixed
17 payment terms. This means that these returns must be estimated from market data.
18 Estimating the cost of equity capital should be a matter of informed judgment about
19 the relative risk of the entity in question and the expected rate of return characteristics
20 of other alternative investments.

21 **Q. HOW IS THE COST OF EQUITY TO BE DETERMINED FOR A**
22 **PARTICULAR COMPANY?**

23 A. Estimating an entity's cost of equity is complex. It requires an analysis of the factors
24 influencing the cost of various types of capital, such as interest on long-term debt,
25 dividends on preferred stock, and earnings on common equity. The data for such an
26 analysis comes from highly competitive capital markets, where the firm raises funds

1 by issuing common stock, selling bonds, and by borrowing (both long-term and
2 short-term) from banks and other financial institutions. In the capital markets, the
3 cost of capital, whether the capital is in the form of debt or equity, is determined by
4 two important factors:

- 5 1) The pure or real rate of interest, often called the risk-free rate of
6 interest, and,
- 7 2) The uncertainty or risk premium (or the compensation the investor
8 requires, over and above the real or pure rate of interest for subjecting
his or her capital to additional risk).

9 **Q. PLEASE DISCUSS THESE FACTORS IN GREATER DETAIL.**

10 A. The pure rate of interest essentially reflects both the time preference for and the
11 productivity of capital. From the standpoint of the individual, it is the rate of interest
12 required to induce the individual to forgo present consumption and offer the funds,
13 thus saved, to others for a specified length of time. Moreover, the pure rate of interest
14 concept is based on the assumption that no uncertainty affects the investment
15 undertaken by the individual, i.e., there is no doubt that the periodic interest
16 payments will be made and the principal returned at the end of the time period. In
17 reality, investments without any risk do not exist. Every commitment of funds
18 involves some degree of uncertainty.

19 Turning to the second factor affecting the cost of capital, it is generally
20 accepted that the higher the degree of uncertainty, the higher the cost of capital.
21 Investors are regarded as risk averse and require that the rate of return increase as
22 the risks and uncertainty associated with an investment increases.

23 **Q. CAN YOU PROVIDE SOME PERSPECTIVE ON YOUR PREVIOUS**
24 **DISCUSSION WITH RESPECT TO RETURNS ON COMMON STOCKS?**

25 A. Yes. Conceptually, the required return on common stocks can be quantified by the
26 following equation:

1 [1] Required Return for Common Stocks = Return on a risk-free asset + Risk Premium
2

3 The risk premium investors require for common stocks will be higher than the risk
4 premium they require for investment grade bonds. This relationship is depicted in
5 the graph of the CML above. As I will discuss later in this testimony, this concept
6 is the basis of risk premium methods, such as the CAPM, that are used to estimate
7 the cost of equity.

8 **Q. PLEASE DISCUSS IN MORE DETAIL THE IMPACT OF RISK ON**
9 **CAPITAL COSTS.**

10 A. With reference to specific utilities, risk is often discussed as consisting of two
11 separate types of risk: business risk and financial risk.

12 Business risk, the basic risk associated with any business undertaking, is the
13 uncertainty associated with the enterprise's day-to-day operations. In essence, it is
14 a function of the normal day-to-day business environment, both locally and
15 nationally. Business risks include the condition of the economy and capital markets,
16 the state of labor markets, regional stability, government regulation, technological
17 obsolescence, and other similar factors that may impact demand for the business'
18 products or services and its cost of production.

19 Financial risk, on the other hand, concerns the distribution of business risk to
20 the various capital investors in the utility. Permanent capital is normally divided into
21 three categories: long-term debt, preferred stock, and common equity. Because
22 common equity owners have only a residual claim on earnings after debt and
23 preferred stockholders are paid, financial risk tends to be concentrated in that
24 element of the firm's capital. Thus, a decision by management to raise additional
25 capital by issuing additional debt concentrates even more of the financial risk of the
26 utility on the common equity owners.

1 **Q. WHAT ARE THE DETERMINANTS OF THE RISK FREE RATE IN**
2 **EQUATION [1]?**

3 A. The risk-free rate can be disaggregated into a “real” rate of interest and an inflation
4 premium (expected future inflation).

5 **Q. WHAT ARE THE DETERMINANTS OF THE REQUIRED RISK PREMIUM**
6 **FROM EQUATION [1] ABOVE?**

7 A. The risk premium can be disaggregated into five general components: (1) Interest
8 Rate Risk; (2) Business Risk; (3) Regulatory Risk; (4) Financial Risk; and
9 (5) Liquidity Risk.

10 Interest Rate Risk refers to the variability in return caused by subsequent
11 changes in interest rates and stems from the inverse relationship between interest
12 rates and asset prices. For example, bond prices fall when interest rates rise and vice
13 versa.

14 Business risk is generally defined above. For utilities, business risk also
15 includes the volatility of revenues due to abnormal weather conditions and the degree
16 of operational leverage.

17 Regulatory risk refers to the quality and consistency of regulation applied to
18 a given regulated utility. Regulatory jurisdictions are evaluated on the basis of three
19 major factors: (1) earnable return on equity, (2) regulatory quality, and (3) regulatory
20 practices. Collectively, these three factors influence a utility’s ability to earn its
21 authorized return. The type of test year employed (historical or future), capital
22 structure and rate base issues, and the length of regulatory lag are among the reasons
23 a utility may or may not have a reasonable opportunity to earn its authorized return.

24 Financial risk is defined immediately above.

25 Construction risk is an important component of financial risk. Construction
26 risk is the risk of tying capital up in projects that are not earning returns, or not having

1 sufficient capital to build the assets needed to keep generating returns. If an entity
2 has a large construction budget relative to internally generated cash flows, it will
3 require external financing, which will result in greater financial risk. It is essential
4 that such entities have access to capital funds on reasonable terms and conditions.
5 Utilities are more susceptible to construction risk for two reasons. First, water and
6 wastewater utilities generally have high capital requirements to build plant to serve
7 customers. Second, utilities have a mandated obligation to serve, leaving less
8 flexibility both in the timing and discretion of scheduling capital projects. This is
9 compounded by the limited ability to wait for more favorable market conditions to
10 raise the capital necessary to fund the capital projects, and then the lag between when
11 plant can be built and when rates can be approved to provide returns on and of that
12 capital. It is imperative that the utility maintain access to needed capital on
13 reasonable terms and conditions. The return allowed on common equity will have a
14 critical role in determining those terms and conditions.

15 Finally, Liquidity Risk refers to the ability to readily convert an investment
16 into cash without sustaining a loss. Capital market theory generally assumes that
17 investments are liquid and observations about risk and return are drawn from
18 information about liquid investments. Non-publicly traded or privately-held
19 investments possess little liquidity.

20 **Q. IS INVESTMENT RISK IMPACTED BY COMPANY SIZE?**

21 A. Yes. Investment risk bears a direct relationship to size and increases as entity size
22 decreases. Investment liquidity may be a significant factor explaining this
23 relationship. However, the illiquidity of smaller stocks does not capture the size
24 effect completely. Size may be a proxy for one or more true unknown factors
25 correlated with size.⁴

26 ⁴ Rolf W. Banz, "The Relationship between Return and Market Value of Common Stocks," *Journal of*

1 **Q. HOW IS THE COST OF EQUITY TYPICALLY ANALYZED FROM A**
2 **COMPARABLE EARNINGS OR BOOK EQUITY RETURN-BASED**
3 **PERSPECTIVE?**

4 A. The cost of equity is the rate of return derived from the book returns of comparable
5 firms. To implement the approach, a group of companies of comparable risk to the
6 subject utility is selected and the book equity return is computed for each company.
7 The allowed return for the subject utility is set equal to the average return on book
8 value equity.⁵ The rationale for this method rests on the premise that regulation is a
9 surrogate for competition and that the profitability of non-regulated firms is set by
10 the free forces of competition.⁶ Typically, the group of companies is made up of
11 non-regulated firms because the book equity returns of regulated firms is not
12 determined by competitive forces but rather the past decisions of regulators.⁷

13 **Q. HAVE YOU CONDUCTED A COMPARABLE EARNINGS ANALYSIS?**

14 A. Yes, but I do not include my Comparable Earnings ("CE") analysis in my cost of
15 equity estimation at this time. Instead, I use it as a check on the reasonableness of
16 my recommendations. My CE analysis of comparable risk firms results in an
17 indicated cost of equity of 16.23 percent. By comparison, my recommended cost of
18 equity is 10.50 percent and well below comparable risk non-regulated firms. I have
19 attached my CE analysis as **Exhibit TJB-COC-DT2**.

20
21
22
23
24

Financial Economics, March 1981, pp. 3-18.

25 ⁵ Morin, p. 381.

26 ⁶ *Id.*

⁷ Morin. P. 383.

1 **IV. THE PUBLICLY TRADED UTILITIES THAT COMPRISE THE SAMPLE**
2 **GROUP USED TO ESTIMATE THE COST OF EQUITY.**

3 **Q. WHY IS A PROXY GROUP USED FOR COMPARISON IN A COST OF**
4 **CAPITAL ANALYSIS?**

5 A. First, a fair rate of return for a specific utility is the return required by investors to
6 hold assets with corresponding levels of risk. Market data for a sample of
7 comparable companies provides insight into the investors' required return, and such
8 data comports with the guidance from the U.S. Supreme Court's decisions in
9 *Bluefield* and *Hope*, which I discussed earlier. The comparable earnings standard set
10 forth in the *Hope* and *Bluefield* decisions requires that the rate of return afforded to
11 utilities be similar to the return for businesses with similar or comparable risks. It
12 follows that a proxy group of companies with comparable risk is a reasonable starting
13 point in a cost of capital analysis. Second, since Liberty Black Mountain is not
14 publicly traded, there is no market information to determine the cost of equity. This
15 necessitates the selection and use of a proxy group.

16 **Q. WHICH COMPANIES COMPRISE YOUR PROXY GROUP?**

17 A. There are six water utilities in my sample: American States Water ("AWR"),
18 American Water Works ("AWK"), Aqua America ("WTR"), California Water
19 Company ("CWT"), Middlesex Water ("MSEX"), and York Water Company
20 ("YORW"). For the methods employed in my analysis, I used data on these sample
21 entities from a sample of publicly traded water utilities, or proxy group, selected
22 from the *Value Line Investment Survey* as a starting point.

23 The six water companies comprising the proxy group were selected by
24 meeting the following criteria: (1) they are followed by the *Value Line Investment*
25 *Survey*; (2) they have at least ten years of historical financial and market information;
26 (3) they have a *Value Line* adjusted beta; (4) they have not cut or omitted their

1 common dividends during the five years ending 2017 or through the time of the
2 preparation of this testimony; (5) they have operating revenues primarily from
3 regulated operations; and (6) at the time of the preparation of this testimony, they
4 had not publicly announced that they were involved in any major merger or
5 acquisition activity. I excluded Connecticut Water ("CTWS") and San Jose Water
6 ("SJW") from my proxy group after they recently announced a merger.

7 **Q. BUT THE WATER UTILITIES IN YOUR SAMPLE ARE NOT DIRECTLY**
8 **COMPARABLE TO LIBERTY BLACK MOUNTAIN?**

9 A. That is correct. However, they are utilities for which market data is available. All of
10 them primarily provide water service (although some provide both water and
11 wastewater services), and their primary source of revenues is from regulated
12 services. They are also commonly used in regulatory proceedings where sample
13 companies are selected to measure the cost of equity. Therefore, they provide a
14 useful *starting point* for developing the cost of equity for Liberty Black Mountain
15 while recognizing that the proxies are not perfectly comparable.

16 **Q. THANK YOU, MR. BOURASSA. DO YOU HAVE A GENERAL**
17 **DESCRIPTION OF THE SIX WATER UTILITIES IN YOUR PROXY**
18 **GROUP?**

19 A. Yes. Table 2 lists the percentages of regulated revenues, operating revenues, net
20 plant, the number of customers or population served, *Value Line* Financial strength,
21 *Value Line* betas, market capitalization, and market size category for the six water
22 utilities. Comparative data for Liberty Black Mountain (where available) is also
23 shown in Table 2. The water utilities in the proxy group consist of Micro-Cap to
24 Large-Cap companies. Four of the six companies are Low-Cap or larger.⁸ The

25 ⁸ Based upon 2018 market data from the Center for Research in Security Prices: Micro-Cap companies are
26 Decile 9-10 with market capitalization less than \$657 million; Low-Cap companies are Decile 6-8 with
market capitalization over \$657 million but less than \$2,760 million; Mid-Cap companies are Decile 3-5

1 market capitalizations range for about \$400 million to over \$14.6 billion with an
2 average of approximately \$4.2 billion. Operating revenues range from about
3 \$49 million to over \$3.3 billion with an average of over \$901 million. Net plant
4 ranges from \$289 million to nearly \$15 billion, with an average of nearly \$4 billion.
5 Most of the companies operate in multiple jurisdictions.

6 **Q. HOW DOES LIBERTY BLACK MOUNTAIN ACTUALLY COMPARE TO**
7 **THE UTILITIES IN YOUR PROXY GROUP?**

8 A. On average, the utilities in the proxy group are much larger and, according to the
9 empirical financial data, they are less risky than Liberty Black Mountain. Liberty
10 Black Mountain is much smaller with fewer customers and has far less revenues, far
11 less net plant and a relatively small and limited service territory. At the end of the
12 test year, Liberty Black Mountain had approximately 2,210 wastewater connections
13 as compared to the average of the proxy group of 876,000 connections per company.
14 Liberty Black Mountain's revenues totaled approximately \$2.5 million, and net
15 plant-in-service (as proposed) is approximately \$12.9 million. The average revenues
16 of my sample companies is nearly 375 times greater than Liberty Black Mountain,
17 and those entities have on average nearly 360 times the net plant of Liberty Black
18 Mountain.

19 **Q. DO RECENT DEVELOPMENTS IN THE WATER AND WASTEWATER**
20 **UTILITY INDUSTRY IMPACT INVESTMENTS?**

21 A. Yes. On the whole, the water and wastewater utility industry continues to confront
22 an increasing need for infrastructure upgrades and replacement. *Value Line*
23 *Investment Survey* (April 12, 2019) notes that following years of neglect, water
24 utilities are spending heavily to upgrade infrastructure. More recently, some public

25 _____
26 companies with market capitalization of over \$2,760 million but less than \$11,979 million; and Large-Cap
companies are Decile 1 -2 companies and have market capitalization of over \$11,979 million.

1 utility commissions have recognized the need to incentivize investment to meet these
2 infrastructure demands and *Value Line* notes that rates have increased on average by
3 almost 50 percent since 2010.

4 However, *Value Line Investment Survey* (April 12, 2019) also cautions that
5 water utility stocks may not be as safe as they have been in the past. This is because
6 water stocks have seen their stock prices rise to near all-time highs even though the
7 dividend yields for water utility stocks are now only about equal to the *Value Line*
8 median. Rising interest rates would make bonds more attractive to the income-
9 oriented investors. Finally, *Value Line* notes that investors should be aware that
10 these water utility stocks may carry more risk than the beta co-efficient and safety
11 rankings would indicate.

12 **Q. WHAT OTHER RISK FACTORS DISTINGUISH LIBERTY BLACK**
13 **MOUNTAIN FROM THE LARGER WATER UTILITIES IN YOUR PROXY**
14 **GROUP?**

15 A. First, water and wastewater utilities are capital intensive and typically have large
16 construction budgets. Firms with large construction budgets face greater
17 construction risk, a form of financial risk as I discussed earlier. The size of a utility's
18 capital budget relative to the size of the utility itself often increases construction risk.
19 Large utilities are better able to fund their capital budgets from their earnings, cash
20 flows, and short-term borrowings. For smaller utilities, the ability to fund their
21 capital budgets from earnings, cash flows, and short-term debt is difficult, if not
22 impossible, and must rely on additional outside capital.

23 Second, smaller companies are simply less able to cope with significant
24 events that affect sales, revenues and earnings. For example, the loss of revenues
25 from a few larger customers or from trends in the reduction of usage by customers
26 through conservation or the makeup of the customer base would have a greater effect

1 on a small entity than on a much larger entity with a larger customer base.

2 Third, there are a number of other factors, including the differences in
3 regulatory environments, differences in the type of test year used for rate making,
4 and differences in the available regulatory mechanisms for recovery of costs outside
5 of a rate case. The large water utilities in my proxy group are generally not subject
6 to the adverse impacts of an unfavorable regulatory environment of one jurisdiction.

7 In summary, there are several factors that impact the ability of a smaller utility
8 to actually earn its authorized return. An inadequate opportunity to earn the revenues
9 authorized in a general rate case leads to a greater variability of earnings for entities
10 like Liberty Black Mountain when compared to the proxy group. This volatility
11 means greater risk, and the greater risk requires higher returns to maintain and
12 support the utility's credit.

13 **Q. ARE THERE QUANTITATIVE MEASURES THAT CAN BE USED TO**
14 **HELP IDENTIFY DIFFERENCES IN BUSINESS RISK?**

15 A. Yes, there are a number of fundamental accounting-based business risk measures
16 that can be used to assess the relative differences between firms. Those include:
17 (1) the co-efficient of variance of ROE; (2) the co-efficient of variance of operating
18 income; (3) the co-efficient of variance of operating margin; and (4) Operating
19 Leverage. The first three reflect the distributions of earnings. These are meaningful
20 when measured against the distribution of earnings of alternative investments, like
21 the water utilities in my proxy group. The fourth business risk measure reflects the
22 impact of sales fluctuations and the impact of fixed operating costs on earnings.

23 The co-efficient of variance of ROE can be quantified using the following
24 equation:

25 [2] Co-efficient of Variance of ROE = Standard Deviation of ROE/Mean of
26 ROE

1 The co-efficient of variance of operating income can be quantified using a
2 relatively simple equation:

3 [3] Co-efficient of Variance of Operating Income = Standard Deviation of
4 Operating Income/Mean of Operating Income

5 The co-efficient of variance of operating margin can be quantified using the
6 following equation:

7 [4] Co-efficient of Variance of Operating Margin = Standard Deviation of
8 Operating Margin/Mean of Operating Margin

9 And, the Operating Leverage formula is expressed as:

10 [5] Operating Leverage = Percentage Change in Operating
11 Income/Percentage Change in Sales

12 Using the business risk measures expressed in equations [2], [3], and [4], the
13 greater the co-efficient of variation or Operating Leverage, the greater the risk to
14 investors of not receiving expected returns.⁹ Below are the computed co-efficient of
15 variation for ROE, Operating Income, and Operating Margin, as well as Operating
16 Leverage using the five most recent years of historical data for the water proxy group
17 and Liberty Black Mountain:

18
19
20
21
22
23
24
25
26 ⁹ Tuller, Lawrence W., *The Small Business Valuation* (Avon, MA: Adams Media Corporation, 1994), p. 89.

<u>Company</u>	<u>Business Risk Co-efficient of variance of ROE</u>	<u>Business Risk Co-efficient of variance of Operating Income</u>	<u>Business Risk Co-efficient of variance of Operating Margin</u>	<u>Operating Leverage</u>
Water Proxy Group	0.0941	0.0850	0.0646	4.34
Liberty Black Mountain	0.5654	0.4694	0.4682	30.74
Relative Risk of Liberty Black Mountain to Water Proxy Group	6.01	5.53	7.25	7.08

These metrics show that Liberty Black Mountain is 5 to 7 times more risky than the average water proxy group companies.

Q. CAN METRICS LIKE AN ENTITY'S CO-EFFICIENT OF VARIATION IN ROE, CO-EFFICIENT OF VARIATION IN OPERATING INCOME, AND OPERATING MARGIN BE USED ALONG WITH MARKET DATA TO DEVELOP COMPANY SPECIFIC RISK PREMIUMS?

A. Yes. *Duff & Phelps* publishes comparative risk characteristics using market data that provides a nexus between a market beta and the metrics operating margin, the coefficient of variation in operating margin, and the coefficient of variation in return on equity.¹⁰ This information can be used to develop implied betas for Liberty Black Mountain for use in the CAPM. By comparing the results of the CAPM for the water proxy group with the CAPM for Liberty Black Mountain using the implied betas, informed risk premiums can be developed. As one would expect, the implied beta for Liberty Black Mountain is higher than the beta of the proxy group. A risk

¹⁰ Duff & Phelps, LLC. *2017 Valuation Handbook; Guide to Cost of Capital*. Hoboken, NJ: John Wiley and Sons, 2017 ("Duff & Phelps"). See also Online at www.dpcostofcapital.com: Duff & Phelps Cost of Capital Navigator platform ("Duff & Phelps Cost of Capital Navigator") and the *Duff & Phelps 2018 Valuation Handbook – U.S. Guide to Cost of Capital* ("Duff & Phelps 2018 Valuation Handbook").

1 premium of 100 to 140 basis points over the cost of equity of the proxy group is
2 indicated for Liberty Black Mountain.¹¹ I will discuss the indicated risk premiums
3 and implied betas in more detail in the risk premium section of this direct testimony.

4 **Q. WHAT ABOUT LIQUIDITY RISK?**

5 A. A rational investor would not regard an investment in Liberty Black Mountain as
6 having the same level of risk as WTR or even the smaller MSEX because of the
7 previously mentioned small size characteristics of Liberty Black Mountain and the
8 fact that an investment in Liberty Black Mountain is relatively illiquid compared to
9 the publicly traded water utilities. An investor in a publicly traded stock can sell
10 stock in a very short period of time if dissatisfied with the returns. An investor in a
11 privately held stock does not have this ability to sell quickly. Consequently,
12 investors will require a greater risk premium, often called liquidity risk premium.
13 As a consequence of these differences in risk, the results produced by the DCF and
14 risk premium methodologies, utilizing data for the sample utilities, often understate
15 the appropriate ROE for a small, regulated water utility such as Liberty Black
16 Mountain.

17 **Q. IS THERE A RELATIONSHIP BETWEEN A UTILITY'S CAPITAL**
18 **STRUCTURE AND ITS COST OF CAPITAL?**

19 A. Yes. Generally speaking, when an entity engages in debt financing, it exposes itself
20 to greater risk. As debt grows relative to the total capital structure, the risk increases
21 in a geometric fashion as compared to the linear percentage increase in the debt ratio
22 itself. This risk is illustrated by considering the effect of leverage on net earnings.
23 For example, as leverage increases, the equity ratio falls creating two adverse effects.
24 First, equity earnings decline rapidly and may even disappear. Second, the "cushion"

25
26 ¹¹ 100 to 140 basis points as indicated in **Exhibit TJB-COC-DT4**.

1 of equity protection for debt falls. A decline in the protection afforded debt holders,
2 or the possibility of a serious decline in debt protection, will act to increase the cost
3 of debt financing. Therefore, one may conclude that each new financing, whether
4 through debt or equity, impacts the marginal cost of future financing by any
5 alternative method.

6 For an entity already perceived as being over-leveraged, this additional
7 borrowing would cause the marginal costs of both equity and debt to increase.
8 On the other hand, if the same entity instead successfully employed equity funding,
9 this could actually reduce the real marginal cost of additional borrowing, even if the
10 particular equity issuance occurred at a higher unit cost than an equivalent amount
11 of debt.

12 **Q. HOW DO THE CAPITAL STRUCTURES OF THE SAMPLE WATER**
13 **UTILITIES COMPARE TO THE CAPITAL STRUCTURE FOR LIBERTY**
14 **BLACK MOUNTAIN?**

15 A. Table 3 shows Liberty Black Mountain's proposed capital structure contains
16 54 percent equity and 46 percent debt, compared to the average of the water utility
17 sample of approximately 53 percent equity and 47 percent debt. Because the capital
18 structures are similar, it would be inappropriate to make a financial risk adjustment
19 to the cost of equity.

20 **V. OVERVIEW OF THE DCF AND RISK PREMIUM METHODS.**

21 **A. Introduction.**

22 **Q. PLEASE EXPLAIN THE GENERAL APPROACHES TO ESTIMATING**
23 **THE COST OF CAPITAL.**

24 A. There are two broad approaches:

- 25 1) identify comparable-risk sample companies and estimate the cost of
26 capital directly, or

- 1 2) find the location on the CML and estimate the relative risk of the
2 entity, which jointly determines the cost of capital.

3 The DCF method falls into the first approach. It is a direct method, but uses only a
4 subset of the total capital market evidence. The DCF rests on the premise that the
5 fundamental value of an asset (i.e., its stock) is its ability to generate future cash
6 flows to the owner of that asset. The DCF is simply the sum of a stock's expected
7 dividend yield and the expected long-term growth rate. Dividend yields are readily
8 available, but long-term growth estimates are not. I will explain the DCF in greater
9 detail later.

10 The risk premium methods fall into the second approach. An equity risk
11 premium is established by determining the relationship between the cost of equity
12 and an interest rate over time. The CAPM method falls into the category of risk
13 premium methods. To implement, it is generally assumed that the past correlation
14 will continue on into the future. The risk premium generally uses a small subset of
15 the capital market evidence, whereas the CAPM uses information on all securities,
16 rather than a small subset. I will explain the risk premium methods in more detail
17 later. For now, the risk premium methods reflect a risk-return relationship, often
18 depicted graphically as the CML.

19 Each of these methods measures investor expectations. In the final analysis,
20 ROE estimates are subjective and should be based on sound, informed judgment and
21 supported by competent evidence. I have applied one version of the DCF and three
22 versions of the RP methods (including the CAPM). I believe these methods provide
23 the foundation for evaluating the fair cost of equity capital for the publicly traded
24 water utilities in my proxy group. I then add a risk premium to the results of these
25 models for the proxy group to account for the differences in risk (business,
26 regulatory, liquidity, size) between the proxy group and Liberty Black Mountain.

B. Explanation of the DCF Model and Its Inputs.

Q. PLEASE EXPLAIN THE DCF METHOD OF ESTIMATING THE COST OF EQUITY.

A. The DCF model is based on the concept that the current price of a share of stock is equal to the present value of future cash flows from the purchase of the stock. In other words, the DCF model seeks to replicate the market valuation process that sets the price investors are willing to pay for a share of an entity's stock. It rests on the assumption that investors rely on the expected returns (i.e., cash flow they expect to receive) to set the price of a security. The DCF model in its most general form is:

$$[6] \quad P_0 = CF_1/(1+k) + CF_2/(1+k)^2 + \dots + CF_n/(1+k)^n$$

where k is the cost of equity; n is the number of years; P_0 is the current stock price; and, CF_1 , through CF_n are the expected future cash flows expected to be received in periods 1 through n .

Equation [6] can be written to show that the current price (P_0) is also equal to

$$[7] \quad P_0 = CF_1/(1+k) + CF_2/(1+k)^2 + \dots + P_t/(1+k)^t$$

where P_t is the price expected to be received at the end of the period t . If the future price (P_t) included a premium (an expected increase in the stock price or capital gain), the price the investor would pay today (in anticipation of receiving that premium) would increase. In other words, by estimating the cash flows from the purchase of a stock in the form of dividends and capital gains, we can calculate the investor's required rate of return, i.e., the rate of return an investor presumptively used in bidding the current price to the stock (P_0) to its current level.

Equation [7] is a Market Price version of the DCF model. As with the general form of the DCF model in equation [6], the current stock price (P_0) is the present value of the expected cash inflows in the Market Price approach. The cash flows are comprised of dividends and the final selling price of the stock. The estimated cost

of equity (k) is the rate of return investors expect if they bought the stock at today's price, held the stock and received dividends through the transition period, and then sold it for price in period t (P_t).

Q. CAN YOU PROVIDE AN EXAMPLE TO ILLUSTRATE THE MARKET PRICE VERSION OF THE DCF MODEL?

A. Yes. Assume an investor buys a share of common stock for \$40. If the expected dividend during the coming year is \$2.00, then the expected dividend yield is 5 percent ($\$2.00/\$40 = 5.0$ percent). If the stock price is also expected to increase to \$43.00 after one year, this \$3.00 expected gain adds an additional 7.5 percent to the expected total rate of return ($\$3.00/\$40 = 7.5$ percent). Thus, the investor buying the stock at \$40 per share expects a total return of 12.5 percent (5 percent dividend yield plus 7.5 percent price appreciation). The total return of 12.5 percent is the appropriate measure of the cost of capital because this is the rate of return that caused the investor to commit \$40 of his or her capital by purchasing the stock.

Q. PLEASE CONTINUE WITH YOUR DESCRIPTION OF THE DCF MODEL.

A. Under the assumption that future cash flow is expected to grow at a constant rate ("g"), equation [6] can be solved for k and rearranged into the simple form:

$$[8] \quad k = CF_1/P_0 + g$$

where CF_1/P_0 is the expected dividend yield (also expressed as D_0/P_0) and g is the expected long-term dividend (price) growth rate. The expected dividend yield is computed as the ratio of next period's expected dividend (" D_0 ") divided by the current stock price (" P_0 ").

This form of the DCF model is known as the "constant growth" DCF model and recognizes that investors expect to receive a portion of their total return in the form of current dividends and the remainder through future dividends and capital (i.e. price) appreciation. A key assumption of this form of the model is that investors

1 expect that same rate of return (k) every year and that market price grows at the same
2 rate as dividends. As already discussed, this has not been historically true for the
3 water utilities in the proxy group, as shown by the data in Table 4.

4 **Q. ARE THERE ANY CONCERNS ABOUT APPLYING THE DCF MODEL TO**
5 **UTILITY STOCKS?**

6 A. Yes, there are a number of reasons why caution must be used when applying the
7 DCF model to utility stocks. First, a non-publicly traded company does not have a
8 stock market price. Using the stock prices from a proxy group assumes that the stock
9 of Liberty Black Mountain would be similarly priced and has a dividend yield similar
10 to the publicly traded water companies. Second, the stock price and dividend yield
11 components may be unduly influenced by structural changes in the industry, such as
12 mergers and acquisitions, which influence investor expectations. Third, the DCF
13 model is based on a number of assumptions that may not be realistic given the current
14 capital market environment. The traditional DCF model assumes that the market
15 price per share ("MPPS"), book value per share ("BVPS"), earnings per share
16 ("EPS"), and dividends per share ("DPS"), all grow at the same rate. This has not
17 been historically true for the sample water utility companies. For example, Table 4
18 shows that over the past 5 years the average MPPS growth has significantly
19 exceeded the average BVPS, EPS, and DPS.

20 We should be especially concerned with the DCF model's applicability under
21 current market conditions. The Federal Reserve's bond buying programs have kept
22 longer-term bond yields low and interest rates are expected to rise, but in the
23 meantime, and because bond yields are still very low, investors have been "chasing
24 yields" and driving up the stock prices of companies that pay dividends, like utilities.
25 Over the past several years, Value Line has taken note of these fundamental changes
26 surrounding water utility stocks. The *Value Line* Investment Survey (October 14,

1 2016) for the Water Utility Industry noted:

2 When we went to press last July, institutional investors,
3 spurred by low rates on U.S. Treasury securities, had plowed
4 large amounts of funds into this relatively minor segment of
5 the U.S. equity market. Consisting of only nine stocks, the
6 industry has a combined market capitalization of less than
7 \$25 billion. Long known to many retail investors for their
8 modest, but well-defined earnings, many accounts have also
9 been attracted to these shares because of their higher-than-
10 average yields, solid dividend growth prospects, low volatility,
11 and defensive nature. During the first half of 2016, however,
12 demand for certain income-generating stocks reached peak
13 levels. Indeed, the price of the equities in this industry were
14 pushed to such all-time highs, that their yields (the primary
15 reason to buy the stocks) fell below the median of the *Value*
16 *Line* universe.

17 The *Value Line* Investment Survey (January 13, 2017) for the Water Utility
18 Industry noted:

19 The average dividend yield on the eight regulated water
20 utilities we follow is currently 2.1%, or exactly the same as the
21 median for all stocks in the *Value Line* universe. Historically,
22 the yield on these stocks has been much higher. As an
23 example, the typical yield on an electric utility equity is about
24 3.6%, or 150 basis points higher than the water utility industry.
25 Why is this? One reason is that when taken as a whole, the
26 market capitalization of the group is very modest. Thus, it
27 doesn't take a large shift into the sector by institutional
28 investors to drive the price of these stocks higher and their
29 yields lower. Indeed, the three stocks with the best returns over
30 the last three months were all small cap stocks. *York Water*
31 and *SJW* each surged 30% while *Middlesex Water* rose about
32 25%. Before these moves, the market capitalization of each
33 individual stock was \$375 million, \$850 million, and \$550
34 million, respectively. The spike in prices has also left the
35 equities with respective yields of 1.7%, 1.5%, and 2.1%.

36 The *Value Line* Investment Survey (January 12, 2018) for the Water Utility
37 Industry noted:

38 Shares of water utilities are currently trading in uncharted
39 territory. Aided most likely by strong institutional demand,
40 and a limited supply of equity, the large- and mid-cap stocks in
41 the group have done extremely well.

42 We caution investors that these stocks may not be as safe as
43 they have been in the past. That is because the larger utilities

1 have seen their stocks rise to near all-time highs. For example,
2 the current yield on this group's stocks is only about equal to
3 the *Value Line* median. Also, though inflation remains tame,
4 the Federal Reserve has indicated more interest rate hikes next
5 year. This could make bonds more attractive to income-
oriented investors. In any case, subscribers should be aware
6 that these stocks may carry more risk than their Beta co-
efficients and Safety ranks indicate.

7 Finally, the most recent *Value Line* Investment Survey (April 12, 2019) for
the Water Utility Industry continues this theme and notes:

8 Despite its reputation as being defensive sector of the equity
9 market, the Water Utility Industry continues to perform
10 relatively well in an up market. Indeed, typically purchased
11 for their yield and dividend growth prospects, the average yield
12 in this group is now below the Value Line median. Based, on
13 other key financial metrics, this Industry is trading at
14 historically high levels. For example, the P/E ratios of these
15 stocks is probably close to 30. That's over 1.7 times the
16 average stock's P/E. Not only are other stocks offering an
17 alternative to this group, but short-term Treasury notes are
looking attractive on a relative basis as well. The yield on a
three-month Treasury note is currently over 2.4%. Thus, it is
yielding more than 50 basis points higher than most water
equities. True, there is not the possibility of dividend hikes for
this security, but there also is just about no risk whatsoever.
All in all, we think investors should take a hard look at the
offerings on the front end of the yield curve rather than invest
in water utility stocks.

18 ... Despite their low Beta co-efficient, and high scores for Price
19 Stability and Earnings Predictability, these stocks may hold
20 more risk than a typical utility investor may want to undertake.
21 This opinion is based purely on what we believe are elevated
valuations of the equities. We continue to think that the
industry is fundamentally sound, but better alternatives are
available elsewhere.

22 While dividend yields for the proxy group companies have been at all-time
23 lows, 3, 5, and 10-year compound annual total returns for the proxy group are
24 16.81 percent, 15.03 percent, and 12.14 percent, respectively, from advances in stock

1 prices and reinvestment of dividends.¹² These returns are significantly higher than
2 my DCF estimate of the cost of equity of just 9.0 percent, which is a source of my
3 concern in the application of the DCF at this time. The expected equity returns
4 suggested by the market based DCF model do not line up with recent experience in
5 the markets. As Dr. Morin notes:¹³

6 To the extent that increases (decreases) in relative market
7 valuation are anticipated by investors, especially myopic
8 investors with short-term investment horizons, the standard
DCF model will understate (overstate) the cost of equity.

9 Another way of stating this point is that the DCF model does not account for
10 the ebb and flow of investor sentiments over the course of the business cycle.
11 The problem was particularly acute in the mid-1990s and mid-2000s where
12 investors, faced with very low returns on short-term fixed-income securities and an
13 uncertain market outlook, sought higher yields offered by utility stocks in a so-called
14 flight to quality, boosting utility stock price and lowering the dividend yield.¹⁴ The
15 circumstances then are not so different from what is occurring today.

16 **Q. DO YOU HAVE ANY FURTHER CONCERNS WITH THE DCF?**

17 A. Yes. Fourth, the application of the DCF model produces estimates of the cost of
18 equity that are consistent with investor expectations *only* when the market price of a
19 stock and the stock's book value are approximately the same. The DCF model will
20 understate the cost of equity when the market-to-book ratio exceeds 1.0 and,
21 conversely, the model will overstate the cost of equity when the market-to-book ratio
22 is less than 1.0. The reason for this is that the market-derived return produced by the
23 DCF is often applied to book value rate base by regulators.

24 ¹² *Value Line Investment Analyzer* weekly data from March 29, 2018.

25 ¹³ Morin, p. 433.

26 ¹⁴ Morin, pp. 21-22

1 Fifth, the assumption of a constant growth rate may be unrealistic, and there
2 may be difficulty in finding an adequate proxy for the growth rate. Historical growth
3 rates can be downward biased as a result of the impact of anemic historical growth
4 rates in earnings, mergers and acquisitions, restructuring, unfavorable regulatory
5 decisions, and even abnormal weather patterns. Conversely, historical growth rates
6 can be upwardly biased as well, particularly under the current market conditions I
7 discussed previously.

8 **Q. WHAT DATA HAVE YOU USED TO COMPUTE THE EXPECTED**
9 **DIVIDEND YIELD (D_1/P_0) IN YOUR DCF MODEL?**

10 A. First, I computed a current dividend yield (D_0/P_0). The time value of money should
11 be taken into account when determining dividend yields. This adjustment is required
12 because the basic model assumes dividends are paid once a year, but investors
13 actually receive dividend payments on a quarterly basis. Prices paid for the stock
14 (P_0) would reflect the anticipated payment and potential re-investment of quarterly
15 dividends. To approximate the time value of money and the payment of quarterly
16 dividends, I computed expected dividend yield (D_1/P_0) as the current dividend yield
17 (D_0/P_0) times one plus the growth rate (g) divided by 2. I used the spot price for each
18 of the stocks of the water utilities in the sample group as reported by the *Value Line*
19 *Investment Analyzer* for June 14, 2019 for P_0 . The current dividend (CF_0) is the
20 current indicated dividend as reported by *Value Line*. In my tables, the current
21 dividend yield is denoted as (D_0/P_0), where D_0 is the current dividend and P_0 is the
22 spot stock price. (D_1/P_0) is used to denote the expected dividend yield in the tables.

23 **Q. WHAT MEASURES OF GROWTH (“g”) HAVE YOU USED?**

24 A. My estimates of growth are based upon analysts’ estimates of growth. For my
25 forecast growth estimate, I have used the growth forecasts from *Value Line*, *Zacks*
26 *Investment Research*, and *Yahoo Finance*. I report the analysts’ forecasts of future

growth in Table 4.

Q. WHY DID YOU USE FORECASTED GROWTH RATES IN YOUR GROWTH ESTIMATES?

A. The empirical evidence indicates that analyst estimates of EPS growth are the best measure of growth for use in the DCF for utility stocks.¹⁵ Further, the DCF model requires estimates of growth that investors expect in the future and not past estimates of growth that have already occurred. Logically, in estimating future growth, financial institutions and analysts have taken into account all relevant historical information on an entity, as well as other more recent information.¹⁶ To the extent that past results provide useful indications of future growth prospects, analysts' forecasts would already incorporate that information. In addition, the current price of a stock reflects known historic information on that entity, including its past earnings history. Any further recognition of the past will double count what has already occurred. Therefore, forward-looking growth rates should be used.

Q. PLEASE SUMMARIZE THE EQUITY COST ESTIMATES YOU MAKE WITH THE DCF APPROACH.

A. In Table 6, my DCF estimate for the cost of equity of the proxy group is 9.0 percent.

¹⁵ Gordon, David A., Gordon, Myron J. and Gould, Lawrence I., "Choice Among Methods of Estimating Share Yield," *Journal of Portfolio Management*, Spring 1989, pp. 50-55. Gordon, Gordon and Gould found that a consensus of analysts' forecasts of earnings per share growth for the next five years provides a more accurate estimate of growth required in the DCF model than three different historical measures of growth (historical EPS, historical DPS, and historical retention growth). They explain that this result makes sense because analysts would take into account such past growth as indicators of future growth as well as any new information. Other studies confirm the superiority of analysts' estimates such as Vander Weide, James H. and Carleton, Willard T., "Investor Growth Expectations: Analysts vs. History," *Journal of Portfolio Management*, Spring 1988, pp. 78-87; Brown, Lawrence D. and Rozeff, Michael S., "The Superiority of Analyst Forecasts as Measures of Expectations: Evidence from Earnings," *Journal of Finance*, March 1978, pp. 1-16; and Timme, Stephen G. and Eisemann, Peter C., "On the Use of Consensus Forecasts of Growth in the Constant Growth Model: The Case for Electric Utilities," *Journal of Financial Management*, Winter 1989, pp. 23-35. A 2004 study by the Kentucky Public Service Commission Advance Research Center updated the study by Vander Weide and Carleton (1988) and confirmed the superiority of analyst estimates over historical averages.

¹⁶ Gordon, Gordon, and Gould, p. 54.

1 For Liberty Black Mountain, my estimate is 9.8 percent as shown in Table 1.

2 **C. Explanation of the Risk Premium and Its Inputs.**

3 **Q. PLEASE EXPLAIN THE RP METHODOLOGY FOR ESTIMATING THE**
4 **COST OF EQUITY.**

5 A. The risk premium method is sometimes referred to as the “bond yield plus risk
6 premium method.” The general approach is to determine the spread between the
7 return on debt and the return on equity, and then add this spread to the current debt
8 yield to derive an estimate of the cost of equity. To implement the risk premium, it
9 is assumed that the past relationship will continue into the future. The RP is widely
10 used by analysts and investors.¹⁷

11 The RPM formula provides a formal risk-return relationship and is stated as:

12
$$(9) \quad k = K_d + \text{bond-equity spread}$$

13 where k is the expected return on equity and K_d is the cost of debt or debt yield.

14 **Q. PLEASE TURN TO YOUR RISK PREMIUM EQUITY COST ESTIMATES.**
15 **HOW MANY RISK PREMIUM ANALYSES HAVE YOU PERFORMED?**

16 A. I performed one risk premium analysis (not including the CAPM). My analysis is
17 presented in Table 8. For the period 1999 to 2018 (20 years), I subtract average
18 annual long-term US. Treasury yields from annual average total returns of the water
19 proxy group to determine the annual risk premium for each year. The average over
20 the period is then added to the average expected long-term U.S. Treasury yield
21 (2020-2022) of 3.3 percent from Table 7 to estimate the cost of equity.

22 **Q. WHAT IS THE RESULT OF YOUR FIRST APPROACH?**

23 A. Table 8 shows that the indicated cost of equity for the water proxy group is
24 10.8 percent. My estimate for Liberty Black Mountain is 11.6 percent.

25
26 ¹⁷ Morin, p. 108.

1 **Q. SHOULD STUDIES OF HISTORICAL RISK PREMIUMS RELY ON**
2 **ARITHMETIC AVERAGE RETURNS OR ON GEOMETRIC AVERAGE**
3 **RETURNS?**

4 A. Whenever relying on historical risk premiums, only arithmetic average returns over
5 long periods are appropriate for forecasting and estimating the cost of capital,
6 geometric average returns are not. As various finance experts have explained, an
7 arithmetic mean is the correct approach to use in estimating the cost of capital,
8 particularly for a risk premium model.¹⁸ As Dr. Morin states:

9 Because valuation is forward-looking, the appropriate average
10 is the one that most accurately approximates the expected
11 future rate of return. *The best estimate of the expected returns*
12 *over a future holding period is the arithmetic average. Only*
13 *arithmetic means are correct for forecasting purposes and for*
14 *estimating the cost of capital.* There is no theoretical or
15 empirical justification for the use of geometric rates of return
16 as a measure of the appropriate discount rate in computing the
17 cost of capital or in computing present values.¹⁹

18 The consensus among these experts makes sense. Only arithmetic mean return rates
19 and yields are appropriate for cost of capital purposes because ex-post (historical)
20 total returns and equity risk premiums differ in size and direction over time,
21 providing insight into the variance and standard deviation of returns. The geometric
22 mean of ex-post (after the fact) equity risk premiums provides no insight into the
23 potential variance of future returns because the geometric mean relates the change
24 over many periods to a constant rate of change, rather than the year-to-year
25 fluctuations, or variance, which are critical to risk analysis. In short, the conclusion
26 of these financial experts is that, while the geometric mean is useful in comparing

24 ¹⁸ Zvi Bode, Alex Kane, Alan J. Marcus, *Investments* (McGraw-Hill 6th ed., 2005) (“Bode”), pp. 864 – 865;
25 Richard A. Brealey, Stewart C. Myers, Franklin Allen, *Principles of Corporate Finance* (McGraw-Hill 11th
26 ed.) (“Brealey”), pp. 162-163.

¹⁹ Morin, pp. 116-117 (emphasis added).

1 what happened in the past, it should not be used to determine estimates of expected
2 future returns or market risk premiums.

3 **Q. TURNING TO THE CAPM, PLEASE EXPLAIN THE CAPM**
4 **METHODOLOGY FOR ESTIMATING THE COST OF EQUITY.**

5 A. Like all risk premium methods, the CAPM is the sum of a risk-free rate plus a risk
6 premium. Like the risk premium method, it quantifies the additional return required
7 by investors for bearing incremental risk. The CAPM was developed by William
8 Sharpe and John Lintner in the mid-1960s and is a common topic in college finance
9 textbooks. The CAPM provides a formal risk-return relationship premised on the
10 idea that only market risk matters, as measured by beta. The traditional version of
11 CAPM is represented by the formula:

$$[10] \quad k = R_f + \beta(R_m - R_f)$$

13 where k is the expected return, R_f is the risk-free rate (or zero beta asset), R_m is the
14 market return, $(R_m - R_f)$ is the market risk premium, and β is beta.

15 **Q. WHAT IS BETA AND WHAT DOES IT MEASURE?**

16 A. Beta is a measure of the relative risk of a security in relation to the market. In other
17 words, it is a measure of the sensitivity of a security to the market as a whole. This
18 sensitivity is also known as systematic risk. It is estimated by regressing a security's
19 excess returns against a market portfolio's excess returns. The slope of the
20 regression line is the beta.

21 Beta for the market is 1.0. A security with a beta greater than 1.0 is considered
22 more risky than the market. A security with a beta less than 1.0 is considered less
23 risky than the market.

24 **Q. ARE THERE ANY CONCERNS ABOUT APPLYING THE CAPM MODEL**
25 **TO UTILITY STOCKS?**

26 A. Yes. I have concerns with using this model in most periods because mechanical

1 application of the model may produce unreasonable results. The traditional CAPM
2 only captures a single measure of systematic risk as measured by beta, but there are
3 other forms of systematic risk priced by the market such as company size. A size
4 premium is necessary because the empirical evidence indicates that beta alone does
5 not measure the risk of smaller companies.²⁰ Further, there are computational
6 problems surrounding beta since it depends on the return data, the time period used,
7 its duration, the choice of the market index, and whether annual, monthly, or weekly
8 return figures are used. Betas are estimated with error. Based on empirical evidence,
9 high betas will tend to have a positive error (risk is overestimated) and low betas will
10 have a negative error (risk is underestimated).²¹

11 **Q. ARE THERE ALTERNATIVES TO THE TRADITIONAL CAPM?**

12 A. Yes, alternative versions of the CAPM have been developed that provide more robust
13 explanations of returns required by investors. A version of the CAPM called the
14 Empirical CAPM or ECAPM was developed to recognize that estimations of R_f are
15 higher than the return on long-term Treasuries. Dr. Roger Morin discusses ECAPM
16 at pages 189-191 of his book, *New Regulatory Finance*. The ECPAM is represented
17 as follows:

18
$$[11] \quad k = R_f + .25(R_m - R_f) + .75\beta(R_m - R_f)$$

19 The ECAPM was developed from the empirical findings that show the slope of the
20 CML is flatter and the risk-free rate is at a higher point than predicted by the pure
21 CAPM. The ECAPM has been shown to do a better job at predicting market returns.

22
23
24
25 ²⁰ Duff & Phelps 2018 *Valuation Handbook*, Chapter 2, p. 7.

26 ²¹ Fama, Eugene F. and Kenneth R. French, "The Capital Asset Pricing Model: Theory and Evidence,"
Journal of Economic Perspectives, Summer 2004, pp. 25-46.

1 *Duff & Phelps* also suggests a version of the CAPM in which a size premium
2 is included.²² This modified CAPM or MCAPM is represented as follows:

3
$$[12] \quad k = R_f + \beta(R_m - R_f) + RP_s$$

4 where k is the expected return, R_f is the risk-free rate (or zero beta asset), R_m is the
5 market return, $(R_m - R_f)$ is the market risk premium, β is beta, and RP_s is the size
6 premium. Both the ECAPM and MCAPM recognize that the pure CAPM is
7 incomplete and does not fully account for the higher returns that are needed on
8 smaller company stocks. In other words, the higher risks associated with smaller
9 firms are not fully accounted for by beta.²³

10 **Q. IS FIRM SIZE A UNIQUE RISK?**

11 A. No, firm size is a systematic risk factor and is an adjustment to the pure CAPM.²⁴
12 Putting aside the empirical financial data, the need for a risk premium for size makes
13 sense. Entity size is a significant element of business risk for which investors expect
14 to be compensated through greater returns. As discussed earlier, smaller companies
15 are simply less able to cope with significant events that impact sales, revenues, and
16 earnings. For example, smaller companies face more risk exposure to business
17 cycles and economic conditions, both nationally and locally. Additionally, the loss
18 of revenues from a few larger customers would have a greater effect on a small entity
19 than on a much larger entity with a larger, more diverse, customer base. Moreover,
20 smaller companies are generally less diverse in their operations and have less
21 financial flexibility.

22
23
24 ²² *Duff & Phelps 2018 Valuation Handbook*, Chapter 2, p. 14.

25 ²³ Morningstar, *Ibbotson SBBI 2013 Valuation Yearbook* ("Morningstar"), pp. 85-88.

26 ²⁴ Pratt, Shannon P. and Roger J. Grabowski, *Cost of Capital: Applications and Examples* (John Wiley and Sons, 4th Ed. 2010), p. 56.

1 **Q. DID YOU EMPLOY EITHER OF THESE ALTERNATIVE CAPM**
2 **METHODS (EQUATIONS 11 AND 12) AS PART OF YOUR ANALYSIS?**

3 A. Yes. I employed all three versions of the CAPM to estimate the cost of equity for
4 the proxy group, which does somewhat mitigate my concerns about the traditional
5 CAPM.

6 **Q. WHAT IS THE RISK-FREE RATE (R_f)?**

7 A. It is the return on an investment with no risk. The U.S. Treasury rate serves as the
8 basis for the risk-free rate because the yields are directly observable in the market
9 and are backed by the U.S. government. Practically speaking, short-term rates are
10 volatile, fluctuate widely and are subject to more random disturbances than long-
11 term rates. In short, long-term Treasury rates are preferred for these reasons and
12 because long-term rates are more appropriately matched to securities with an
13 indefinite life or long-term investment horizon.

14 **Q. WHAT DO YOU USE AS THE RISK FREE RATE (R_f)?**

15 A. I used the average of the expected long-term U.S. Treasury rate for 2019-2021 as the
16 basis for the risk free rate. Since the cost of capital is an opportunity cost and is
17 prospective, it necessarily requires the use of a forward-looking bond yield.
18 In recent years, interest rates have dropped to very low levels when compared to
19 interest rates for similar securities in the past. From 1999 to 2007, the annual average
20 yield for long-term Treasury bonds was 5.24 percent, ranging from a low of
21 4.84 percent in 2007 to a high of 5.94 percent in 2000. In 2008, and during the recent
22 recession, that annual average dropped to 4.24 percent and dropped further in 2012
23 to 2.9 percent.

24 The drop in long-term Treasury rates has been largely attributed to the market
25 intervention by the Federal Reserve through its quantitative easing programs. Long-
26 term Treasury rates for 2013 and 2014 averaged 3.45 percent and 3.34 percent,

1 respectively. For 2017, long-term Treasury rates have averaged 2.90 percent. The
2 Federal Reserve raised the key federal funds interest rate by 25 basis points three
3 times 2017 and another four times in 2018. The current federal funds rates is at
4 2.5 percent. The average 30-year U.S. Treasury yield for 2018 was 3.0 percent. The
5 average yield for the five months of 2019 has remained around 3.0 percent.
6 Notwithstanding the most recent rate hikes in 2018, interest rates remain at
7 historically low levels, and have even fallen, which may be a short-term situation
8 due to the trade was with China.

9 **Q. WHY DO YOU USE LONG-TERM U.S. TREASURY YIELDS?**

10 A. The yields on long-term Treasury bonds match more closely with the perpetual
11 nature of common stock investments.²⁵ In addition, short-term rates are more
12 volatile, fluctuate widely and are subject to more random disturbances than long-
13 term rates. Long-term Treasury rates are more appropriately matched to securities
14 with an indefinite life or long-term investment horizon. For these reasons long-term
15 rates are preferred.

16 **Q. WHAT DO YOU ADOPT AS THE RETURN FOR THE RISK-FREE RATE?**

17 A. I used long-term expected Treasury bond rates as the measure of the risk-free return
18 for use with CAPM cost of equity estimates from two sources: the *Blue Chip*
19 *Financial Forecasts* and the *Value Line Quarterly Forecast*.²⁶ The appropriate
20 choice for the risk-free rate is the *expected* return for long-term Treasury securities.²⁷
21 Thus, when determining an estimate of the risk-free rate, it is appropriate to adopt a
22 return that is no less than the expected return on the long-term Treasury bond rate.
23 Models to determine the cost of capital are prospective in nature, which require

24 ²⁵ Morin, p. 112.

25 ²⁶ See Table 9.

26 ²⁷ Duff & Phelps, Chapter 3, p. 1.

1 expectational inputs, such as forecasted interest rates.²⁸ The CAPM, ECAPM, and
2 MCAPM estimates are based on average expected yields of the long-term Treasury
3 rates for 2020-2021 (from *Blue Chip Financial Forecasts* and *Value Line Quarterly*
4 *Forecasts*), the average of which is 3.3 percent.²⁹

5 **Q. WHAT DID YOU USE AS THE PROXY OF THE BETA IN YOUR CAPM**
6 **MODELS?**

7 A. For the CAPM and ECAPM, I used the average beta of the sample water utility
8 companies. These betas were obtained from *Value Line Investment Analyzer*
9 (weekly data as of June 13, 2019). *Value Line* is the source for estimated betas that
10 I regularly employ. The average *Value Line* beta for my water proxy group as shown
11 on Table 2 is 0.70.

12 For the MCAPM, I used sum beta. Sum beta is an alternative method of
13 computing betas and helps more fully capture the lagged effect of co-movement in
14 an entity's returns with returns on the market. Since *Duff & Phelps* size premiums
15 are derived using sum beta, I used sum beta to be internally consistent with the size
16 risk premiums for the water proxy group derived from the *Duff & Phelps* 2018 Size
17 Study. I computed the sum beta over a 261 week period (5-years) and used the
18 NYSE composite as the market index. Weekly data over 5-year period is the same
19 period used to estimate beta by *Value Line*.

20 I should note that because Liberty Black Mountain is not publicly traded, it
21 has no beta. In my expert opinion, I strongly believe Liberty Black Mountain, if it
22 were publicly traded, would have a higher *Value Line* beta and sum beta than the
23 sample water utility companies. *Morningstar* reports that when betas (a measure of
24 market risk) are properly estimated, betas are greater for small companies than for

25 ²⁸ Morin, p 172.

26 ²⁹ See Table 7.

1 larger companies.³⁰ *Morningstar* also finds that even after accounting for differences
2 in beta risk, small firms require an additional risk premium over and above the added
3 risk premium indicated by differences in beta risk.

4 **Q. PLEASE EXPLAIN THE MARKET RISK PREMIUM.**

5 A. The market risk premium ($R_m - R_f$) is the return an investor expects to receive as
6 compensation for market risk. It is the expected market return minus the risk-free
7 rate. Approaches for estimating the market risk premium can be historical or
8 prospective.

9 Since expected returns are not directly observable, historical realized returns
10 are often used as a proxy for expected returns on the basis that the historical market
11 risk premium follows what is known in statistics as a “random walk.” If the historical
12 risk premium does follow the random walk, then one should expect the risk premium
13 to remain at its historical mean. Based on this, the best estimate of the future market
14 risk premium is the historical mean. *Duff & Phelps* provides historical market
15 returns for various asset classes from various historical time periods. This
16 publication also provides market risk premiums over U.S. Treasury bonds, which
17 makes it an excellent source for historical market risk premiums.

18 Current market risk premium estimation approaches necessarily require
19 examining the returns expected from common equities and bonds. One method
20 employs application of the DCF model to a representative market index such as the
21 *Value Line* 1700 stocks. The expected return from the DCF is measured for a number
22 of periods of time, and then subtracted from the prevailing risk-free rate for each
23 period to arrive at market risk premium for each period. The market risk premium
24 that is subsequently employed in the CAPM is the average market risk premium of

25
26 ³⁰ *Morningstar*, Chapter 7.

1 the overall period.

2 **Q. HOW DID YOU ESTIMATE THE MARKET RISK PREMIUMS FOR USE**
3 **IN THE CAPM MODELS?**

4 A. For the traditional CAPM and ECAPM, I averaged two market risk premium
5 estimates: an average of an historical market risk premium (1926-2018) and a
6 current market risk premium. For the MCAPM, I used an historical market risk
7 premium (1963-2018) and a current market risk premium.

8 For the historical market risk premiums, I used the *Duff & Phelps* measure of
9 the average premium of the market over long-term treasury securities from 1926
10 through 2018 and 1963 through 2018, both of which use the S&P 500 market index
11 (which is considered a large-cap index). The average historical market risk premium
12 over long-term treasury securities is 6.9 percent for the 1926 to 2018 time period and
13 5.1 percent for the 1963 through 2018 time period.

14 For the current market risk premium, I derived a market risk premium by first
15 using the DCF model to compute an expected market return for each of the past
16 12 months using *Value Line's* projections of the average dividend yield for the
17 dividend yield in the DCF and an average of the median EPS, DPS and BVPS growth
18 on the *Value Line* 1700 stocks. I then subtracted the historical monthly average 30-
19 year Treasury yield for each month from the expected market returns to arrive at the
20 expected market risk premiums. Finally, I averaged the computed market risk
21 premiums to determine the current market risk premium for the last 12 months,
22 nine months, six months, and three months. The data and computations are shown
23 on Table 9. Estimates of the current market risk premium have ranged from
24 8.67 percent to 9.96 percent over the past 12 months. My recommended market risk
25 premium is based on the recent 3-month average estimate of 8.90 percent well below
26 the mid-point of the range of the past 12-months of 9.31 percent.

1 **Q. WHY USE TWO DIFFERENT HISTORICAL RISK PREMIUM**
2 **ESTIMATES?**

3 A. I have typically used an historical market risk premium in my CAPM and ECAPM.
4 I concur with *Morningstar*, which recommends the use of a historical market risk
5 premium based upon the longest time period practicable.³¹ *Duff & Phelps* Risk
6 Premium Report size and risk premia are calculated over the time horizon 1963 –
7 2018, so I used the historical market risk premium for this time period for the
8 MCAPM.

9 **Q. WHY IS IT NECESSARY TO USE A CURRENT MARKET RISK**
10 **PREMIUM?**

11 A. Because long-term historical interest rates used to estimate market risk premiums are
12 much higher than current interest rates. As a result, risk premiums are higher today
13 than the average long-term historical risk premium. This occurs because risk
14 premiums vary inversely with interest rates. Dr. Morin found this inverse
15 relationship between risk premiums and interest rates and reported it in chapter 4 of
16 his 2006 book, *New Regulatory Finance*. He stated a risk premium technique that
17 can be used to determine the cost of equity “consists of examining the risk premiums
18 implied in returns on equity allowed by regulatory commissions for utilities over
19 some past period relative to the contemporaneous level of the long-term Treasury
20 bond yield.”³² Professor Morin reports the following statistical relationship between
21 risk premiums (RPm) and long-term Treasury bond yields (Yield) for the period
22 1987 to 2005 for electric utilities:

23
$$\text{RPm} = 8.2049 - 0.4833 \times \text{Yield, with } R^2 = .81.$$

24
25
26 ³¹ Morningstar at 59.

³² Morin. p. 123.

1 The slope was found to be statistically significantly less than zero (i.e., the t-statistic
2 was - 8.4). In his analysis, annual averages of allowed equity returns reported by
3 Regulatory Research Associates were adopted as the proxies for equity costs. This
4 risk premium method is presented by Dr. Morin in Section 4.5 of his book.

5 **Q. HAVE OTHERS FOUND AN INVERSE RELATIONSHIP BETWEEN RISK**
6 **PREMIUMS AND INTEREST RATES?**

7 A. Yes. Harris and Marston, “Estimating Shareholders Risk Premia Using Analysts’
8 Growth Rates,” *Financial Management*, Summer 1992 found an inverse
9 relationship. Harris found that for every 100 basis point change in government bond
10 yields the equity risk premium changes by about 51 basis points in the opposite
11 direction.³³

12 **Q. HOW DID YOU ESTIMATE THE SIZE PREMIUM FOR THE WATER**
13 **PROXY GROUP FOR USE IN THE MCAPM?**

14 A. *Duff & Phelps’s* Size Study sorts companies by eight measures of size, breaking
15 down the NYSE universe of companies into 25 size-ranked portfolios.³⁴ The Size
16 Study provides two ways to match an entity’s size (or risk) characteristics to the
17 appropriate size (or risk) premium – a guideline portfolio method and a regression
18 equation method. I used the regression equation method to find the CAPM size risk
19 premium for each of the publicly traded utilities in the proxy group for six measures
20 of size (market value of equity, book equity, market value of invested capital, 5-year
21 average of net income, total assets, and earnings before interest, taxes, depreciation
22 and amortization).³⁵ I determined the average size premium of all size measures for

23 ³³ Morin, p.129

24 ³⁴ The size measures include: 1) Market Capitalization; 2) Book Value of Equity; 3) 5-year Average Net
25 Income; 4) Market Value of Invested Capital; 5) Total Assets; 6) 5-year Average Earnings Before Interest,
Taxes, Depreciation and Amortization (“EBITDA”); 7) Sales; and 8) Number of Employees. See *2018*
Valuation Handbook, Chapter 7, p. 6.

26 ³⁵ *Duff & Phelps Cost of Capital Navigator*, 2018 Supplementary Size Study data and 2018 Supplementary

1 the proxy group (3.43%) and then adjusted the average size premium to reflect the
2 lower risk of the proxy group compared to the companies that make up the respective
3 size-ranked portfolios. This comparative risk study uses the fundamental measures
4 of company risk (operating margin, coefficient of variation in operating income, and
5 coefficient of variation in return on book equity) to gauge how alike or different the
6 proxy group is compared to the companies that make up the size-ranked portfolios
7 in the Size Study. In the instant case, the estimated reduction in risk is -1.02 percent.
8 See **Exhibit TJB-COC-DT3**, page 5. Thus, the market risk premium for size for the
9 proxy group is 2.41 percent (3.43% - 1.02%). See **Exhibit TJB-COC-DT3**, page 2.

10 **Q. WHAT ARE THE RESULTS OF YOUR CAPM METHODS?**

11 A. In Table 10, the traditional CAPM produces an indicated cost of equity of
12 8.90 percent. The ECAPM produces an indicated cost of equity of 9.40 percent. The
13 MCAPM produces an indicated cost of equity of 9.90 percent. The average of these
14 three methods is 9.4 percent. The indicated cost of equity for Liberty Black
15 Mountain is 10.2 percent.

16 **VI. RECOMMENDED RISK PREMIUM FOR LIBERTY BLACK MOUNTAIN.**

17 **Q. PLEASE DISCUSS YOUR RECOMMENDED RISK PREMIUM FOR**
18 **LIBERTY BLACK MOUNTAIN.**

19 A. As I testified earlier, Liberty Black Mountain is not directly comparable to the large,
20 publicly traded water utilities in my proxy group. Liberty Black Mountain's lack of
21 diversification, limited revenue and cash flow, relatively small customer base, lack
22 of investment liquidity, and earnings volatility, increase the risk faced by smaller
23 water and wastewater utilities like the Company over the risk associated with the
24 proxy group.

25
26

Data Regression Equations.

1 **Q. PLEASE DISCUSS SIZE RISK FOR SMALL UTILITY COMPANIES.**

2 A. Investment risk increases as the firm size decreases, all else remaining constant.
3 There is a great deal of empirical evidence that the firm size phenomenon exists.
4 Morningstar's *Ibbotson SBBI 2013 Valuation Yearbook* (Chapter 7) reports that
5 smaller companies have experienced market higher returns that are not fully
6 explainable by their higher betas, and that beta is inversely related to firm size. In
7 other words, smaller companies not only have higher betas but also higher market
8 returns than larger ones. Even after accounting for differences in beta risk, small
9 companies require an additional risk premium over and above the added risk
10 premium indicated by differences in beta risk. Dr. Zepp also reported evidence that
11 the stocks of small water or wastewater utilities are more risky than the stocks of
12 larger utilities in the water utilities sample.³⁶ Additionally, the CPUC published a
13 study that showed smaller water utilities are more risky than larger ones.³⁷ Based on
14 the evidence, it is clear that investors require higher returns on small company stocks
15 than on large company stocks.

16 **Q. DID YOU PREPARE A COMPARATIVE RISK STUDY TO SUPPORT**
17 **DEVELOPMENT OF A RISK PREMIUM FOR LIBERTY BLACK**
18 **MOUNTAIN?**

19 A. Yes. The risk study I prepared for Liberty Black Mountain is attached as **Exhibit**
20 **TJB-COC-DT4**. To conduct my comparative risk study, I started by computing the
21 5-year historical operating margin, coefficient of variation of operating margin, and
22 coefficient of variation of ROE for Liberty Black Mountain. Operating margin is a
23 measure of profitability. The co-efficient of variation of operating margin and ROE

24 _____
25 ³⁶ Zepp, Thomas M., "Utility Stocks and the Size Effect – Revisited," *The Quarterly Review Economics*
26 and Finance, Vol. 43, Issue 3, Autumn 2003, pp. 578-582.

³⁷ Staff Report on Issues Related to Small Water Utilities, June 10, 1991, and CPUC Decision 92-03-093.

1 are measures of earnings variability. All three of these metrics are highly correlated
2 with size and risk.

3 **Q. ARE THESE THE METRICS FOR THE PROXY GROUP AND LIBERTY**
4 **BLACK MOUNTAIN YOU PRESENTED EARLIER IN YOUR**
5 **TESTIMONY?**

6 A. Yes, on page 21.

7 **Q. THANK YOU. PLEASE CONTINUE.**

8 A. Next, I cross-referenced these metrics with data from *Duff & Phelps Cost of Capital*
9 *Navigator* Supplementary Data Risk Study and identified the corresponding market
10 portfolio beta for the Company and for my proxy group.³⁸ I then computed the
11 relative difference in betas between the Liberty Black Mountain and the proxy group.
12 Assuming that the relative difference in the market portfolio beta for the all publicly
13 traded companies is the same for publicly traded water utilities, I then computed
14 implied betas for Liberty Black Mountain using the difference in portfolio betas.³⁹
15 Finally, I used the CAPM methods to compute the indicated cost of equity for each
16 utility and compared the results to the CAPM results for the water proxy group.⁴⁰
17 Based upon this analysis, I believe that the required risk premium for Liberty Black
18 Mountain is in the range of 100 to 140 basis points with a midpoint of 125 basis
19 points.
20
21
22
23

24 ³⁸ *Duff & Phelps Cost of Capital Navigator*, Supplementary Data Risk Study. See also page 3 of **Exhibit**
25 **TJB-COC-DT4**.

25 ³⁹ See page 3 of **Exhibit TJB-COC-DT4**.

26 ⁴⁰ See page 4 of **Exhibit TJB-COC-DT4**.

1 Q. ARE THERE ANY OTHER METHODS THAT PROVIDE USEFUL
2 INFORMATION ABOUT THE RISK PREMIUM FOR LIBERTY BLACK
3 MOUNTAIN?

4 A. Yes. Based upon my analysis of the size risk premium for use in the MCAPM, I
5 found that Liberty Black Mountain's size premium over the water proxy group is
6 398 basis points. See Exhibit TJB-COC-DT3, page 2, line 24.

7 Q. WHAT RISK PREMIUM OVER THE WATER PROXY GROUP DO YOU
8 RECOMMEND FOR LIBERTY BLACK MOUNTAIN?

9 A. I recommend a minimum of 80 basis points which is below the low end of the range
10 derived from my risk study.

11 **VII. SUMMARY AND CONCLUSIONS.**

12 Q. PLEASE PROVIDE A SUMMARY OF YOUR RECOMMENDATIONS
13 BASED UPON YOUR COST OF CAPITAL ANALYSIS, MR. BOURASSA.

14 A. I recommend that the Commission adopt the three-step method I presented above to
15 determine the ROE for Liberty Black Mountain. In the first step, an average of cost
16 of equity for a sample of six water utilities is determined with the DCF model and
17 RP models. In the second step, a risk premium for Liberty Black Mountain is
18 determined to reflect the Company's higher risks. Quantitative evidence based on
19 differences in Liberty Black Mountain's business risk metrics compared to the
20 benchmark proxy group justifies a risk premium in the range of 100 to 140 basis
21 points. I chose 80 basis points as my recommended risk premium to be conservative
22 and to reflect the reduction in risk assuming the Commission recognizes the costs
23 the Company incurred to close the Boulders WWTP and recovery of deferred
24 AFUDC and deferred depreciation as discussed in the first volume of my
25
26

1 testimony.⁴¹ In the third step, equity costs from step one and the risk premiums from
2 step two are combined to determine a fair ROE for Liberty Black Mountain of
3 10.5 percent. Therefore, I recommend that the Commission adopt an ROE for
4 Liberty Black Mountain of no less than 10.5 percent.

5 **Q. PLEASE SUMMARIZE THE EQUITY COST ESTIMATES YOU MADE IN**
6 **STEP ONE.**

7 A. I made four equity cost estimates for the proxy group, which are summarized in
8 Table 1. Where data was available, the equity cost estimates were based on data for
9 the six water utilities listed in Table 2. The first equity cost estimates were derived
10 with the DCF model. Using the DCF model to estimate growth, the estimated equity
11 cost for the proxy group is 9.00 percent. Next, I determined the indicated cost of
12 equity using two risk premium methods, including the CAPM. The RP approach is
13 based on a 20-year average risk premium over long-term U.S. Treasuries. This
14 approach shows a cost of equity for the proxy group of 10.80 percent. I also
15 established a range of CAPM estimates using long-horizon estimates of the market
16 risk premium as well as a current of the market risk premium which produced a cost
17 of equity for the water proxy group of 8.90 percent to 9.90 percent with an average
18 of 9.40 percent. I gave the DCF and RP estimates equal weight to establish a cost of
19 equity for the water proxy group of 9.70 percent.

20 **Q. PLEASE SUMMARIZE YOUR ESTIMATE OF THE RISK PREMIUM YOU**
21 **DETERMINED IN STEP 2.**

22 A. I prepared a comparative risk study use commonly used business risk metrics and
23 data from *Duff & Phelps Cost of Capital Navigator* 2018 Supplementary Data Risk
24 Study. Based upon this study, I conclude that risk premium for Liberty Black
25

26 ⁴¹ Direct Testimony of Thomas J. Bourassa – Rate Base, Income Statement and Rate Design at 10-12.

1 Mountain is in the range of 100 to 140 basis points. I also examined differences in
2 the size premium between Liberty Black Mountain and the proxy group based upon
3 the *Duff & Phelps Cost of Capital Navigator* 2018 Supplementary Data Size Study
4 and Risk Study. Based upon this analysis, I conclude that an appropriate risk
5 premium for Liberty Black Mountain is in the range of 100 to 140 basis points.
6 Based on my consideration of that analysis, I recommend a risk premium for Liberty
7 Black Mountain of no less than 80 basis points at this time.

8 **Q. GIVEN THE RESULTS OF YOUR EQUITY COST ANALYSES, IS AN ROE**
9 **OF 10.50 PERCENT FOR LIBERTY BLACK MOUNTAIN REASONABLE?**

10 A. Yes. In step 1, I estimated the benchmark cost of equity for the sample of six
11 publicly-traded water utilities, which falls in the range of 8.90 percent to 10.8 percent
12 with an average of 9.70 percent. In step 2, I determined a conservative estimate of
13 the risk premium required by Liberty Black Mountain is 80 basis points which is
14 well below the low end of my range of risk premium estimates. Combining the
15 results of step 1 and step 2 indicates the minimum cost of equity for Liberty Black
16 Mountain is 10.5 percent.

17 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY ON COST OF**
18 **CAPITAL?**

19 A. Yes.
20
21
22
23
24
25
26

EXHIBIT TJB-COC-DT1

Stocks in the Water Utility Industry have historically been accumulated by income-oriented investors that are willing to accept less potential total returns in exchange for low volatility and well-defined earnings prospects. This has not been the case in the recent past.

Most water utilities are in the process of spending heavily to replace antiquated pipelines.

State authorities determine what water utilities can earn on their investment. Therefore, the regulatory climate of each state is critical.

Consolidation should continue in this extremely fragmented industry.

Though this is a timely industry, long-term prospects are unattractive.

Are These Stocks Still An Income Play?

Despite its reputation as being defensive sector of the equity market, the Water Utility Industry continues to perform relatively well in an up market. Indeed, typically purchased for their yield and dividend growth prospects, the average yield in this group is now below the *Value Line* median. Based on other key financial metrics, this Industry is trading at historically high levels. For example, the P/E ratios of these stocks is probably close to 30. That's over 1.7 times the average stock's P/E.

Not only are other stocks offering an alternative to this group, but short-term Treasury notes are looking attractive on a relative basis as well. The yield on a three-month Treasury note is currently over 2.4%. Thus, it is yielding more than 50 basis points higher than most water equities. True, there is not the possibility of dividend hikes for this security, but there also is just about no risk whatsoever. All in all, we think investors should take a hard look at the offerings on the front end of the yield curve rather than invest in water utility stocks.

Large Construction Programs

Following years of neglect, water utilities have been spending heavily to upgrade the nation's deteriorating pipelines over the past decade. According to the American Society of Civil Engineers (ASCE), most pipes in America were laid early to mid-20th century, with an average lifespan of between 75 to 100 years. Many of these assets are currently in great need of repair or replacement. Indeed, the ASCE estimates that almost six billion gallons of water are lost per day as a result of leaky pipes. In other terms, this is 14%-18% of the amount of water treated daily. It should be pointed out that ASCE may not be entirely impartial as this would result in much more work for civil engineers.

Positive Regulation

State regulatory commissions are extremely important because they literally set the rate of return that a utility is allowed to earn on its investment. No matter how well run a company is, harsh treatment by authori-

INDUSTRY TIMELINESS: 2 (of 97)

ties is nearly impossible to overcome. Fortunately, regulators have utilities have been successfully working together. They realize that many of the water infrastructure in the U.S. need to be upgraded and that the task will require a lot of money. Thus, states are permitting the utilities to make a decent return on their assets. Estimates are that the average water bill has increased by almost 50% since 2010. This puts regulatory authorities in a difficult position. They are appointed by politicians to be on the regulatory commissions. And, no matter how badly a rate hike may be required, the citizenry doesn't usually react too well to increases in utility bills.

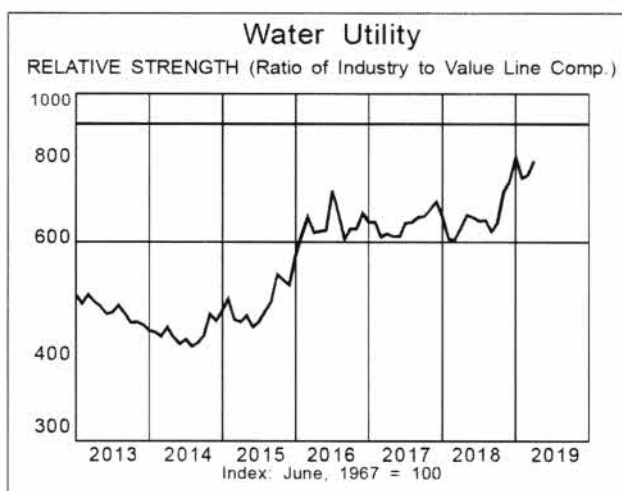
Consolidation

Most of the 50,000-or-so water districts in the U.S. are very small. Moreover, they are municipally owned. That's one of the reasons there are so few investor-owned companies such as the ones in this issue. In any case, the water industry is one place where synergies and economies of scale have historically proven to be very achievable. Over the years we look for the two largest companies *American Water Works* and *Aqua America* to continue using a growth through acquisition strategy. These entities are continually buying smaller water districts. Not only are these acquisitions made more efficient, but a big utility has the financial wherewithal to finance the cost of modernizing antiquated pipelines and wastewater systems.

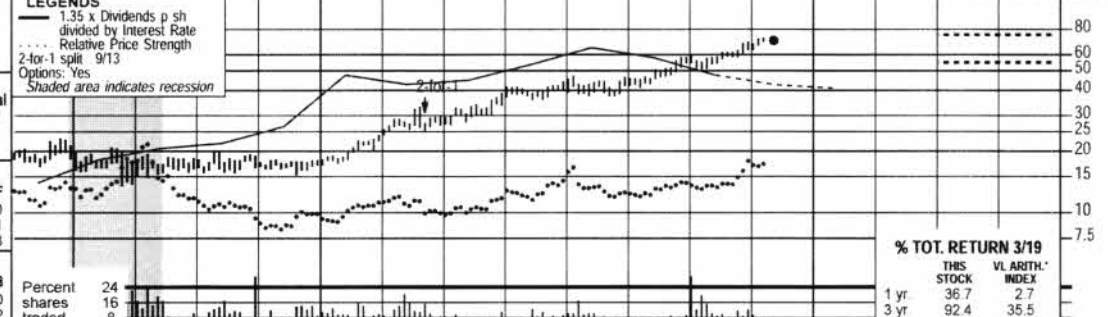
Conclusion

Despite their low Beta co-efficient, and high scores for Price Stability and Earnings Predictability, these stocks may hold more risk than a typical utility investor may want to undertake. This opinion is based purely on what we believe are elevated valuations of the equities. We continue to think that the industry is fundamentally sound, but better alternatives are available elsewhere.

James A. Flood



RECENT PRICE	70.31	P/E RATIO	37.6 (Trailing: 40.9 Median: 21.0)	RELATIVE P/E RATIO	2.16	DIV'D YLD	1.6%	VALUE LINE
--------------	-------	-----------	------------------------------------	--------------------	------	-----------	------	------------

[illegible]

Mid's(000)	27202	26103	26276	26449	26622	26795	26968	27141	27314	27487	27660	27833	28006	28179	28352	28525	28698	28871	29044	29217	29390	29563	29736	29909	30082	30255	30428	30601	30774	30947	31120	31293	31466	31639	31812	31985	32158	32331	32504	32677	32850	33023	33196	33369	33542	33715	33888	34061	34234	34407	34580	34753	34926	35099	35272	35445	35618	35791	35964	36137	36310	36483	36656	36829	37002	37175	37348	37521	37694	37867	38040	38213	38386	38559	38732	38905	39078	39251	39424	39597	39770	39943	40116	40289	40462	40635	40808	40981	41154	41327	41500	41673	41846	42019	42192	42365	42538	42711	42884	43057	43230	43403	43576	43749	43922	44095	44268	44441	44614	44787	44960	45133	45306	45479	45652	45825	46000	46173	46346	46519	46692	46865	47038	47211	47384	47557	47730	47903	48076	48249	48422	48595	48768	48941	49114	49287	49460	49633	49806	49979	50152	50325	50498	50671	50844	51017	51190	51363	51536	51709	51882	52055	52228	52401	52574	52747	52920	53093	53266	53439	53612	53785	53958	54131	54304	54477	54650	54823	54996	55169	55342	55515	55688	55861	56034	56207	56380	56553	56726	56900	57073	57246	57419	57592	57765	57938	58111	58284	58457	58630	58803	58976	59149	59322	59495	59668	59841	59990	60163	60336	60509	60682	60855	61028	61201	61374	61547	61720	61893	62066	62239	62412	62585	62758	62931	63104	63277	63450	63623	63796	63969	64142	64315	64488	64661	64834	65007	65180	65353	65526	65699	65872	66045	66218	66391	66564	66737	66910	67083	67256	67429	67602	67775	67948	68121	68294	68467	68640	68813	68986	69159	69332	69505	69678	69851	70024	70197	70370	70543	70716	70889	71062	71235	71408	71581	71754	71927	72100	72273	72446	72619	72792	72965	73138	73311	73484	73657	73830	74003	74176	74349	74522	74695	74868	75041	75214	75387	75560	75733	75906	76079	76252	76425	76598	76771	76944	77117	77290	77463	77636	77809	77982	78155	78328	78501	78674	78847	79020	79193	79366	79539	79712	79885	80058	80231	80404	80577	80750	80923	81096	81269	81442	81615	81788	81961	82134	82307	82480	82653	82826	83000	83173	83346	83519	83692	83865	84038	84211	84384	84557	84730	84903	85076	85249	85422	85595	85768	85941	86114	86287	86460	86633	86806	86979	87152	87325	87498	87671	87844	88017	88190	88363	88536	88709	88882	89055	89228	89401	89574	89747	89920	90093	90266	90439	90612	90785	90958	91131	91304	91477	91650	91823	91996	92169	92342	92515	92688	92861	93034	93207	93380	93553	93726	93900	94073	94246	94419	94592	94765	94938	95111	95284	95457	95630	95803	95976	96149	96322	96495	96668	96841	97014	97187	97360	97533	97706	97879	98052	98225	98398	98571	98744	98917	99090	99263	99436	99609	99782	99955	100128	100301	100474	100647	100820	100993	101166	101339	101512	101685	101858	102031	102204	102377	102550	102723	102896	103069	103242	103415	103588	103761	103934	104107	104280	104453	104626	104799	104972	105145	105318	105491	105664	105837	106010	106183	106356	106529	106702	106875	107048	107221	107394	107567	107740	107913	108086	108259	108432	108605	108778	108951	109124	109297	109470	109643	109816	110000	110173	110346	110519	110692	110865	111038	111211	111384	111557	111730	111903	112076	112249	112422	112595	112768	112941	113114	113287	113460	113633	113806	113979	114152	114325	114498	114671	114844	115017	115190	115363	115536	115709	115882	116055	116228	116401	116574	116747	116920	117093	117266	117439	117612	117785	117958	118131	118304	118477	118650	118823	118996	119169	119342	119515	119688	119861	120034	120207	120380	120553	120726	120900	121073	121246	121419	121592	121765	121938	122111	122284	122457	122630	122803	122976	123149	123322	123495	123668	123841	124014	124187	124360	124533	124706	124879	125052	125225	125398	125571	125744	125917	126090	126263	126436	126609	126782	126955	127128	127301	127474	127647	127820	127993	128166	128339	128512	128685	128858	129031	129204	129377	129550	129723	129896	130069	130242	130415	130588	130761	130934	131107	131280	131453	131626	131799	131972	132145	132318	132491	132664	132837	133010	133183	133356	133529	133702	133875	134048	134221	134394	134567	134740	134913	135086	135259	135432	135605	135778	135951	136124	136297	136470	136643	136816	136989	137162	137335	137508	137681	137854	138027	138200	138373	138546	138719	138892	139065	139238	139411	139584	139757	139930	140103	140276	140449	140622	140795	140968	141141	141314	141487	141660	141833	142006	142179	142352	142525	142698	142871	143044	143217	143390	143563	143736	143909	144082	144255	144428	144601	144774	144947	145120	145293	145466	145639	145812	145985	146158	146331	146504	146677	146850	147023	147196	147369	147542	147715	147888	148061	148234	148407	148580	148753	148926	149099	149272	149445	149618	149791	149964	150137	150310	150483	150656	150829	151002	151175	151348	151521	151694	151867	152040	152213	152386	152559	152732	152905	153078	153251	153424	153597	153770	153943	154116	154289	154462	154635	154808	154981	155154	155327	155500	155673	155846	156019	156192	156365	156538	156711	156884	157057	157230	157403	157576	157749	157922	158095	158268	158441	158614	158787	158960	159133	159306	159479	159652	159825	160000	160173	160346	160519	160692	160865	161038	161211	161384	161557	161730	161903	162076	162249	162422	162595	162768	162941	163114	163287	163460	163633	163806	163979	164152	164325	164498	164671	164844	165017	165190	165363	165536	165709	165882	166055	166228	166401	166574	166747	166920	167093	167266	167439	167612	167785	167958	168131	168304	168477	168650	168823	168996	169169	169342	169515	169688	169861	169990	170163	170336	170509	170682	170855	171028	171201	171374	171547	171720	171893	172066	172239	172412	172585	172758	172931	173104	173277	173450	173623	173796	173969	174142	174315	174488	174661	174834	175007	175180	175353	175526	175699	175872	176045	176218	176391	176564	176737	176910	177083	177256	177429	177602	177775	177948	178121	178294	178467	178640	178813	178986	179159	179332	179505	179678	179851	179990	180163	180336	180509	180682	180855	181028	181201	181374	181547	181720	181893	182066	182239	182412	182585	182758	182931	183104	183277	183450	183623	183796	183969	184142	184315	184488	184661	184834	185007	185180	185353	185526	185699	185872	186045	186218	186391	186564	186737	186910	187083	187256	187429	187602	187775	187948	188121	188294	188467	188640	188813	188986	189159	189332	189505	189678	189851	190024	190197	190370	190543	190716	190889	191062	191235	191408	191581	191754	191927	192100	192273	192446	192619	192792	192965	193138	193311	193484	193657	193830	194003	194176	194349	194522	194695	194868	195041	195214	195387	195560	195733	195906	196079	196252	196425	196598	196771	196944	197117	197290	197463	197636	197809	197982	198155	198328	198501	198674	198847	199020	199193	199366	199539	199712	199885	200058	200231	200404	200577	200750	200923	201096	201269	201442	201615	201788	201961	202134	202307	202480	202653	202826	203000	203173	203346	203519	203692	203865	204038	204211	204384	204557	204730	204903	205076	205249	205422	205595	205768	205941	206114	206287	206460	206633	206806	206979	207152	207325	207498	207671	207844	208017	208190	208363	208536	208709	208882	209055	209228	209401	209574	209747	209920	210093	210266	210439	210612	210785	210958	211131	211304	211477	211650	211823	211996	212169	212342	212515	212688	212861	213034	213207	213380	213553	213726	213900	214073	214246	214419	214592	214765	214938	215111	215284	215457	215630	215803	215976	216149	216322	216495	216668	216841	217014	217187	217360	217533	217706	217879	218052	218225	218398	218571	218744	218917	219090	219263	219436	219609	219782	219955	220128	220301	220474	220647	220820	220993	221166	221339	221512	221685	221858	222031	222204	222377	222550	222723	222896	223069	223242	223415	223588	223761	223934	224107	224280	224453	224626	224800	224973	225146	225319	225492	225665	225838	226011	226184	226357	226530	226703	226876	227
------------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	-----

51%	47%	49%	45%	41%	53%	54%	56%	52%	61%	60%	60%	All Div ds to Net Prof	62%
<p>BUSINESS: American States Water Co. operates as a holding company. Through its principal subsidiary, Golden State Water Co., it supplies water to 259,919 customers in 70 cities in 10 counties. Service areas include the metropolitan areas of Los Angeles and Orange Counties. The company also provides electricity to 24,353 customers in Big Bear Lake and San Bernardino Cnty. Provides water & wastewater services to U.S. military bases through its ASUS sub. Sold Chaparral City Wtr. of AZ. (6/11). Employs 817. BlackRock, Inc. owns 11.7% of out. shares; Vanguard, 9.5% off. d. 1.5% (4/18 3P/ty). Chairman, Lloyd Ross. Pres. & CEO: Robert Sprowls. Inc. CA. Addr.: 630 East Foothill Blvd., San Dimas, CA 91773. Tel: 909-394-3600. internet.aswater.com.</p>													

American States Water recorded solid results in the fourth quarter. Share earnings were \$0.37, or 6% higher than the previous year's figure. This comparison was accomplished even though profits dipped slightly in the company's core water utility business. The ASUS unit, which provides water services to American army bases, contributed \$0.18 to share earnings, versus \$0.11 in the year-earlier period. Most of the gains were due to the commencement of operations at Fort Riley, increases in earnings from the Elgin Air Force base, and higher activity at Fort Bragg. The armed services are in the process of privatizing water services to many compounds via 50-year contracts. We expect ASUS to win a fair share of the remaining facilities that will eventually seek market bids. American States can augment its earning growth in this segment because it generates a higher return on its investment here as regulators do not set the allowed return on equity.

A major rate case is still pending. In California, water utilities file for rate relief triennially. For the 2018-2021 period, authorities tentatively agreed to a

settlement with the Golden State subsidiary last year, but the agreement hasn't been approved by the California Public Utility Commission. When the deal is finalized, the utility will be allowed to recoup certain expenses incurred in 2018. **Earnings momentum should continue through next year.** With the utility being able to implement higher rates sometime in 2019, American States' earnings per share may well rise 10% to \$1.90. In 2020, we think the bottom line will have another good showing, and earnings per share could reach \$2.05.

These timely shares are only for short-term investors. American States Water is a well-run company, but its stock price is expensive by most key financial metrics. For starters, this income equity now has a yield that is lower than the *Value Line* median. Moreover, three-to-five-year total return potential is well-below average. Conservative investors may find the stock's low volatility and well-defined prospects appealing. However, we think these positives are already factored into the price of the stock.

James A. Flood April 12, 2019

Calendar	Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2016	93.5	112.0	123.8	106.8	436.1
2017	98.8	113.2	124.4	104.2	440.6
2018	94.7	106.9	124.2	111.0	436.8
2019	97.0	115	130	108	450
2020	100	118	132	115	465

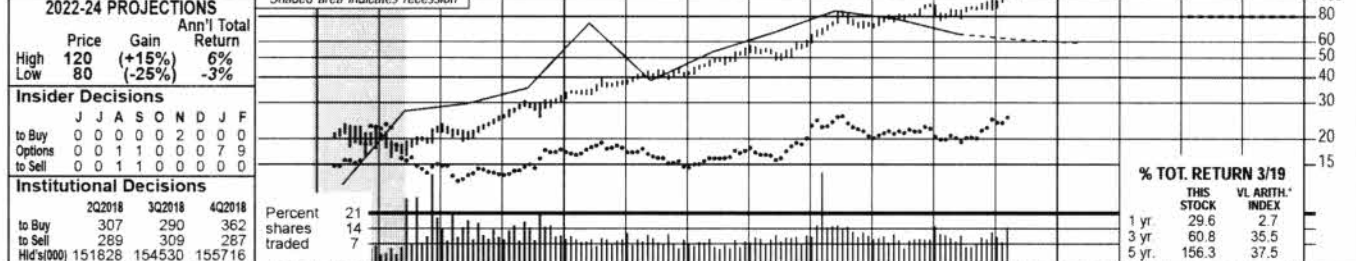
Calendar	Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2016	.28	.45	.59	.30	1.62
2017	.34	.62	.57	.35	1.88
2018	.29	.44	.62	.37	1.72
2019	.30	.55	.65	.40	1.90
2020	.33	.61	.69	.42	2.05

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2015	.213	.213	.224	.224	.87
2016	.224	.224	.224	.242	.91
2017	.242	.242	.255	.255	.99
2018	.255	.255	.275	.275	1.06
2019	.275				

Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	80
Earnings Predictability	85

AMERICAN WATER NYSE-AWK				RECENT PRICE	103.71	P/E RATIO	32.7	(Trailing: 32.9 Median: 19.0)	RELATIVE P/E RATIO	1.88	DIV'D YLD	1.9%	VALUE LINE
--------------------------------	--	--	--	--------------	--------	-----------	------	-------------------------------	--------------------	------	-----------	------	------------

TIMELINESS 1	Raised 4/5/19	High: 23.7	23.0	25.8	32.8	39.4	45.1	56.2	61.2	85.2	92.4	98.2	107.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
---------------------	---------------	------------	------	------	------	------	------	------	------	------	------	------	-------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



2003	2004	2005	2006	2007 ^E	2008 ^E	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	© VALUE LINE PUB. LLC	22-24
--	--	--	13.08	13.84	14.61	13.98	15.49	15.18	16.25	16.28	16.78	17.72	18.54	18.81	19.04	19.95	20.95	Revenues per sh	23.80
--	--	--	.65	d.47	2.87	2.89	3.56	3.73	4.27	4.36	4.75	5.13	5.26	5.14	6.15	6.75	7.05	"Cash Flow" per sh	8.30
--	--	--	d.97	d2.14	1.10	1.25	1.53	1.72	2.11	2.06	2.39	2.64	2.62	2.38	3.15	3.60	3.85	Earnings per sh ^A	4.70
--	--	--	--	--	.40	.82	.86	.90	1.21	.84	1.21	1.33	1.47	1.62	1.78	1.94	2.10	Div'd Decl'd per sh ^B	2.75
--	--	--	4.31	4.74	6.31	4.50	4.38	5.27	5.25	5.50	5.33	6.51	7.36	8.04	8.78	9.15	9.15	Cap'l Spending per sh	9.00
--	--	--	23.86	28.39	25.64	22.91	23.59	24.11	25.11	26.52	27.39	28.25	29.24	30.13	32.42	34.55	36.55	Book Value per sh ^D	41.25
--	--	--	160.00	160.00	160.00	174.63	175.00	175.66	176.99	178.25	179.46	178.28	178.10	178.44	180.68	181.00	182.00	Common Shs Outst'g ^C	189.00
--	--	--	--	--	18.9	15.6	14.6	16.8	16.7	19.9	20.0	20.5	27.7	33.8	27.3	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	21.5
--	--	--	--	--	1.14	1.04	.93	1.05	1.06	1.12	1.05	1.03	1.45	1.70	1.47			Relative P/E Ratio	1.20
--	--	--	--	--	1.9%	4.2%	3.8%	3.1%	3.4%	2.0%	2.5%	2.5%	2.0%	2.0%	2.1%			Avg Ann'l Div'd Yield	2.8%

CAPITAL STRUCTURE as of 12/31/18				2440.7	2710.7	2666.2	2876.9	2901.9	3011.3	3159.0	3302.0	3357.0	3440.0	3615	3815	Revenues (\$mil)	4500			
Total Debt \$8604.0 mil. Due in 5 Yrs \$1555.0 mil.				209.9	267.8	304.9	374.3	369.3	429.8	476.0	468.0	426.0	567.0	650	700	Net Profit (\$mil)	890			
LT Debt \$7569.0 mil. LT Interest \$328.0 mil. (56% of Cap'l)				37.9%	40.4%	39.5%	40.7%	39.1%	39.4%	39.1%	39.2%	53.3%	28.2%	21.0%	21.0%	Income Tax Rate	21.0%			
				--	--	--	6.2%	5.1%	--	--	--	5.1%	4.0%	5.0%	5.0%	AFUDC % to Net Profit	5.0%			
Leases, Uncapitalized: Annual rentals \$17.0 mil.				56.9%	56.8%	55.7%	53.9%	52.4%	52.4%	53.7%	52.4%	54.7%	56.3%	57.0%	58.0%	Long-Term Debt Ratio	59.0%			
Pension Assets 12/18 \$1499.0 mil				43.1%	43.2%	44.2%	46.1%	47.6%	47.4%	46.2%	47.5%	45.3%	43.6%	43.0%	42.0%	Common Equity Ratio	41.0%			
Oblig. \$1892.0 mil.				9289.0	9561.3	9580.3	9635.5	9940.7	10364	10911	10967	11875	13433	14600	15700	Total Capital (\$mil)	18800			
Pfd Stock \$7.0 mil. Pfd Div'd \$ 4 mil				10524	11059	11021	11739	12391	12900	13933	14992	16246	17409	18500	19500	Net Plant (\$mil)	22500			
				3.8%	4.4%	4.8%	5.4%	5.1%	5.5%	5.7%	5.6%	4.9%	5.4%	5.5%	5.5%	Return on Total Cap'l	6.0%			
Common Stock 180,751,697 shs				5.2%	6.5%	7.2%	8.4%	7.8%	8.7%	9.4%	9.0%	7.9%	9.7%	10.5%	10.5%	Return on Shr. Equity	11.5%			
as of 2/14/19				5.2%	6.5%	7.2%	8.4%	7.8%	8.7%	9.4%	9.0%	7.9%	9.7%	10.5%	10.5%	Return on Com Equity	11.5%			
MARKET CAP: \$18.7 billion (Large Cap)				1.8%	2.8%	3.5%	3.6%	4.7%	4.3%	4.7%	4.0%	2.5%	4.2%	5.0%	5.0%	Retained to Com Eq	5.0%			
CURRENT POSITION				2016	2017	12/31/18	65%	56%	52%	57%	40%	50%	50%	56%	68%	56%	54%	55%	All Div'ds to Net Prof	59%

AQUA AMERICA NYSE-WTR				RECENT PRICE	36.31	P/E RATIO	31.6	Trailing: 33.6 Median: 22.0	RELATIVE P/E RATIO	1.82	DIV'D YLD	2.5%	VALUE LINE						
TIMELINESS	3	Lowered 11/30/18	High: 17.6 Low: 9.8	17.2 12.3	18.4 13.2	19.0 15.4	21.5 16.8	28.1 20.6	28.2 22.4	31.1 24.4	35.8 28.0	39.6 29.4	39.4 32.1	37.6 32.7	Target Price Range 2022 2023 2024				
SAFETY	2	Raised 4/20/12	LEGENDS 1.60 x Dividends p sh divided by Interest Rate Relative Price Strength 5-for-4 split '913 Options: Yes Shaded area indicates recession																
TECHNICAL	2	Raised 4/12/19	5-for-4																
BETA	70	(1.00 = Market)	5-for-4																
2022-24 PROJECTIONS				Ann'l Total															
High	Price	Gain	Return																
Low	55	(+50%)	13%																
	40	(+10%)	6%																
Insider Decisions				J J A S O N D J F															
to Buy				0 0 0 0 0 0 0 0 0 0 0 0															
Options				0 7 0 0 0 0 0 0 0 0 0 0															
to Sell				0 0 0 0 0 0 0 0 0 0 0 0															
Institutional Decisions				2Q2018 3Q2018 4Q2018															
to Buy				198 206 241															
to Sell				174 180 213															
Hld's(000)				96445 99521 101230															
Percent shares traded				15 10 5															
				1 yr. 9.7 2.7															
				3 yr. 23.2 35.5															
				5 yr. 64.4 37.5															
				% TOT. RETURN 3/19															
				THIS STOCK VL ARITH. INDEX															
				1 yr. 9.7 2.7															
				3 yr. 23.2 35.5															
				5 yr. 64.4 37.5															
				© VALUE LINE PUB. LLC 22-24															
2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Revenues per sh	6.50
2.38	2.78	3.08	3.23	3.61	3.71	3.93	4.21	4.10	4.32	4.32	4.37	4.61	4.62	4.56	4.71	5.00	5.25	"Cash Flow" per sh	3.10
.77	.87	.97	1.01	1.10	1.14	1.29	1.42	1.45	1.51	1.82	1.89	1.87	2.07	2.12	1.90	2.35	2.50	Earnings per sh ^A	2.05
.46	.51	.57	.56	.57	.58	.62	.72	.83	.87	1.16	1.20	1.14	1.32	1.35	1.08	1.50	1.60	Div'd Decl'd per sh ^B	1.35
.28	.29	.32	.35	.38	.41	.44	.47	.50	.54	.58	.63	.69	.74	.79	.85	.91	.97	Cap'l Spending per sh	2.25
1.06	1.23	1.47	1.64	1.43	1.58	1.66	1.89	1.90	1.98	1.73	1.84	2.07	2.16	2.69	2.78	2.80	2.80	Book Value per sh	15.55
4.27	4.71	5.04	5.57	5.85	6.26	6.50	6.81	7.21	7.90	8.63	9.27	9.78	10.43	11.02	11.28	12.20	12.85	Common Shs Outst'g ^C	182.00
154.31	158.97	161.21	165.41	166.75	169.21	170.61	172.46	173.60	175.43	177.93	178.59	176.54	177.39	177.71	178.09	178.50	179.00	Avg Ann'l P/E Ratio	24.0
24.5	25.1	31.8	34.7	32.0	24.9	23.1	21.1	21.3	21.9	21.2	20.8	23.5	23.9	24.7	32.6	<i>Bold figures are Value Line estimates</i>		Relative P/E Ratio	1.35
1.40	1.33	1.69	1.87	1.70	1.50	1.54	1.34	1.34	1.39	1.19	1.09	1.18	1.25	1.24	1.76			Avg Ann'l Div'd Yield	2.3%
2.5%	2.3%	1.8%	1.8%	2.1%	2.8%	3.1%	3.1%	2.8%	2.8%	2.4%	2.5%	2.6%	2.3%	2.4%	2.4%				
CAPITAL STRUCTURE as of 12/31/18				670.5 726.1 712.0 757.8 768.6 779.9 814.2 819.9 809.5 838.1 895 940														Revenues (\$mill)	1185
Total Debt \$2558.4 mill. Due in 5 Yrs \$698.8 mill.				104.4 124.0 144.8 153.1 205.0 213.9 201.8 234.2 239.7 192.0 268 285														Net Profit (\$mill)	375
LT Debt \$2398.4 mill LT Interest \$96.0 mill (54% of Cap'l)				39.4% 39.2% 32.9% 39.0% 10.0% 10.5% 6.9% 8.2% 6.6% 6.8% 10.0% 15.0%														Income Tax Rate	20.0%
Pension Assets-12/18 \$239.0 mill. Oblig. \$282.0 mill.				55.6% 56.6% 52.7% 52.7% 48.9% 48.5% 50.3% 48.4% 50.6% 54.4% 56.0% 56.5%														AFUDC % to Net Profit	6.5%
Pfd Stock None				44.4% 43.4% 47.3% 47.3% 51.1% 51.5% 49.7% 51.6% 49.4% 45.6% 44.0% 43.5%														Long-Term Debt Ratio	56.0%
Common Stock 178,145,692 shares as of 2/12/19				2495.5 2706.2 2646.8 2929.7 3003.6 3216.0 3469.5 3587.7 3965.4 4407.8 4930 5300														Common Equity Ratio	44.0%
MARKET CAP: \$6.5 billion (Large Cap)				3227.3 3469.3 3612.9 3936.2 4167.3 4402.0 4688.9 5001.6 5399.9 5930.3 6100 6400														Total Capital (\$mill)	6425
CURRENT POSITION				2016	2017	12/31/18												Net Plant (\$mill)	7200
(SMILL.)																		Return on Total Cap'l	7.5%
Cash Assets				3.7	4.2	3.6												Return on Shr. Equity	13.5%
Receivables				97.4	98.6	101.2												Return on Com Equity	13.5%
Inventory (AvgCst)				13.0	14.4	15.8												Retained to Com Eq	4.5%
Other				14.6	14.0	26.6												All Div'ds to Net Prof	66%
Current Assets				128.7	131.2	147.2													
Accts Payable				59.9	59.2	77.3													
Debt Due				157.2	117.4	160.0													
Other				84.4	107.9	161.7													
Current Liab.				301.5	284.5	399.0													
ANNUAL RATES				Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '22-'24													
of change (per sh)																			
Revenues				3.0%	1.5%	6.0%													
"Cash Flow"				6.5%	5.0%	7.5%													
Earnings				8.0%	5.5%	8.5%													
Dividends				7.5%	8.0%	9.5%													
Book Value				6.5%	6.5%	6.0%													
Cal-endar	QUARTERLY REVENUES (\$ mill.)					Full Year													
	Mar.31	Jun.30	Sep.30	Dec.31															
2016	192.6	203.9	226.6	196.8		819.9													
2017	187.8	203.4	215.0	203.3		809.5													
2018	194.3	211.9	226.2	205.7		838.1													
2019	205	225	235	230		895													
2020	215	235	250	240		940													
Cal-endar	EARNINGS PER SHARE ^A					Full Year													
	Mar.31	Jun.30	Sep.30	Dec.31															
2016	.29	.34	.41	.28		1.32													
2017	.28	.34	.43	.30		1.35													
2018	.29	.37	.44	.30		1.08													
2019	.31	.38	.48	.33		1.50													
2020	.33	.41	.51	.35		1.60													
Cal-endar	QUARTERLY DIVIDENDS PAID ^B					Full Year													
	Mar.31	Jun.30	Sep.30	Dec.31															
2015	.165	.165	.178	.178		.69													
2016	.178	.178	.1913	.1913		.74													
2017	.1913	.1913	.2047	.2047		.79													
2018	.2047	.2047	.219	.219		.85													
2019	.219																		

Aqua America is awaiting final approvals of a major acquisition. Last October, the water utility announced that it would pay \$4.275 billion, as well as assume \$1.3 billion in debt, to buy Peoples Natural Gas Company in an all-cash transaction. Aqua's size would increase meaningfully as the combined entity would have a rate base of \$10.8 billion, and 1.74 million connections serving five million people. Three different state authorities have to sign off on the deal, so it is not expected to be completed until the middle of this year.

A major new investor has been brought on board. On March 29th, it was announced that the Canadian Pension Plan (CPPIB) would pay \$750 million for 21.7 million newly issued shares. This would increase the number of shares outstanding by about 12%. The funds will be used to help finance the purchase of Peoples' Gas and is contingent upon the closing of the deal. (Please note: As per Value Line convention, we will not include the proposed acquisition in our earnings presentation until the Peoples' transaction is official.)

residential, 58%, commercial, 16%, industrial, wastewater & other, 26%. Off. & dir. own less than 1% of the common stock; Vanguard Group, 10.7%; Blackrock, Inc. 9.5%; State Street Capital, 4.9% (3/19 Proxy). President & Chief Executive Officer: Christopher Franklin, Inc. PA Addr.: 762 West Lancaster Avenue, Bryn Mawr, PA 19010. Tel.: 610-525-1400. Internet: www.aquaamerica.com.

The new entity will have a changed risk profile. While Aqua has experience operating a regulated entity, the gas sector is different than the water business. Mainly, citizens realize that old rusty water pipes have to be replaced. There is more community push back when it comes to transporting natural gas. Since Aqua already has a good relationship with Pennsylvania regulators, where most of the business will be centered, we don't anticipate any major changes. Still, we expect state authorities to be more challenging on the natural gas side. In addition, the company's balance sheet will undergo a large transformation. In addition to the new shares sold to CPPIB, more equity and bonds will have to be issued. We estimate that another 50 million new shares may be required, along with perhaps over \$2 billion of debt obligations.

Investors are probably better off waiting on the sidelines. The proposed merger has left the company's near-term prospects very ill-defined, making WTR much riskier than most of its peers in this group.

James A. Flood
April 12, 2019

CALIFORNIA WATER NYSE-CWT				RECENT PRICE	52.41	P/E RATIO	32.8	(Trailing: 41.6 Median: 20.0)	RELATIVE P/E RATIO	1.89	DIV'D YLD	1.5%	VALUE LINE						
TIMELINESS	1	Raised 3/8/19	High: 23.3	24.1	19.8	19.4	19.3	23.4	26.4	26.0	36.8	46.2	49.1	55.0	Target Price Range 2022 2023 2024				
SAFETY	3	Lowered 7/27/07	Low: 13.8	16.7	16.9	16.7	16.8	18.4	20.3	19.5	22.5	32.4	35.3	44.6					
TECHNICAL	2	Raised 4/12/19	LEGENDS 1.33 x Dividends p sh divided by Interest Rate Relative Price Strength 2-for-1 split 6/11 Options: Yes Shaded area indicates recession																
BETA	70	(1.00 = Market)	2022-24 PROJECTIONS Ann'l Total High Price 55 Gain (+5%) 3% Return Low 35 (-35%) -7%																
Insider Decisions			Institutional Decisions 2020/18 3Q2018 4Q2018 to Buy 87 104 126 to Sell 91 77 76 Held's(000) 35009 35103 35160																
			Percent shares traded 18 12 6																
			% TOT. RETURN 3/19 THIS STOCK VL ARTH' INDEX 1 yr. 48.3 2.7 3 yr. 115.4 35.5 5 yr. 154.6 37.5																
© VALUE LINE PUB. LLC 22-24																			
2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Revenues per sh	15.50
8.18	8.59	8.72	8.10	8.88	9.90	10.82	11.05	12.00	13.34	12.23	12.50	12.29	12.70	13.89	14.38	14.65	14.90	"Cash Flow" per sh	3.60
1.26	1.42	1.52	1.36	1.56	1.86	1.93	1.93	2.07	2.32	2.21	2.47	2.22	2.34	3.00	2.99	3.30	3.40	Earnings per sh ^A	2.00
.61	.73	.74	.67	.75	.95	.98	.91	.86	1.02	1.02	1.19	.94	1.01	1.40	1.26	1.65	1.75	Div'd Decl'd per sh ^B	1.05
.56	.57	.57	.58	.58	.59	.59	.60	.62	.63	.64	.65	.67	.69	.72	.75	.79	.82	Cap'l Spending per sh	3.65
2.19	1.87	2.01	2.14	1.84	2.41	2.66	2.97	2.83	3.04	2.58	2.76	3.69	4.77	5.40	4.35	3.95	4.00	Book Value per sh ^C	17.00
7.22	7.83	7.90	9.07	9.25	9.72	10.13	10.45	10.76	11.28	12.54	13.11	13.41	13.75	14.44	15.19	15.45	15.80	Common Shs Outst'g ^D	50.00
33.86	36.73	36.78	41.31	41.33	41.45	41.53	41.67	41.82	41.98	47.74	47.81	47.88	47.97	48.01	48.07	48.50	49.00	Avg Ann'l P/E Ratio	23.0
22.1	20.1	24.9	29.2	26.1	19.8	19.7	20.3	21.3	17.9	20.1	19.7	24.8	29.6	26.9	32.7	Bold figures are Value Line estimates		Relative P/E Ratio	1.25
1.26	1.06	1.33	1.58	1.39	1.19	1.31	1.29	1.34	1.14	1.13	1.04	1.25	1.55	1.35	1.77			Avg Ann'l Div'd Yield	2.5%
4.2%	3.9%	3.1%	2.9%	3.0%	3.1%	3.1%	3.2%	3.4%	3.5%	3.1%	2.8%	2.9%	2.3%	1.9%	1.8%				
CAPITAL STRUCTURE as of 12/31/18				449.4	460.4	501.8	560.0	584.1	597.5	588.4	609.4	666.9	691.2	710	730	Revenues (\$mill) ^E	775		
Total Debt \$880.0 mill. Due in 5 Yrs \$430.1 mill.				40.6	37.7	36.1	42.6	47.3	56.7	45.0	48.7	67.2	60.5	80.0	85.5	Net Profit (\$mill)	100		
LT Debt \$710.0 mill. LT Interest \$40.0 mill. (49% of Cap'l)				40.3%	39.5%	40.5%	37.5%	30.3%	33.0%	36.0%	35.5%	30.1%	21.0%	21.0%	21.0%	Income Tax Rate	21.0%		
Pension Assets-12/18 \$469.7 mill. Oblig. \$639.9 mill.				7.6%	4.2%	7.6%	8.0%	4.3%	2.7%	4.3%	6.1%	3.5%	5.0%	5.0%	5.0%	AFUDC % to Net Profit	5.0%		
Pfd Stock None				47.1%	52.4%	51.7%	47.8%	41.6%	40.1%	44.4%	44.6%	42.7%	49.3%	46.5%	43.5%	Long-Term Debt Ratio	38.0%		
Common Stock 48,065,000 shs				52.9%	47.6%	48.3%	52.2%	58.4%	59.9%	55.6%	55.4%	57.3%	50.7%	53.5%	56.5%	Common Equity Ratio	62.0%		
MARKET CAP: \$2.5 billion (Mid Cap)				794.9	914.7	931.5	908.2	1024.9	1045.9	1154.4	1191.2	1209.3	1440.2	1400	1375	Total Capital (\$mill)	1375		
CURRENT POSITION (\$mill.)				1198.1	1294.3	1381.1	1457.1	1515.8	1590.4	1701.8	1859.3	2048.0	2232.7	2300	2385	Net Plant (\$mill)	2500		
Cash Assets				6.5%	5.5%	5.5%	6.3%	6.0%	6.3%	5.2%	5.5%	7.1%	5.5%	6.5%	7.5%	Return on Total Cap'l	8.5%		
Other				9.6%	8.6%	8.0%	9.0%	7.9%	9.1%	7.0%	7.4%	9.7%	8.3%	10.5%	11.0%	Return on Shr. Equity	12.0%		
Current Assets				9.6%	8.6%	8.0%	9.0%	7.9%	9.1%	7.0%	7.4%	9.7%	8.3%	10.5%	11.0%	Return on Com Equity	12.0%		
Accts Payable				3.8%	3.0%	2.3%	3.4%	3.4%	4.1%	2.0%	2.4%	4.7%	3.3%	5.5%	6.0%	Retained to Com Eq	5.5%		
Debt Due				60%	66%	71%	62%	56%	55%	71%	68%	51%	60%	48%	47%	All Div'ds to Net Prof	53%		
Other																			
Current Liab																			

(A) Diluted earnings. Next earnings report due early May.	(B) Dividends historically paid in mid-Feb., May, Aug., and November. Div'd reinvestment plan available.	(C) In millions.	<table><tr><td>Company's Financial Strength</td><td>B++</td></tr><tr><td>Stock's Price Stability</td><td>65</td></tr><tr><td>Price Growth Persistence</td><td>45</td></tr><tr><td>Earnings Predictability</td><td>85</td></tr></table>	Company's Financial Strength	B++	Stock's Price Stability	65	Price Growth Persistence	45	Earnings Predictability	85
Company's Financial Strength	B++										
Stock's Price Stability	65										
Price Growth Persistence	45										
Earnings Predictability	85										

© 2019 Value Line, Inc. All rights reserved. Factual material is obtained from sources believed to be reliable and is provided without warranties of any kind. THE PUBLISHER IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS HEREIN. This publication is strictly for subscriber's own, non-commercial, internal use. No part of it may be reproduced, resold, stored or transmitted in any printed, electronic or other form, or used for generating or marketing any printed or electronic publication, service or product.

To subscribe call 1-800-VALUELINE

YORK WATER NDQ-YORW				RECENT PRICE	33.69	P/E RATIO	29.6	Trailing: 32.4 Median: 25.0	RELATIVE P/E RATIO	1.70	DIV'D YLD	2.0%	VALUE LINE								
TIMELINESS	3	Raised 1/25/19	High: 16.5	18.0	18.0	18.1	18.5	22.0	24.3	26.7	39.8	39.9	36.1	36.5	Target Price Range						
SAFETY	3	Lowered 7/17/15	Low: 6.2	9.7	12.8	15.8	16.8	17.6	18.8	19.7	23.8	31.7	27.5	30.3	2022	2023	2024				
TECHNICAL	1	Raised 4/12/19	LEGENDS 1.10 x Dividends p sh divided by Interest Rate Relative Price Strength 3-for-2 split 9/06 Options: Yes Shaded area indicates recession																		
BETA	.75	(1.00 = Market)																			
2022-24 PROJECTIONS				Ann'l Total																	
High	Price	Gain	Return																		
Low	45	(+35%)	9%																		
	30	(-10%)	Nil																		
Insider Decisions				J J A S O N D J F																	
to Buy				2	14	2	2	14	2	3	14	2									
Options				0	0	0	0	0	0	0	0	0									
to Sell				0	0	1	0	0	0	0	0	0									
Institutional Decisions				2Q2018 3Q2018 4Q2018																	
to Buy				39	42	43															
to Sell				33	36	41															
Hld's(000)				4448	4539	4765															
				Percent shares traded	12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														
					12	8	4														

EXHIBIT TJB-COC-DT2

**Liberty Utilities (Black Mountain Sewer), Corp.
Comparable Earnings**

Average Earned Return on Equity and Risk Measures

Line No.	Company	Symbol	VL Industry	VL Beta	VL Status	VL Financial Strength	VL Earnings Predictability	VL Current Dividend Yld	% Debt	10-year Mean Book ROE	CVROE	STDROE
1	AT&T Inc.	T	TELESERV	0.75	U	A++	100	6.43	47.45	13.44%	0.08182	0.01099
2	Equifax Inc.	EFX	INFOSER	1	U	A	95	1.27	45.84	20.77%	0.12242	0.02542
3	Flowers Foods	FLO	FOODPROC	0.75	U	B+	80	3.41	44.05	16.65%	0.11016	0.01834
4	Genuine Parts	GPC	AUTOPRTS	0.9	U	A+	95	3.08	41.34	20.36%	0.12213	0.02486
5	Matthews Int'l	MATW	FUNL SVC	1.05	U	B+	100	2.33	51.70	14.14%	0.11858	0.01677
6	Oracle Corp.	ORCL	SOFTWARE	1	U	A++	95	1.86	55.11	27.14%	0.09324	0.02531
7	Quest Diagnostics	DGX	MEDSERV	0.95	U	B++	95	2.21	39.66	16.48%	0.11128	0.01834
8	Smucker (J.M.)	SJM	FOODPROC	0.7	U	A	95	2.86	37.27	10.31%	0.10378	0.01070
9	Sonoco Products	SON	PACKAGE	1	U	A	95	2.79	40.35	16.32%	0.10829	0.01767
10	SYNNEX Corp.	SNX	INDUSRV	1.2	U	A	80	1.62	43.32	12.95%	0.11718	0.01518
11	TELUS Corporation	T.TO	TELESERV	0.6	U	B++	90	4.51	56.39	16.19%	0.11999	0.01943
12	Thermo Fisher Sci.	TMO	INSTRMNT	1.05	U	A	75	0.28	39.11	9.51%	0.12097	0.01150
13	United Technologies	UTX	DIVERSIF	1.05	U	A++	90	2.29	51.72	19.27%	0.09054	0.01745
14	Zimmer Biomet Hldgs	ZBH	MEDICINV	0.95	U	A	65	0.87	42.74	13.75%	0.10018	0.01378
	Average			0.93		A	89.29	2.56	45.43	16.23%	0.108611	0.017553
	Median			0.98		A	95.00	2.31	43.69	16.26%	0.110720	0.017560

Consturction of Proxy Group for Comparable Earnings

VL1700 firms first filtered using the following criteria:

1. Dividend paying stocks
2. Debt between 35 and 65 percent
3. VL Financial Strenght B+ or above
4. Projected EPS growth <= 10%

These criteria narrowed the sample down to 41 companies

The average CVROE and average CVOM for the period 2009-2018 was then computed on this sample.

The following filter was applied to the 41 companies:

1. CVROE <= average CVROE* .5
2. STDROE <= average STDROE* .5
3. Eliminate Regulated firms, Financial Services firms, and REITs

EXHIBIT TJB-COC-DT3

Liberty Utilities (Black Mountain Sewer), Corp.
Risk Premium Estimates for Use in Modified CAPM
Based on *Duff and Phelps Cost of Capital Navigator Supplementary Data Risk Study and Regression Data Equations*

Line No.	Company	Symbol	Measures of size (Millions)						
			MV Equity ¹	Book Equity ¹	MVIC ¹	5 Yr Avg. Net Income ¹	Total Assets ¹	5 Yr Avg. EBITDA ¹	Sales
1	American States Water	AWR	\$ 2,741	\$ 559	\$ 3,121	\$ 63	\$ 1,470	\$ 156	\$ 437
2	American Water Works	AWK	\$ 21,062	\$ 5,858	\$ 28,631	\$ 3,254	\$ 1,470	\$ 1,580	\$ 3,440
3	Aqua America	WTR	\$ 7,278	\$ 2,009	\$ 9,676	\$ 216	\$ 6,159	\$ 456	\$ 838
4	California Water	CWT	\$ 2,420	\$ 731	\$ 3,130	\$ 57	\$ 2,412	\$ 186	\$ 698
5	Middlesex	MSEX	\$ 1,004	\$ 249	\$ 1,157	\$ 23	\$ 620	\$ 64	\$ 138
6	York Water Company	YORW	\$ 448	\$ 126	\$ 541	\$ 12	\$ 320	\$ 30	\$ 48
7	Liberty Utilities (Black Mountain Sewer), Corp.		N/A	\$ 0.4	N/A	\$ 0.4	\$ 0.9	\$ 1.3	\$ 83.7

¹ From Value Line Investment Analyzer data weekly as of March 29, 2018.

Net Income Data (\$ millions)									
Line No.	Company	Symbol	Average						
			2018	2017	2016	2015	2014	2013	2012
8	American States Water	AWR	\$ 63.9	\$ 69.4	\$ 59.7	\$ 60.5	\$ 61.1	\$ 62.9	\$ 62.9
9	American Water Works	AWK	\$ 3,440.0	\$ 3,357.0	\$ 3,302.0	\$ 3,159.0	\$ 3,011.3	\$ 3,253.9	\$ 3,253.9
10	Aqua America	WTR	\$ 192.0	\$ 239.7	\$ 234.2	\$ 201.8	\$ 213.9	\$ 216.3	\$ 216.3
11	California Water	CWT	\$ 65.6	\$ 67.2	\$ 48.7	\$ 45.0	\$ 56.7	\$ 56.6	\$ 56.6
12	Middlesex	MSEX	\$ 32.5	\$ 22.8	\$ 22.7	\$ 20.0	\$ 18.4	\$ 23.3	\$ 23.3
13	York Water Company	YORW	\$ 13.4	\$ 13.0	\$ 11.9	\$ 12.5	\$ 11.5	\$ 12.4	\$ 12.4
14	Liberty Utilities (Black Mountain Sewer), Corp.		\$ 0.5	\$ 0.9	\$ 0.3	\$ -	\$ 0.2	\$ 0.4	\$ 0.4

[illegible]

[illegible]

Liberty Utilities (Black Mountain Sewer), Corp.
Comparative Risk Study - Adjustment to Size Premium
Based on *Duff and Phelps Cost of Capital Navigator Supplementary Data Risk Study and Regression Data Equations*

Line No.	Company	Symbol	OM	5 - Year Historical		CV(ROE)
1				CV (OM)		
2	American States Water	AWR	25.84%	12.48%		5.63%
3	American Water Works	AWK	33.98%	5.34%		7.67%
3	Aqua America	WTR	39.73%	2.03%		11.39%
4	California Water	CWT	18.40%	13.32%		13.78%
5	Middlesex	MSEX	39.35%	3.61%		14.25%
6	York Water Company	YORW	49.78%	1.97%		3.72%
13	Proxy Group Average		34.51%	6.46%		9.41%
Proxy Group Risk Differences						
14	Smoothed Average Risk Premium From Equivalent D Exhibit		5.93%	8.33%		Average 8.18%
15	Smoothed Average Risk Premium From Equivalent C Exhibit		9.69%	9.61%		7.48%
16	Indicated Risk Adjustment		-3.75%	-1.27%		9.24%
17	Possible Risk Adjustment		0.00%	to		-2.03%
						Mid-point -1.02%
18	Liberty Utilities (Black Mountain Sewer), Corp.		OM	5 - Year Historical		CV(ROE)
19				CV (OM)		
20	Smoothed Average Risk Premium From Equivalent D Exhibit		26.91%	46.82%		56.54%
21	Smoothed Average Risk Premium From Equivalent C Exhibit		6.68%	10.35%		Average 8.88%
22	Indicated Risk Adjustment		9.69%	9.61%		8.88%
			-3.01%	0.74%		9.51%
	Possible Risk Adjustment		0.00%	to		-0.63%
						Mid-point -0.32%

EXHIBIT TJB-COC-DT4

Liberty Utilities (Black Mountain Sewer), Corp.
Comparative Risk Study

Page 1 of 4

Line No.										
1	Operating Income EBIT (\$ in millions)							Std	Co-efficient	
2		2018	2017	2016	2015	2014	Average	Dev.	of variation	
3	Company ¹								of Operating Income	
4	American States Water	AWR	101.0	137.4	102.5	118.5	119.0	115.70	14.853	0.1284
5	American Water Works	AWK	1,139.0	1,244.0	1,070.0	1,075.0	1,002.6	1,106.12	90.947	0.0822
6	Aqua America	WTR	323.2	329.0	325.6	321.1	314.4	322.64	5.476	0.0170
7	California Water	CWT	156.4	123.9	101.0	95.7	108.6	117.11	24.409	0.2084
8	Middlesex	MSEX	51.5	52.2	54.6	48.8	46.6	50.72	3.099	0.0611
9	York Water Company	YORW	23.7	23.6	24.0	23.8	23.2	23.65	0.298	0.0126
10	Proxy Group							23.1803		0.0850
11	Liberty Utilities (Black Mountain Sewer), Corp.	2018	2017	2016	2015	2014	Average	Std Dev.	Co-efficient of variation	
		0.85	0.91	0.54	0.16	0.81	0.66	0.31	of Operating Income	0.4694
12	Risk relative to the average risk of the proxy group									5.53
13	Sales (\$ in millions)	2018	2017	2016	2015	2014	Average			
14	Company ¹									
15	American States Water	AWR	437	441	436	459	466	448		
16	American Water Works	AWK	3,440	3,357	3,302	3,159	3,011	3,254		
17	Aqua America	WTR	838	810	820	814	780	812		
18	California Water	CWT	698	667	609	588	598	632		
19	Middlesex	MSEX	138	131	133	126	117	129		
20	York Water Company	YORW	48	49	48	47	46	48		
21	Liberty Utilities (Black Mountain Sewer), Corp.	2018	2017	2016	2015	2014	Average			
		2.49	2.56	2.53	2.30	2.23	2.42			
22	Operating Margin (%)							Std	Co-efficient	
23	Company ¹							Dev.	of variation	
24	American States Water	AWR	23.12%	31.20%	23.51%	25.84%	25.56%	25.84%	0.0323	0.1248
25	American Water Works	AWK	33.11%	37.06%	32.40%	34.03%	33.29%	33.98%	0.0182	0.0534
26	Aqua America	WTR	38.56%	40.64%	39.71%	39.44%	40.31%	39.73%	0.0081	0.0203
27	California Water	CWT	22.40%	18.57%	16.57%	16.26%	18.17%	18.40%	0.0245	0.1332
28	Middlesex	MSEX	37.28%	39.91%	41.06%	38.73%	39.76%	39.35%	0.0142	0.0361
29	York Water Company	YORW	48.84%	48.59%	50.44%	50.52%	50.52%	49.78%	0.0098	0.0197
30	Proxy Group		33.89%	35.99%	33.95%	34.14%	34.60%	34.51%	0.0178	0.0646
31	Liberty Utilities (Black Mountain Sewer), Corp.	2018	2017	2016	2015	2014	Average	Std Dev.	Co-efficient of variation	
		34.04%	35.41%	21.48%	7.14%	36.50%	26.91%	0.1260	of Operating Margin	0.4682
32	Risk relative to the average risk of the proxy group									7.25

¹ Based on information from Value Line Investment Analyzer weekly ended May 1 2019

**Liberty Utilities (Black Mountain Sewer), Corp.
Comparative Risk Study**

Page 2 of 4

Line										
No.										
1	<u>Return on Equity (ROE)</u>									
2			<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>Average</u>	<u>Std</u>	Co-efficient
3	<u>Company</u> ¹	<u>Symbol</u>							<u>Dev.</u>	of variation
4	American States Water	AWR	11.4%	13.1%	12.1%	13.0%	12.0%	12.3%	0.0069	of ROE
5	American Water Works	AWK	9.7%	7.9%	9.0%	9.4%	8.7%	8.9%	0.0069	
6	Aqua America	WTR	9.6%	12.2%	12.7%	11.7%	12.9%	11.8%	0.0135	
7	California Water	CWT	9.0%	9.7%	7.4%	7.0%	9.1%	8.4%	0.0116	
8	Middlesex	MSEX	13.0%	9.9%	10.3%	9.6%	9.3%	10.4%	0.0149	
9	York Water Company	YORW	10.6%	10.9%	10.4%	11.5%	11.0%	10.9%	0.0040	
10	Proxy Group		10.5%	10.6%	10.3%	10.4%	10.5%	10.5%	0.0096	
										Co-efficient
11	Company		<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>Average</u>	<u>Std</u>	of variation
			10.55%	20.41%	6.34%	4.72%	12.48%	10.90%	0.06	of ROE
12	Risk relative to the average risk of the proxy group									6.01
1	Operating Leverage = Percent Change in Operating Income/Percent Change in Sales									
2	(also a measure of business risk)									
3			<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>Average</u>			
4	<u>Company</u> ¹	<u>Symbol</u>								
5	American States Water	AWR	30.92	32.96	2.74	0.31	16.73			
6	American Water Works	AWK	3.41	9.76	0.10	1.47	3.69			
7	Aqua America	WTR	0.50	0.82	2.00	0.49	0.95			
8	California Water	CWT	5.60	2.40	1.56	0.16	2.43			
9	Middlesex	MSEX	0.25	2.71	2.16	0.63	1.44			
10	York Water Company	YORW	0.69	0.77	0.85	1.00	0.82			
11	Average		6.89	8.24	1.57	0.68	4.34			
			<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>Average</u>			
12	Liberty Utilities (Black Mountain Sewer), Corp.		2.45	72.04	22.54	25.94	30.74			
13	Risk relative to the average risk of the proxy group						7.08			

¹ Based on information from Value Line Investment Analyzer weekly ended May 1 2019.

Liberty Utilities (Black Mountain Sewer), Corp.
Capital Asset Pricing Model (CAPM)

Page 4 of 4

Line No.		R_f^1	$+$	$(\frac{\beta^2}{0.87})$	\times	$(\frac{RP_M^4}{7.90\%})$	$)$	$=$	k	CAPM Results From Table 11	Difference	
1	Traditional CAPM	3.3%	$+$	0.87	\times			$=$	10.20%	8.80%	1.40%	
2												
3		R_f^1	$+$	$\frac{RP_M^4 \times .25}{7.90\%}$	$+$	$(\frac{\beta^2}{0.87})$	\times	$(\frac{RP_M^4}{7.90\%}) \times .75$				
4	Empirical CAPM	3.3%	$+$	7.90%	\times	0.87	\times	7.90%	\times	10.40%	9.40%	1.00%
5												
6		R_f^1	$+$	$(\frac{\beta^3}{0.74})$	\times	$(\frac{RP_M^5}{7.00\%}) + (\frac{RP_S^6}{2.41\%})$		$=$	10.90%	9.90%	1.00%	
7	Modified CAPM	3.3%	$+$	0.74	\times							
8												
9												
10	Average								10.50%	9.40%	1.10%	

Notes:

¹ Forecasts of long-term treasury yields. Source Table 8.

² Implied VL Beta of Company. Source is page 6.

³ Implied Sum Beta of Company. Source is page 6.

⁴ Estimate of Market Risk Premium (MRP):

Historical MRP (1926-2018)
Current MRP
Average MRP

6.90% Source is Duff & Phelps 2018 CRSP Decile Size Study - Supplementary Exhibits.
8.90% Source is Table 10
7.90%

⁵ Estimate of MRP

Historical MRP (1963-2018)
Current MRP
Average MRP

5.10% Source is Duff & Phelps 2018 CRSP Decile Size Study - Supplementary Exhibits.
8.90% Source is Table 10
7.00%

⁶ Average proxy group adjusted size risk premium based upon Duff & Phelps Size Study data and Risk Study data.

See Exhibit TJB-COC-DT2 and Testimony.

D SCHEDULES

Liberty Utilities (Black Mountain Sewer) Corp.

Test Year Ended December 31, 2018

Summary of Cost of Capital

Exhibit
Schedule D-1

Page 1

Witness: Bourassa

		<u>Adjusted End of Test Year</u>				<u>Projected Capital Structure</u>			
Line	Item of Capital	Dollar Amount	Percent of Total	Cost Rate	Weighted Cost	Dollar Amount	Percent of Total	Cost Rate	Weighted Cost
No.									
1	Long-Term Debt	1,966,116	30.00%	3.36%	1.01%	7,074,201	46.00%	3.56%	1.64%
2									
3	Stockholder's Equity	4,587,605	70.00%	10.50%	7.35%	8,304,496	54.00%	10.50%	5.67%
4									
5	Totals	6,553,721	100.00%		8.36%	15,378,697	100.00%		7.31%
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

SUPPORTING SCHEDULES:

D-1

D-2

D-3

D-4

E-1

Testimony

RECAP SCHEDULES:

A-3

Cost of Long Term Debt

[illegible]

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Cost of Preferred Stock

Exhibit
Schedule D-3
Page 1
Witness: Bourassa

Line

No.

1

End of Test Year

End of Projected Year

2

3

Description
of Issue

Shares
Outstanding Amount Dividend
Requirement

Shares
Outstanding Amount Dividend
Requirement

4

5

6

7

NOT APPLICABLE, NO PREFERRED STOCK ISSUED OR OUTSTANDING

8

9

10

11

12

13

14

15

16

17

18

19

20

21

SUPPORTING SCHEDULES:

22

E-1

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

RECAP SCHEDULES:

D-1

Liberty Utilities (Black Mountain Sewer) Corp.
Test Year Ended December 31, 2018
Cost of Common Equity

Exhibit
Schedule D-4
Page 1
Witness: Bouras

Line

Line

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

The Company is proposing a cost of common equity of

10.50%

SUPPORTING SCHEDULES:

E-1

See Cost of Capital Testimony

RECAP SCHEDULES:

D-1

TABLES 1-10

Liberty Utilities (Black Mountain Sewer), Corp.

Table 1

Summary of Results

<u>Line No.</u>		<u>Indicated Cost of Equity for Sample Group</u>	<u>Indicated Cost of Equity for Company¹</u>
1	DCF Constant Growth - Table 6	9.00%	9.80%
2	Risk Premium - Table 8	10.80%	11.60%
3	CAPM - Table 10	9.40%	10.20%
4	Average (rounded)	9.70%	10.50%
5	Cost of Equity Recommendation		10.50% ²

Notes:

¹ Estimates include an equity risk premium of 80 basis points and a financial risk adjustment of 0 basis points. See testimony.

² See testimony.

Liberty Utilities (Black Mountain Sewer), Corp.

Table 2

Selected Characteristics of Sample Group of Water Utilities

Line No.	Company	Symbol	Operating Revenues (millions) ¹	Net Plant (millions) ¹	S&P Bond Rating ²	Moody's Bond Rating ²	Number of Customers ³	Value Line Beta ¹	Adjusted Sum Beta ⁴	Market Capitalization ¹	Size Decile
1	American States Water	AWR	436.8	1,296	A+	A2	258,949	0.70	0.55	\$ 2,740.5	Low-Cap
2	American Water Works	AWK	3,440.0	17,409	A	A3	3,353,000	0.60	0.53	21,062.3	Large-Cap
3	Aqua America	WTR	838.1	5,930	A+	NR	982,849	0.70	0.61	7,277.5	Mid-Cap
4	California Water	CWT	698.2	2,233	A+	NR	482,400	0.70	0.64	2,420.2	Low-Cap
5	Middlesex	MSEX	138.1	619	A	NR	112,120	0.75	0.78	1,003.7	Low-Cap
6	York Water Company	YORW	48.4	299	A-	NR	67,000	0.75	0.52	447.9	Micro-Cap
7	Average		\$ 933.3	\$ 4,631.0			876,053	0.70	0.60	\$ 5,825.4	
8	Liberty Utilities (Black Mountain Sewer), Corp.		\$ 2.5	\$ 12.9			2,210	Estimated 0.87	Estimated 0.74	N/A	

Notes:

¹ Value Line Analyzer Data (Weekly as of June 13, 2019)

² S&P and/or Moody's Website

³ Most recent annual report or 10-K

⁴ See Testimony.

Liberty Utilities (Black Mountain Sewer), Corp.
Table 3
Capital Structures

Line No.	<u>Company</u>	<u>Symbol</u>	Book Value ¹		Market Value ¹	
			Long-Term <u>Debt</u>	Common <u>Equity</u>	Long-Term <u>Debt</u>	Common <u>Equity</u>
1	American States Water	AWR	40.5%	59.5%	12.2%	87.8%
2	American Water Works	AWK	56.4%	43.6%	26.4%	73.6%
3	Aqua America	WTR	54.4%	45.6%	24.8%	75.2%
4	California Water	CWT	49.3%	50.7%	22.7%	77.3%
5	Middlesex	MSEX	38.1%	61.9%	13.2%	86.8%
6	York Water Company	YORW	42.6%	57.4%	17.2%	82.8%
7	Average		46.9%	53.1%	19.4%	80.6%
8	Liberty Utilities (Black Mountain Sewer), Corp.		46.0%	54.0%	N/A	N/A

¹ Value Line Analyzer Data (Weekly as of June 13 2019)

Liberty Utilities (Black Mountain Sewer), Corp.
Table 4
Comparisons of Past and Future Estimates of Growth

			[1]	[2]	[3]	[4]	[5]
				<u>Five-year historical annual changes</u>			Historical
Line		Stock		Book			Average Growth
<u>No.</u>	<u>Company</u>	<u>Symbol</u>	<u>Price</u> ¹	<u>Value</u> ²	<u>EPS</u> ²	<u>DPS</u> ²	<u>Col. 1-4</u>
1	American States Water	AWR	18.47%	4.00%	4.50%	9.00%	8.99%
2	American Water Works	AWK	16.52%	4.00%	6.50%	10.50%	9.38%
3	Aqua America	WTR	7.70%	6.50%	5.50%	8.00%	6.93%
4	California Water	CWT	15.62%	4.50%	5.50%	3.00%	7.15%
5	Middlesex	MSEX	20.57%	4.50%	11.00%	3.00%	9.77%
6	York Water Company	YORW	8.90%	4.00%	6.50%	4.00%	5.85%
7	GROUP AVERAGE		14.63%	4.58%	6.58%	6.25%	8.01%

			[1]	[2]	[3]	[4]	[5]
			<u>Ten-year historical average annual changes</u>				Historical
	<u>Company</u>	<u>Symbol</u>	Stock	Book			Average Growth
			<u>Price¹</u>	<u>Value²</u>	<u>EPS²</u>	<u>DPS²</u>	<u>Col. 1-4</u>
8	American States Water	AWR	15.06%	4.00%	4.50%	9.00%	8.14%
9	American Water Works	AWK	N/A	4.00%	6.50%	10.50%	7.00%
10	Aqua America	WTR	7.58%	6.50%	5.50%	8.00%	6.89%
11	California Water	CWT	7.46%	4.50%	5.50%	3.00%	5.11%
12	Middlesex	MSEX	11.97%	4.50%	11.00%	3.00%	7.62%
13	York Water Company	YORW	10.23%	4.00%	6.50%	4.00%	6.18%
14	GROUP AVERAGE		10.46%	4.58%	6.58%	6.25%	6.82%

Line No.	Company	Symbol	[1]	[2]	[3]	[4]
			Value Line Projected Growth ²	Zack's Projected Growth ³	Yahoo Finance Growth ⁴	Average Projected Growth
15	American States Water	AWR	8.00%	8.00%	6.00%	7.33%
16	American Water Works	AWK	9.50%	8.08%	8.20%	8.59%
17	Aqua America	WTR	8.50%	6.00%	5.00%	6.50%
18	California Water	CWT	8.50%	10.00%	9.80%	9.43%
19	Middlesex	MSEX	7.50%		2.70%	5.10%
20	York Water Company	YORW	9.50%		4.90%	7.20%
21	GROUP AVERAGE		8.58%		6.10%	7.36%

Notes:

¹ Compound growth in stock prices ending December 31 through 2018. Data from Yahoo Finance website.

² Value Line Analyzer, weekly as of June 13, 2019.

³ Zack's Investment Research website June 17 2019

⁴ Yahoo Finance website June 17, 2019

Liberty Utilities (Black Mountain Sewer), Corp.

Table 5

Current Dividend Yields for Water Utility Sample Group

Line No.	Company	Symbol	Stock Price (P ₀) ¹	Current Dividend (D ₀) ¹	[3] Current Dividend Yield (D ₀ /P ₀)	[4] Average Annual Dividend Yield (D ₀ /P ₀) ^{1,2}
1	American States Water	AWR	74.76	1.06	1.42%	1.81%
2	American Water Works	AWK	118.27	1.78	1.51%	2.07%
3	Aqua America	WTR	41.58	0.85	2.04%	2.42%
4	California Water	CWT	50.97	0.75	1.47%	1.82%
5	Middlesex	MSEX	61.87	0.91	1.47%	2.10%
6	York Water Company	YORW	34.59	0.67	1.94%	2.13%
7	GROUP AVERAGE				1.64%	2.06%

Notes:

¹ Stock prices as of June 14, 2019. Indicated Dividend from Value Line Analyzer weekly as of June 13, 2019.

² Average Annual Dividend is dividends declared per share for a year divided by the average annual price of the stock in the same year, expressed as a percentage. As report by Value Line Analyzer software. For comparison purposes only.

Liberty Utilities (Black Mountain Sewer), Corp.
Table 6
Discounted Cash Flow Analysis
DCF Constant Growth

Line No.	Company	Symbol	[1] Dividend Yield (D_0/P_0) ¹	[2] Expected Dividend Yield (D_1/P_0) ²	[3] Average Projected Growth (g) ³	[4] Indicated Cost of ROE $k = \text{Div Yield} + g$ (Cols 2+3)	Adjusted Indicated Cost of Equity (COE) ⁴ $k = \text{Div Yield} + g$ (Cols 2+3)
1	American States Water	AWR	1.42%	1.42%	+	7.33%	8.8%
2	American Water Works	AWK	1.51%	1.51%	+	8.59%	10.1%
3	Aqua America	WTR	2.04%	2.04%	+	6.50%	8.5%
4	California Water	CWT	1.47%	1.47%	+	9.43%	10.9%
5	Middlesex	MSEX	1.47%	1.47%	+	5.10%	6.6%
6	York Water Company	YORW	1.94%	1.94%	+	7.20%	9.1%
7	Average			1.64%		7.36%	
8	Adjusted Average ⁴						9.0%

Notes:

¹ Spot Dividend Yield = D_0/P_0 . Source Table 5.

² Expected Dividend Yield = $D_1/P_0 = D_0/P_0 \cdot (1+g/2)$.

³ Average Analyst Growth rate (g). Source Table 4.

⁴ Excluded because results are less than projected Baa bond yields plus 100 basis points or 6.3% . See Testimony.

Liberty Utilities (Black Mountain Sewer), Corp.

Table 7

Forecasts of Long-Term Interest Rates

Line No.		<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>Average</u>
1	Long-term Treasury Rates				
2	Blue Chip Consensus Forecasts ¹	3.1%	3.8%	3.9%	
3	Value Line ²	2.8%	3.0%	3.2%	
4	Average	3.0%	3.4%	3.6%	3.3%
5	Aaa Corporate Bonds				
6	Blue Chip Consensus Forecasts ¹	4.0%	4.4%	4.6%	
7	Value Line ²	4.0%	4.2%	4.3%	
8	Average	4.0%	4.3%	4.5%	4.3%
9	Baa Corporate Bonds				
10	Blue Chip Consensus Forecasts ¹	5.0%	5.3%	5.6%	
11	Value Line ²				
12	Average	5.0%	5.3%	5.6%	5.3%

Notes:

¹ Blue Chip consensus forecasts (June 2019).

² Value Line Selection and Opinion - Quarterly Forecasts (May 31, 2019).

Liberty Utilities (Black Mountain Sewer), Corp.
Table 8
Risk Premium Analysis Based on Total Returns

Line No.	Year	Annual Total Return ¹	LT Treasury Bond Yield ²	Risk Premium
1	1999	12.23%	5.87%	6.36%
2	2000	14.19%	5.94%	8.25%
3	2001	14.36%	5.49%	8.87%
4	2002	-3.73%	5.43%	-9.16%
5	2003	24.67%	5.05%	19.62%
6	2004	12.10%	5.12%	6.98%
7	2005	20.16%	4.56%	15.60%
8	2006	6.55%	4.91%	1.64%
9	2007	-5.02%	4.84%	-9.86%
10	2008	-3.14%	4.28%	-7.42%
11	2009	1.28%	4.08%	-2.80%
12	2010	11.50%	4.25%	7.25%
13	2011	5.66%	3.91%	1.75%
14	2012	13.86%	2.92%	10.94%
15	2013	17.87%	3.45%	14.42%
16	2014	16.95%	3.34%	13.61%
17	2015	9.12%	2.84%	6.28%
18	2016	32.26%	2.59%	29.67%
19	2017	16.91%	2.90%	14.02%
20	2018	6.27%	3.00%	3.27%
21	Average 1999 to 2018	11.2%	4.2%	7.0%
22	Expected Long-term Treasury Bond Rate ³			3.3%
23	Adjusted Historical Risk Premium ⁴			7.5%
24	Projected Returns on Equity for Sample			10.8%

Notes:

¹ Computed Composite Total Returns on Proxy Group.

² Average annual 30 Yr. U.S. Treasury Bond yields as reported by the Federal Reserve.

³ Yields for 2003-2005 are based upon 20-year U.S. Treasury Forecast LT U.S. Treasury Rate. Source Table 7.

⁴ As explained in testimony, risk premiums are inversely related to interest rates. Adjustment assumes equity costs change by 50% as much as interest rates.

Liberty Utilities (Black Mountain Sewer), Corp.

Table 9

Estimation of Current Market Risk Premium
Using DCF Analysis

Line	No.	Month	Dividend Yield (D_0/P_0) ¹	Expected Dividend Yield (D_1/P_0) ²	Expected Growth (g) ³	Expected Market Return (k)	Monthly Average 30 Year Treasury Rate ⁴	Expected Market Risk Premium (MRP)
1	Jan 2018		2.68%	2.91%	+ 8.50%	= 11.41%	= 2.88%	= 8.53%
2	Feb		2.57%	2.79%	+ 8.67%	= 11.46%	= 3.13%	= 8.33%
3	Mar		2.59%	2.82%	+ 9.00%	= 11.82%	= 3.09%	= 8.73%
4	Apr		2.56%	2.78%	+ 8.67%	= 11.44%	= 3.07%	= 8.37%
5	May		2.55%	2.77%	+ 8.83%	= 11.61%	= 3.13%	= 8.48%
6	June		2.54%	2.77%	+ 9.00%	= 11.77%	= 3.05%	= 8.72%
7	July		2.52%	2.75%	+ 9.17%	= 11.91%	= 3.01%	= 8.90%
8	Aug		2.52%	2.76%	+ 9.33%	= 12.09%	= 3.04%	= 9.05%
9	Sep		2.56%	2.80%	+ 9.33%	= 12.13%	= 3.15%	= 9.98%
10	Oct		2.76%	3.02%	+ 9.33%	= 12.35%	= 3.34%	= 9.01%
11	Nov		2.74%	3.00%	+ 9.50%	= 12.50%	= 3.36%	= 9.14%
12	Dec		3.09%	3.39%	+ 9.67%	= 13.06%	= 3.10%	= 9.96%
13	Jan 2019		2.86%	3.14%	+ 9.67%	= 12.80%	= 3.04%	= 9.76%
14	Feb		2.71%	2.96%	+ 9.17%	= 12.12%	= 3.02%	= 9.10%
15	Mar		2.76%	3.01%	+ 9.00%	= 12.01%	= 2.98%	= 9.03%
16	Apr		2.71%	2.94%	+ 8.67%	= 11.61%	= 2.94%	= 8.67%
17	May		2.90%	3.16%	+ 8.67%	= 11.82%	= 2.82%	= 9.00%
15	Recommended		2.79%	3.04%	+ 8.78%	= 11.81%	= 2.91%	= 8.90%
16	Short-term Trends							
17	Recent Twelve Months Avg		2.72%	2.97%	+ 9.21%	= 12.18%	= 3.07%	= 9.11%
18	Recent Nine Months Avg		2.79%	3.04%	+ 9.22%	= 12.27%	= 3.08%	= 9.18%
19	Recent Six Months Avg		2.84%	3.10%	+ 9.14%	= 12.24%	= 2.98%	= 9.25%
20	Recent Three Months Avg		2.79%	3.04%	+ 8.78%	= 11.81%	= 2.91%	= 8.90%

Notes:

¹ Average Dividend Yield (D_0/P_0) of dividend paying stocks. Data from Value Line Investment Analyzer Software Data - Value Line 1700 Stocks

² Expected Dividend Yield (D_1/P_0) equals current average dividend yield (D_0/P_0) times one plus growth rate(g).

³ Median of Projected EPS and Projected DPS Growth for VL 1700 stocks. Data from Value Line Investment Analyzer Software.

⁴ Monthly average 30 year U.S. Treasury as reported by Federal Reserve.

Liberty Utilities (Black Mountain Sewer), Corp.

Table 10

Capital Asset Pricing Model (CAPM, ECAPM, and MCAPM)

Line No.		R_f^1	+	(β^2)	x	RP_M^4)	=	k
1	Traditional CAPM	3.3%	+	(0.70	x	7.90%)	=	8.80%
2									
3		R_f^1		$RP_M^3 \times .25$	+	(β^2)	x RP_M^4	x .75	
4	Empirical CAPM (ECAPM)	3.3%	+	7.90%	x .25 + (0.70	x 7.90%) x .75	= 9.40%
5									
6		R_f^1	+	(β^3)	x	RP_M^5) + RP_S^5		
7	Modified CAPM (MCAPM)	3.3%	+	(0.60	x	7.00%) + 2.41%	=	9.90%
8									
9									
10	Average (rounded)								9.40%

Notes:

¹ Forecasts of long-term treasury yields. Source Table 7.

² Average VL Beta of Water Proxy Group. Source is Table 2.

³ Average Sum Beta of Water Proxy Group. Source is Table 2

⁴ Estimate of Market Risk Premium (MRP):

Historical MRP (1926-2018) 6.90% Source is Duff & Phelps 2019 CRSP Decile Size Study - Supplementary Exhibits

Current MRP 8.90% Source is Table 9

Average MRP 7.90%

⁵ Estimate of MRP

Historical MRP (1963-2018) 5.10% Source is Duff & Phelps 2019 CRSP Decile Size Study - Supplementary Exhibits.

Current MRP 8.90% Source is Table 9

Average MRP 7.00%

⁶ Average proxy group adjusted size risk premium based upon Duff & Phelps Size Study data and Risk Study data.

See Exhibit TJB-COC-DT2 and Testimony.

1 SHAPIRO LAW FIRM, P.C.
Jay L. Shapiro (No. 014650)
2 1819 E. Morten Avenue, Suite 280
Phoenix, Arizona 85020
3 Telephone (602) 559-9575
jay@shapslawaz.com

4 LIBERTY UTILITIES
5 Todd C. Wiley (No. 015358)
12725 W. Indian School Road, Suite D-101
6 Avondale, Arizona 85392
Todd.Wiley@LibertyUtilities.com

7 Attorneys for Liberty Utilities (Black Mountain Sewer) Corp.
8

9 **BEFORE THE ARIZONA CORPORATION COMMISSION**

10 IN THE MATTER OF THE APPLICATION
11 OF LIBERTY UTILITIES (BLACK
MOUNTAIN SEWER) CORP., AN
12 ARIZONA CORPORATION, FOR A
DETERMINATION OF THE FAIR VALUE
13 OF ITS UTILITY PLANTS AND
PROPERTY AND FOR INCREASES IN ITS
14 RATES AND CHARGES FOR UTILITY
SERVICE BASED THEREON.
15

DOCKET NO: SW-02361A-19-0139

**NOTICE OF FILING
DIRECT TESTIMONY OF
THOMAS J. BOURASSA
ON COST OF SERVICE STUDY**

16 According to the Letter of Deficiency issued July 26, 2019, the cost of service study
17 ("COSS") was missing from Liberty Utilities (Black Mountain Sewer) Corp.'s
18 ("Company") rate application filed on June 27, 2019. The COSS and associated Direct
19 Testimony of Thomas J. Bourassa are hereby provided. The Company believes the
20 application is now complete and anticipates an expeditious finding of sufficiency by Staff.
21 Upon the issuance of a sufficiency finding, the Company withdraws its (1) Request for
22 Waiver, filed July 17, 2019; (2) Motion for a Finding of Sufficiency or, Alternatively, the
23 Granting of [the Company's] Request for Waiver, filed July 31, 2019; and (3) Reply to
24 Staff's Response to Request for Waiver, filed August 1, 2019.
25
26

1 RESPECTFULLY SUBMITTED this 7th day of August, 2019.

2 SHAPIRO LAW FIRM, P.C.

3 

4 By: _____

5 Jay L. Shapiro
6 1819 E. Morten Avenue, Suite 280
7 Phoenix, Arizona 85020
8 jay@shaplawaz.com
9 whitney@shaplawaz.com

10 and

11 LIBERTY UTILITIES

12 Todd C. Wiley
13 General Counsel
14 Liberty Utilities (West Region)
15 12725 W. Indian School Road, Suite D-101
16 Avondale, Arizona 85392
17 Todd.Wiley@LibertyUtilities.com

18 Attorneys for Liberty Utilities (Black Mountain
19 Sewer) Corp.

20 **ORIGINAL** e-Filed
21 and eight (8) copies delivered
22 this 7th day of August, 2019:

23 Docket Control
24 Arizona Corporation Commission
25 1200 W. Washington Street
26 Phoenix, AZ 85007

COPY of the foregoing emailed
this 7th day of August, 2019, to:

Robin Mitchell, Director
Legal Division
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, AZ 85007
legaldiv@azcc.gov
utildivservicebyemail@azcc.gov

1 Stephen Emedi
2 Bridget Humphrey
3 Legal Division
4 Arizona Corporation Commission
5 1200 W. Washington Street
6 Phoenix, AZ 85007
7 semedi@azcc.gov
8 bhumphrey@azcc.gov
9

10 By: Whitney Bink
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

1 SHAPIRO LAW FIRM, P.C.
Jay L. Shapiro (No. 014650)
2 1819 E. Morten Avenue, Suite 280
Phoenix, Arizona 85020
3 Telephone (602) 559-9575
jay@shapslawaz.com

4 LIBERTY UTILITIES
5 Todd C. Wiley (No. 015358)
12725 W. Indian School Road, Suite D-101
6 Avondale, Arizona 85392
Todd.Wiley@LibertyUtilities.com

7 Attorneys for Liberty Utilities (Black Mountain Sewer) Corp.
8

9 **BEFORE THE ARIZONA CORPORATION COMMISSION**

10
11 IN THE MATTER OF THE APPLICATION
OF LIBERTY UTILITIES (BLACK
12 MOUNTAIN SEWER) CORP., AN
ARIZONA CORPORATION, FOR A
13 DETERMINATION OF THE FAIR VALUE
OF ITS UTILITY PLANTS AND
14 PROPERTY AND FOR INCREASES IN ITS
RATES AND CHARGES FOR UTILITY
15 SERVICE BASED THEREON.

DOCKET NO: SW-02361A-19-0139

16
17
18 **DIRECT TESTIMONY**
19 **OF**
20 **THOMAS J. BOURASSA**
21
22 **COST OF SERVICE STUDY**

23
24 **August 7, 2019**
25
26

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

TABLE OF CONTENTS

I. INTRODUCTION AND PURPOSE OF TESTIMONY 1

II. COSS (G SCHEDULES) 5

 A. Overview of COSS 5

 B. Explanation of COSS 8

 C. COSS Results..... 10

1 **I. INTRODUCTION AND PURPOSE OF TESTIMONY.**

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

3 A. My name is Thomas J. Bourassa. My business address is 139 W. Wood Drive,
4 Phoenix, Arizona 85029.

5 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

6 A. I am testifying on behalf of the Liberty Utilities (Black Mountain Sewer) Corp.
7 ("Liberty Black Mountain" or the "Company").

8 **Q. HAVE YOU PREVIOUSLY SUBMITTED DIRECT TESTIMONY IN THE**
9 **INSTANT CASE?**

10 A. Yes, my direct testimony was submitted in support of the initial application in this
11 docket. There were two volumes, one addressing rate base, income statement and
12 rate design, and the other addressing cost of capital.

13 **Q. WHAT IS THE PURPOSE OF THIS THIRD VOLUME OF YOUR DIRECT**
14 **TESTIMONY?**

15 A. To provide testimony on a cost of service study ("COSS" or "G Schedules") for
16 Liberty Black Mountain.

17 **Q. WHY DID YOU PREPARE A COSS FOR THE COMPANY?**

18 A. Because Staff effectively forced the Company into filing the COSS by refusing to
19 find the application sufficient without the G Schedules and then taking the position
20 that only the Commission can grant the waiver Staff directed the Company to file.
21 The Company does not believe that G Schedules are required under the
22 Commission's rules. Even so, the Company was faced with the choice of waiting
23 to see what action was taken on its request, or urgently preparing a COSS as soon
24 as possible so that the application could be found sufficient. In other words, the
25 Company directed me to prepare this additional volume of direct testimony in order
26

1 to mitigate any additional and unnecessary delay in this case by Staff's arbitrary
2 application of the rules in relation to the requirement for a COSS.

3 **Q. WHY DO YOU BELIEVE STAFF IS BEING ARBITRARY?**

4 A. Because Staff has routinely found water and sewer rate case applications sufficient
5 without a COSS.¹ I do not know what happened in this case but in my nearly

6
7 ¹ See, e.g., the following proceedings:

- 8 • Liberty Utilities (Gold Canyon Sewer) Corp.; Docket No. SW-02519A-06-0015
- 9 • Johnson Utilities L.L.C.; Docket No. WS-02987A-08-0180
- 10 • Liberty Black Mountain; Docket No. SW-02361A-08-0609
- 11 • Global Water – Palo Verde Utilities Company; Docket No. SW-20445A-09-0077
- 12 • Willow Valley Water Co., Inc.; Docket No. W-01732A-09-0079
- 13 • Global Water – Santa Cruz Water Company, LLC; Docket No. W-20446A-09-0080
- 14 • Water Utility of Greater Tonopah, LLC; Docket No. W-02450A-09-0081
- 15 • Valencia Water Company – Town Division; Docket No. W-01212A-09-0082
- 16 • Clear Springs Utility Company, Inc.; Docket No. WS-01689A-11-0402
- 17 • Far West Water and Sewer, Inc.; Docket No. WS-03478-12-0307
- 18 • Valencia Water Company – Town Division; Docket No. W-01212A-12-0309
- 19 • Global Water – Palo Verde Utilities Company; Docket No. SW-20445A-12-0310
- 20 • Water Utility of Northern Scottsdale, LLC; Docket No. W-03720A-12-0311
- 21 • Water Utility of Greater Tonopah, LLC; Docket No. W-02450A-12-0312
- 22 • Global Water – Santa Cruz Water Company, LLC; Docket No. W-20446A-12-0314
- 23 • Willow Valley Water Co., Inc.; Docket No. W-01732A-12-0315
- 24 • Utility Source, L.L.C.; Docket No. WS-04235A-13-0331
- 25 • Red Rock Utilities, LLC; Docket No. WS-04245A-14-0295
- 26 • Quail Creek Water Co.; Docket No. W-02514A-14-0343
- Baca Float Water Company; Docket Nos. WS-01678A-14-0424 & WS-01678A-14-0425
- Sahuarita Water Company, L.L.C.; Docket No. W-03718A-15-0213
- Liberty Utilities (Bella Vista Water) Corp.; Docket No. W-02465A-15-0367
- Liberty Utilities (Rio Rico Water & Sewer) Corp.; Docket No. WS-02676A-15-0368
- Liberty Utilities (Entrada Del Oro Sewer) Corp.; Docket No. SW-04316A-16-0078
- Rio Verde Utilities, Inc.; Docket No. WS-02156A-16-0201
- Valley Pioneers Water Company, Inc.; Docket No. W-02033A-16-0412
- Pima Utility Company; Docket Nos. W-02199A-16-0421 & SW-02199A-16-0422
- Ajo Improvement Company; Docket Nos. WS-01025A-17-0361 & WS-01025A-17-0363
- Johnson Utilities L.L.C.; Docket No. WS-02987A-17-0392
- Clearwater Utilities Company, Inc.; Docket No. W-01752A-18-0042
- Payson Water Co., Inc.; Docket No. W-03514A-18-0230
- Farmers Water Co.; Docket No. W-01654A-18-0083
- Truxton Canyon Water Company, Inc.; Docket No. W-02168A-18-0308
- Pueblo Del Sol Water Company; Docket No. W-02208A-19-0140. See also Arizona-American Water Company, Docket Nos. W-01303A-09-0343 & SW-01303A-09-0343. There were no district level cost of service studies, and it was stipulated that any party who wanted to make cost of service arguments could do so using the COSS from Arizona-American's previous rate case. A statewide COSS (used for consolidation) was based on the district level cost of service studies from the company's previous rate case.

30 years of testifying in Commission rate proceedings, this is the first time I have ever heard of a request to waive the obligation to file G Schedules.

Q. DO YOU BELIEVE THE COMPANY WAS REQUIRED TO PREPARE G SCHEDULES WITH ITS RATE APPLICATION?

A. No, I did not believe then and do not believe now that a COSS is required. Arizona Administrative Code A.A.C. R14-2-103(B)(1) (“Rule 103”) only requires a COSS where two conditions are met. First, the utility is part of the “utility industry that recognizes cost of service studies as important tools for rate design.” Second, the “[c]osts incurred by the utility are likely to vary significantly from 1 defined segment of customers to another.” I do not believe either condition is met in this case.

Q. PLEASE EXPLAIN WHY YOU DO NOT THINK THE FIRST CONDITION IS MET IN THIS CASE.

A. Historically, the Commission has not set cost of service based rates for water and wastewater utilities. Liberty Black Mountain prepared a COSS in its last rate application in 2015, which study was not utilized.² The Company did not file a COSS in its two previous rate cases before the 2015 rate case. As referenced in footnote one, there are numerous instances where the Commission did not require cost of service studies. Therefore, Liberty Black Mountain reasonably concluded that it is not in a segment of the industry where cost of service studies are recognized as important.

Q. WHY DID THE COMPANY PREPARE A COST OF SERVICE IN THE LAST RATE CASE?

A. Because the Company proposed a significant change in the rate design for commercial customers in the last rate case, moving from a rated equivalent unit rate

² See Decision No. 75510 (April 22, 2016).

1 based on an aged engineering sheet to rates based upon water usage. Because Liberty
2 Black Mountain was proposing a significant change in rate design, it filed a COSS
3 in an effort to help to eliminate disputes over the proposed rate design and rates. It
4 does not mean that a COSS was required; it means that the Company chose to file a
5 COSS under those specific circumstances.

6 **Q. WHY ISN'T THE SECOND CONDITION FOR FILING THE**
7 **G SCHEDULES MET IN THIS RATE CASE?**

8 A. Noting that it does not matter if the first condition is not met, the second condition
9 is not met because there are no costs that are likely to vary significantly between
10 segments of customers. For starters, the rule does not define "significant." That
11 said, I am not aware of any costs that differ materially between customer segments.
12 Liberty Black Mountain only has two customer classes (residential and commercial)
13 and the residential class makes up over 94 percent of the customers. There are no
14 unique or special costs required to serve one class versus the other, and there are no
15 specific costs that vary significantly based on the type of customer. While the COSS
16 may show that it is more costly to serve a commercial customer than a residential
17 customer, that does not arise to a significant cost variation due to customer class.
18 It means that a commercial customer just requires more of the same expense than a
19 residential customer to serve.

20 **Q. WOULD SIGNIFICANT CHANGES IN OPERATING EXPENSES SINCE**
21 **THE LAST RATE CASE NECESSITATE A COSS?**

22 A. Not unless the changes were driven primarily or significantly by one class of
23 customers, not the other. For instance, if all of the Company's commercial
24 customers were no longer allowed to pretreat certain wastes and the Company had
25 to provide pretreatment. In that scenario, the customers requiring pretreatment
26 would certainly be causing costs that varied significantly between classes.

1 Of course, if the proposed rate design dealt with such significant cost variations
2 through a separate surcharge, the COSS would be of less benefit. Clearly, though, a
3 mere change (increase or decrease) in costs does not require a COSS. Today, instead
4 of the costs to operate its own wastewater treatment plant to treat some of its
5 collected wastewater, Liberty Black Mountain sends all of its wastewater to
6 Scottsdale. That change in the source of the cost of wastewater reclamation was not
7 caused by a difference in cost between segments of customers and has no impact on
8 the cost of service for rate design. In other words, the nature of the costs (wastewater
9 treatment) did not change, nor did the responsibility of each customer class change
10 as a result.

11 **II. COSS (G SCHEDULES).**

12 **A. Overview of COSS.**

13 **Q. WHAT EXACTLY IS A COSS?**

14 A. A COSS is an analysis of the adequacy of revenues and revenue requirements to be
15 met by the various classes of customers under both existing and proposed rates. The
16 study begins with an allocation of utility plant and expenses into cost and asset
17 functions, which are then allocated to customer classifications. The study attempts
18 to trace the costs associated with meeting the customers' service requirements.
19 Ideally, the revenues received from each customer class should equal the cost of
20 providing service to that customer class. The cost to provide service includes the
21 operating and maintenance expenses and the capital costs. Operating and
22 maintenance expenses include the costs of operating the system and the costs of
23 maintaining system facilities and equipment. Capital costs include investment-
24 related cash requirements such as debt service, contributions to debt service reserves,
25 and capital requirements not financed by debt. Capital costs also include
26 depreciation expense and either a return on rate base (for-profit utilities) or an

operating margin (non-profit utilities) as well as incomes taxes and other taxes, if applicable.

Q. WHAT IS THE PURPOSE OF A COSS?

A. Typically, the purpose of preparing a COSS is to offer guidance in setting rates to be charged for utility service. Again, the basic premise in establishing rates for the various classes of customers that are both adequate and equitable is that rates should reflect the cost of providing utility service. Cost-based rates can also be used to send an appropriate price signal to customers because the amount paid for service approximates the cost to provide the service. In other words, subsidies between customers are minimized.

There are many factors at play when rates are set that can result in rates that are not adequate and/or equitable between the various classes of customers. Non-economic factors may be at play when rates are set. For example, the regulatory body may favor subsidizing one class of customers by shifting costs to other classes of customers or shifting revenues within one class of customers to subsidize members within that class. Lifeline or discounted rates, which are sometimes used to assist low-income customers in areas with high utility costs, are prime examples of subsidization of a class of customers by other customers. If possible, lifeline rates should not apply to a whole customer class. If lifeline rates are needed, they should be offered only to customers meeting some income test. Another example is the goal of keeping the rate design simple and easier to understand. There may also be goals on promoting conservation (in the case of water utilities) or other social or economic goals. Thus, public policy may have a significant impact on rate design. In the end, though, the goal in setting new rates remains that the Company be able to actually recover its revenue requirement.

1 **Q. WHAT METHOD OF COST ALLOCATION WAS USED IN YOUR COSS IN**
2 **THIS CASE?**

3 A. I used the Commodity Demand Method which is described AWWA Manual M1,
4 “Principles of Water Rates, Fees and Charges” published in 2000 and prior additions
5 of the manual. It is the method prescribed by Rule 103. The commodity demand
6 method allocates each item of the cost of providing water service to the several cost
7 functions - commodity, demand, which is further separated into customer, meter and
8 services functions. These functional costs are then allocated to the several customer
9 classifications served by the system.

10 **Q. HOW IS THE COSS ORGANIZED?**

11 A. The COSS used the test year revenue requirements developed by the Company in
12 Schedules A through F and H. Costs were allocated to each of the cost functions
13 described earlier and then to the customer classifications.

14 The COSS contains schedules G-1 through G-7, which are the standard filing
15 schedules if a COSS is filed.

16 G Schedules with higher numbers (*i.e.*, 5, 6 and 7) contain the allocation
17 factors and actual allocations to functions. These functions are then carried forward
18 to the summary G schedules 1, 2, 3 and 4, which allocate expenses and plant (by
19 function) to classes of customers. I will start my analysis using Schedule G-7 and
20 end with Schedules G-2 and G-1.

21 **Q. WHAT IS A “FUNCTION”?**

22 A. Functions refer to the plant and the expenses needed to collect, treat and dispose of
23 wastewater from the customer. The functions associated with collection, treatment,
24 and disposal of wastewater are typically commodity, demand, and customer (and/or
25 services).

26

Commodity refers to the volume of the commodity sold. The commodity function is used to derive the commodity rate, or the rate charged per unit of measurement, gallons. Demand refers to how the collection and treatment system is sized to meet customer demand. Hence, the system is built to be able collect and treat wastewater (the commodity), as well as the demand placed on the system when wastewater flows peak. The customer (and/or service) function can also be used to develop the monthly minimum charged to each class of customer. Demand and customer functions refer to the collection and treatment of wastewater. The costs associated with demand and customer functions are incurred whether the customer generates no wastewater flows or 50,000 gallons of flow.

Q. AFTER COSTS ARE ALLOCATED TO FUNCTIONS, HOW ARE EXPENSES AND ASSETS THEN ALLOCATED TO THE INDIVIDUAL CLASSES OF CUSTOMERS?

A. After the expenses and assets are allocated to the commodity, demand, and customer functions, the values for the functions are then allocated to various customer classes. Customer classes are typically broken down into residential, commercial, industrial, and public authority, although Liberty Black Mountain only has two classes of customer, residential and commercial.

B. Explanation of COSS Schedules.

Q. PLEASE DESCRIBE AND EXPLAIN THE SCHEDULES THAT COMPRISE THE COSS.

A. The allocations for the development of the class allocation factors are shown on Schedule G-7b, pages 1 and 2. Allocation factors for expenses were determined by examining the causal relationships of each expense to the various functions, which

1 may include an examination of the recorded amounts during the test year and the use
2 of professional judgment.

3 The operation and maintenance expense allocation to functions (commodity,
4 demand, customer, service, and meter) are shown on Schedule G-6a, page 1
5 (adjusted test year at present rates) and Schedule G-6b, page 2 (adjusted test year at
6 proposed rates).

7 The depreciation expense allocations are shown on Schedule G-6a, page 2
8 (adjusted test year at present rates) and Schedule 6b page 2, which apply the function
9 allocation factors shown on Schedule G-7b, pages 1 and 2 (adjusted test year at
10 proposed rates). Depreciation expense was computed using the Company's
11 proposed depreciation rates in this rate case.

12 On Schedule G-5, pages 1 and 2, I allocated net plant and other rate base items
13 to each customer class using the function allocation factors set forth in Schedule G-
14 7a, pages 1 and 2.

15 Schedule G-4 allocates the commodity, demand, and customer expenses
16 developed on Schedule 6a and Schedule 6b to customer classes using the allocation
17 factors developed on Schedule G-7b, pages 1 and 2. Schedule G-4a shows the
18 allocated costs at present rates. Schedule G-4b shows the allocated costs at proposed
19 rates.

20 Schedule G-3 allocates the rate bases for commodity, demand, and customer
21 functions to the customer classes.

22 Schedules G-1 and G-2 derive the return on rate base by customer classes at
23 present and proposed rates, respectively. The returns on rate base are computed by
24 dividing the operating income for the customer class by the rate base for that
25 customer class.

26

1 **C. COSS Results.**

2 **Q. WHAT IS THE RANGE OF THE RETURNS FOR THE TWO CUSTOMER**
3 **CLASSES AT PRESENT RATES?**

4 A. As shown on Schedule G-1, the returns vary slightly between the residential and
5 commercial customer classes at the present rates. The largest customer class, the
6 residential class, provides the lowest return under the present rates or 2.71 percent.
7 The commercial class is providing a higher return at 3.00 percent.

8 **Q. WHAT ARE THE RETURNS FOR THE CUSTOMER CLASSES AT**
9 **PROPOSED RATES?**

10 A. As shown on Schedule G-2, the returns continue to vary between the residential and
11 commercial customer classes at proposed rates but not significantly. The residential
12 class provides a return under the proposed rates of 7.28 percent. This is below the
13 overall required return of 7.31 percent and indicates the residential class will not be
14 quite paying its full cost of service at the Company's proposed rates. The
15 commercial and contract class provide a return of 7.44 percent. This result indicates
16 that the commercial will continue to pay somewhat more than their cost of service.
17 The results are similar to the rates in the prior case in terms of each class paying
18 somewhat more or less than the cost of service.

19 **Q. DO YOU HAVE ANYTHING ELSE TO ADD REGARDING THE COSS,**
20 **MR. BOURASSA?**

21 A. Just that this will increase the Company's rate case expense because we did not factor
22 a COSS into the rate case expense estimate. Preparing G Schedules and the
23 supporting testimony took a great deal of time, and I was required to prepare one
24 under urgent time constraints. Furthermore, even though the COSS was not utilized
25 in the last rate case, we have to assume now that it is being filed there is a potential
26 for discovery and dispute. It is unfortunate, but the reality is that Staff's application

1 of Rule 103 has done little for certain except increase the rate case expense burden
2 on the Company and its customers. In any event, the Company's rate case expense
3 surcharge will need to be updated as the rate case progresses to reflect this additional
4 cost.

5 **Q. DOES THIS CONCLUDE THE THIRD VOLUME OF YOUR DIRECT**
6 **TESTIMONY?**

7 A. Yes.

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

G SCHEDULES

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Cost of Service Summary
At Present Rates

LINE NO.	DESCRIPTION	Total Company	Jurisdictional Total	Residential	Commercial
1	<u>RATE BASE (a)</u>				
2	Gross Plant in Service	\$ 20,708,639	\$ 20,708,639	\$ 17,283,813	\$ 3,424,826
3	Accumulated Depreciation	8,126,120	8,126,120	6,793,754	1,332,367
4	Net Plant	\$ 12,582,518	\$ 12,582,518	\$ 10,490,059	\$ 2,092,459
5	Construction Work in Progress	-	-	-	-
6	Working Capital Assets & Misc. Other	3,711,205	3,711,205	3,094,036	617,169
7	Contributions & Advances in Aid of Construction	(1,885,118)	(1,885,118)	(1,571,625)	(313,493)
8	TOTAL RATE BASE [A]	\$ 14,408,605	\$ 14,408,605	\$ 12,012,470	\$ 2,396,135
9	<u>OPERATING REVENUES (c)</u>				
10	Present Rate Schedules(b)	\$ 2,462,285	\$ 2,462,285	\$ 2,062,589	\$ 399,696
11	Other Revenues	11,106	11,106	9,129	1,977
12	Effluent Revenues	-	-	-	-
13	TOTAL OPERATING REVENUES [A]	\$ 2,473,391	\$ 2,473,391	\$ 2,071,717	\$ 401,673
14	<u>OPERATING EXPENSES (c)</u>				
15	Operations and Maintenance				
16	Collection and Pumping	\$ 715,797	\$ 715,797	\$ 596,202	\$ 119,596
17	Treatment and Disposal	76,043	76,043	62,644	13,399
18	Reclaimed Water	-	-	-	-
19	Customer Accounts	4,497	4,497	4,232	265
20	Administrative and General	441,078	441,078	383,092	57,986
21	Total Operating and Maintenance Expense	\$ 1,237,415	\$ 1,237,415	\$ 1,046,169	\$ 191,246
22	Depreciation and Amortization	732,550	732,550	613,541	119,009
23	Taxes Other Than Income	52,868	52,868	44,076	8,792
24	Income Taxes	53,331	53,331	42,548	10,784
25	TOTAL EXPENSES [A]	\$ 2,076,165	\$ 2,076,165	\$ 1,746,334	\$ 329,831
26	OPERATING INCOME	\$ 397,226	\$ 397,226	\$ 325,383	\$ 71,843
27	EARNED RATE OF RETURN ON RATE BASE	2.76%	2.76%	2.71%	3.00%
28	<u>COST OF SERVICE REQUIREMENT SUMMARY</u>				
29	REQUIRED RATE OF RETURN GIVEN EQUAL RATES OF RETURN	7.31%	7.31%	7.31%	7.31%
30	REQUIRED OPERATING INCOME (L8*L27)	\$ 1,053,093	\$ 1,053,093	\$ 877,965	\$ 175,128
31	OPERATING INCOME DEFICIENCY/(SURPLUS) (L28-L24)	\$ 655,867	\$ 655,867	\$ 552,582	\$ 103,286
32	REVENUE CONVERSION FACTOR(d)[A]	1.3399	1.3399	1.3399	1.3399
33	REVENUE DEFICIENCY/(SURPLUS) (L29*L30)	\$ 878,786	\$ 878,786	\$ 740,395	\$ 138,391
34	RATE SCHEDULE REVENUE REQUIREMENT (L10+L31)	\$ 3,341,071	\$ 3,341,071	\$ 2,802,984	\$ 538,087
35	INDICATED % INCREASE ON PRESENT RATE SCHEDULE (L33/L10)	35.53%	35.53%	35.74%	34.45%
36	TOTAL REVENUE REQUIREMENT (L12 + L31)	\$ 3,352,176	\$ 3,352,176	\$ 2,812,112	\$ 540,064
37	<u>PROPOSED RATE SCHEDULE REVENUE REQUIREMENTS</u>				
38	REVENUE DEFICIENCY / (SURPLUS)	\$ 878,786	\$ 878,786	736,192	142,594
39	% INCREASE (L38/L10)	35.69%	35.69%	35.69%	35.68%
40	COST OF SERV. RATE SCHEDULE (L10 + L38)	\$ 3,341,071	\$ 3,341,071	\$ 2,798,780	\$ 542,290
41	COST OF SERV. REV. REQUIREMENT (L11 + L12 + L40)	\$ 3,352,176	\$ 3,352,176	\$ 2,807,909	\$ 544,267
42	% INCREASE IN TOTAL REVENUES (L36/L13)	35.53%	35.53%	35.54%	35.50%
43	EARNED RATE OF RETURN ON RATE BASE AT PROPOSED RATES(e)	7.31%	7.31%	7.28%	7.44%

Supporting Schedules

- (a) G-3
- (b) H-1
- (c) G-4a
- (d) C-5
- (e) G-2

Recap Schedules

- [A] A-1

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Cost of Service Summary
At Proposed Rates

LINE NO.	DESCRIPTION	Total Company	Jurisdictional Total	Residential	Commercial
1	<u>RATE BASE (a)</u>				
2	Gross Plant in Service	\$ 20,708,639	\$ 20,708,639	\$ 17,283,813	\$ 3,424,826
3	Accumulated Depreciation	<u>8,126,120</u>	<u>8,126,120</u>	<u>6,793,754</u>	<u>1,332,367</u>
4	Net Plant	\$ 12,582,518	\$ 12,582,518	\$ 10,490,059	\$ 2,092,459
5	Construction Work in Progress	-	-	-	-
6	Working Capital Assets & Misc. Other	3,711,205	3,711,205	3,094,036	617,169
7	Contributions & Advances in Aid of Construction	<u>(1,885,118)</u>	<u>(1,885,118)</u>	<u>(1,571,625)</u>	<u>(313,493)</u>
8	TOTAL RATE BASE [A]	\$ 14,408,605	\$ 14,408,605	\$ 12,012,470	\$ 2,396,135
9	<u>OPERATING REVENUES (c)</u>				
10	Proposed Rate Schedules(b)	\$ 3,341,071	\$ 3,341,071	\$ 2,798,780	\$ 542,290
11	Other Revenues	11,106	11,106	9,129	1,977
12	Effluent Revenues	-	-	-	-
13	TOTAL OPERATING REVENUES [A]	\$ 3,352,176	\$ 3,352,176	\$ 2,807,909	\$ 544,267
			100.00%	83.76%	16.24%
14	<u>OPERATING EXPENSES (c)</u>				
15	Operations and Maintenance				
16	Collection and Pumping	\$ 715,797	\$ 715,797	\$ 596,202	\$ 119,596
17	Treatment and Disposal	76,043	76,043	62,644	13,399
18	Reclaimed Water	-	-	-	-
19	Customer Accounts	4,023	4,023	3,785	237
20	Administrative and General	<u>441,078</u>	<u>441,078</u>	<u>383,092</u>	<u>57,986</u>
21	Total Operating and Maintenance Expense	\$ 1,236,941	\$ 1,236,941	\$ 1,045,723	\$ 191,218
22	Depreciation and Amortization	732,550	732,550	613,541	119,009
23	Taxes Other Than Income	59,140	59,140	49,305	9,835
24	Income Taxes	<u>270,452</u>	<u>270,452</u>	<u>224,456</u>	<u>45,996</u>
25	TOTAL EXPENSES [A]	\$ 2,299,084	\$ 2,299,084	\$ 1,933,026	\$ 366,058
26	OPERATING INCOME	\$ 1,053,093	\$ 1,053,093	\$ 874,883	\$ 178,210
27	EARNED RATE OF RETURN ON RATE BASE AT PROPOSED RATES	7.31%	7.31%	7.28%	7.44%
28	Relative Ratio of Return - Proposed Rates			0.996	1.018

Supporting Schedules

(a) G-3
(b) H-1
(c) G-4b
(d) C-5

Recap Schedules

[A] A-1
[B] G-1

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Rate Base Allocation to Rate Schedules/Classes

Line No.	Description	Total Company (a)	Jurisdictional Total (a)	Residential	Commercial	Allocation Factor (b)
RATE BASE						
GROSS PLANT IN SERVICE						
<u>Collection Plant</u>						
1	Commodity	\$ 9,071,188	\$ 9,071,188	\$ 7,456,421	\$ 1,614,766	CBC
2	Demand - Extra Cap Max Day	7,255,141	7,255,141	6,127,241	1,127,900	CMD
3	Customer Accounts	-	-	-	-	CB
4	Customer Services	258,784	258,784	239,200	19,584	CS
5	Reuse/Effluent	-	-	-	-	CF
6	Total Collection Plant	\$ 16,585,113	\$ 16,585,113	\$ 13,822,862	\$ 2,762,251	
<u>Pumping Plant</u>						
7	Commodity	\$ 1,117,007	\$ 1,117,007	\$ 918,168	\$ 198,839	CBC
8	Demand - Extra Cap Max Day	893,383	893,383	754,496	138,887	CMD
9	Customer Accounts	-	-	-	-	CB
10	Customer Services	-	-	-	-	CS
11	Reuse/Effluent	-	-	-	-	CF
12	Total Pumping Plant	\$ 2,010,390	\$ 2,010,390	\$ 1,672,664	\$ 337,726	
<u>Treatment and Disposal Plant</u>						
13	Commodity	\$ 870,198	\$ 870,198	\$ 715,294	\$ 154,904	CBC
14	Demand - Extra Cap Max Day	695,985	695,985	587,786	108,199	CMD
15	Customer Accounts	-	-	-	-	CB
16	Customer Services	-	-	-	-	CS
17	Reuse/Effluent	-	-	-	-	CF
18	Total Treatment and Disposal Plant	\$ 1,566,183	\$ 1,566,183	\$ 1,303,080	\$ 263,104	
<u>Reclaimed Water Plant</u>						
19	Commodity	\$ -	\$ -	\$ -	\$ -	CBC
20	Demand - Extra Cap Max Day	-	-	-	-	CMD
21	Customer Accounts	-	-	-	-	CB
22	Customer Services	-	-	-	-	CS
23	Reuse/Effluent	-	-	-	-	CF
24	Total Reclaimed Water Plant	\$ -	\$ -	\$ -	\$ -	
<u>Gross Plant In Service before Intangible and General Plant</u>						
25	Commodity	\$ 11,058,393	\$ 11,058,393	\$ 9,089,884	\$ 1,968,510	
26	Demand - Extra Cap Max Day	8,844,510	8,844,510	7,469,523	1,374,987	
27	Customer Accounts	-	-	-	-	
28	Customer Services	258,784	258,784	239,200	19,584	
29	Reuse/Effluent	-	-	-	-	
30	Gross Plant In Service	\$ 20,161,687	\$ 20,161,687	\$ 16,798,606	\$ 3,363,081	
<u>General Plant</u>						
31	Commodity	\$ 134,360	\$ 134,360	\$ 110,443	\$ 23,918	CBC
32	Demand - Extra Cap Max Day	107,462	107,462	90,755	16,706	CMD
33	Customer Accounts	244,966	244,966	230,520	14,446	CB
34	Customer Services	3,144	3,144	2,906	238	CS
35	Reuse/Effluent	-	-	-	-	CF
36	Total General Plant	\$ 489,932	\$ 489,932	\$ 434,625	\$ 55,308	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Rate Base Allocation to Rate Schedules/Classes

Line No.	Description	Total Company (a)	Jurisdictional Total (a)	Residential	Commercial	Allocation Factor (b)
	<u>Intangible Plant</u>					
37	Commodity	\$ -	\$ -	\$ -	\$ -	CBC
38	Demand - Extra Cap Max Day	-	-	-	-	CMD
39	Customer Accounts	-	-	-	-	CB
40	Customer Services	-	-	-	-	CS
41	Reuse/Effluent	-	-	-	-	CF
42	Total Intangible Plant	\$ -	\$ -	\$ -	\$ -	
	<u>Allocated Corporate Plant</u>					
43	Commodity	\$ 15,637	\$ 15,637	\$ 12,853	\$ 2,784	CBC
44	Demand - Extra Cap Max Day	12,506	12,506	10,562	1,944	CMD
45	Customer Accounts	28,509	28,509	26,828	1,681	CB
46	Customer Services	366	366	338	28	CS
47	Reuse/Effluent	-	-	-	-	CF
48	Total Allocated Corporate Plant	\$ 57,019	\$ 57,019	\$ 50,582	\$ 6,437	
	<u>Reconciling Amount</u>					
49	Commodity		\$ -	\$ -	\$ -	CBC
50	Demand - Extra Cap Max Day		-	-	-	CMD
51	Customer Accounts		-	-	-	CB
52	Customer Services		-	-	-	CS
53	Fire Hydrants		-	-	-	CF
54	Total Reconciling Amount	\$ -	\$ -	\$ -	\$ -	
	<u>Gross Plant In Service</u>					
55	Commodity	\$ 11,208,391	\$ 11,208,391	\$ 9,213,180	\$ 1,995,211	
56	Demand - Extra Cap Max Day	8,964,478	8,964,478	7,570,840	1,393,637	
57	Customer Accounts	273,476	273,476	257,348	16,127	
58	Customer Services	262,295	262,295	242,444	19,850	
59	Fire Hydrants	-	-	-	-	
60	Total Gross Plant In Service (a)(c)	\$ 20,708,639	\$ 20,708,639	\$ 17,283,813	\$ 3,424,826	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Rate Base Allocation to Rate Schedules/Classes

Line No.	Description	Total Company (a)	Jurisdictional Total (a)	Residential	Commercial	Allocation Factor (b)
ACCUMULATED DEPRECIATION AND AMORTIZATION						
	<u>Source of Supply Plant</u>					
61	Commodity	\$ 2,988,077	\$ 2,988,077	\$ 2,456,168	\$ 531,909	CBC
62	Demand - Extra Cap Max Day	2,389,865	2,389,865	2,018,332	371,534	CMD
63	Customer Accounts	-	-	-	-	CB
64	Customer Services	187,353	187,353	173,174	14,179	CS
65	Fire Hydrants	-	-	-	-	CF
66	Total Source of Supply Plant	\$ 5,565,295	\$ 5,565,295	\$ 4,647,674	\$ 917,621	
	<u>Pumping Plant</u>					
67	Commodity	\$ 656,492	\$ 656,492	\$ 539,629	\$ 116,862	CBC
68	Demand - Extra Cap Max Day	525,062	525,062	443,435	81,627	CMD
69	Customer Accounts	-	-	-	-	CB
70	Customer Services	-	-	-	-	CS
71	Fire Hydrants	-	-	-	-	CF
72	Total Pumping Plant	\$ 1,181,554	\$ 1,181,554	\$ 983,064	\$ 198,490	
	<u>Water Treatment Plant</u>					
73	Commodity	\$ 610,571	\$ 610,571	\$ 501,883	\$ 108,688	CBC
74	Demand - Extra Cap Max Day	488,335	488,335	412,417	75,918	CMD
75	Customer Accounts	-	-	-	-	CB
76	Customer Services	-	-	-	-	CS
77	Fire Hydrants	-	-	-	-	CF
78	Total Water Treatment Plant	\$ 1,098,906	\$ 1,098,906	\$ 914,300	\$ 184,606	
	<u>Transmission and Distribution Plant</u>					
79	Commodity	\$ -	\$ -	\$ -	\$ -	CBC
80	Demand - Extra Cap Max Day	-	-	-	-	CMD
81	Customer Accounts	-	-	-	-	CB
82	Customer Services	-	-	-	-	CS
83	Fire Hydrants	-	-	-	-	CF
84	Total Transmission and Distribution Plant	\$ -	\$ -	\$ -	\$ -	
	<u>General Plant</u>					
85	Commodity	\$ 68,411	\$ 68,411	\$ 56,233	\$ 12,178	CBC
86	Demand - Extra Cap Max Day	54,715	54,715	46,209	8,506	CMD
87	Customer Accounts	124,727	124,727	117,372	7,355	CB
88	Customer Services	1,601	1,601	1,480	121	CS
89	Fire Hydrants	-	-	-	-	CF
90	Total General Plant	\$ 249,454	\$ 249,454	\$ 221,294	\$ 28,161	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Rate Base Allocation to Rate Schedules/Classes

Line No.	Description	Total Company (a)	Jurisdictional Total (a)	Residential	Commercial	Allocation Factor (b)
	<u>Allocated Corporate Plant</u>					
92	Commodity	\$ 8,477	\$ 8,477	\$ 6,968	\$ 1,509	CBC
93	Demand - Extra Cap Max Day	6,780	6,780	5,726	1,054	CMD
94	Customer Accounts	15,456	15,456	14,544	911	CB
95	Customer Services	198	198	183	15	CS
96	Fire Hydrants	-	-	-	-	CF
97	Total Allocated Corporate Plant	\$ 30,911	\$ 30,911	\$ 27,422	\$ 3,490	
	<u>Retirement Work in Progress</u>					
98	Commodity	\$ -	\$ -	\$ -	\$ -	CBC
99	Demand - Extra Cap Max Day	-	-	-	-	CMD
100	Customer Accounts	-	-	-	-	CB
101	Customer Services	-	-	-	-	CS
102	Fire Hydrants	-	-	-	-	CF
103	Total Retirement Work in Progress	\$ -	\$ -	\$ -	\$ -	
	<u>Advances in Aid of Construction</u>					
104	Commodity	\$ -	\$ -	\$ -	\$ -	CBC
105	Demand - Extra Cap Max Day	-	-	-	-	CMD
106	Customer Accounts	-	-	-	-	CB
107	Customer Services	-	-	-	-	CS
108	Fire Hydrants	-	-	-	-	CF
109	Total Advances in Aid of Construction	\$ -	\$ -	\$ -	\$ -	
	<u>Accumulated Depreciation/Amortization</u>					
110	Commodity	\$ 4,332,027	\$ 4,332,027	\$ 3,560,881	\$ 771,146	
111	Demand - Extra Cap Max Day	3,464,758	3,464,758	2,926,119	538,639	
112	Customer Accounts	140,183	140,183	131,916	8,267	
113	Customer Services	189,152	189,152	174,837	14,315	
114	Fire Hydrants	-	-	-	-	
115	Total Accumulated Depreciation/Amortization (a)(c)	\$ 8,126,120	\$ 8,126,120	\$ 6,793,754	\$ 1,332,367	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Rate Base Allocation to Rate Schedules/Classes

Line No.	Description	Total Company (a)	Jurisdictional Total (a)	Residential	Commercial	Allocation Factor (b)
NET UTILITY PLANT IN SERVICE						
	Net Plant					
116	Commodity	\$ 6,876,363	\$ 6,876,363	\$ 5,652,299	\$ 1,224,065	
117	Demand - Extra Cap Max Day	5,499,720	5,499,720	4,644,721	854,998	
118	Customer Accounts	133,293	133,293	125,432	7,860	
119	Customer Services	73,142	73,142	67,607	5,535	
120	Fire Hydrants	-	-	-	-	
121	Net Utility Plant in Service (a)	\$ 12,582,518	\$ 12,582,518	\$ 10,490,059	\$ 2,092,459	
CONSTRUCTION WORK IN PROGRESS						
	Construction Work in Progress					
122	Commodity	\$ -	\$ -	\$ -	\$ -	CBC
123	Demand - Extra Cap Max Day	-	-	-	-	CMD
124	Customer Accounts	-	-	-	-	CB
125	Customer Services	-	-	-	-	CS
126	Fire Hydrants	-	-	-	-	CF
127	Total Construction Work in Progress (a)	\$ -	\$ -	\$ -	\$ -	
WORKING CAPITAL ASSETS						
	Working Capital Assets					
128	Commodity	\$ 2,028,179	\$ 2,028,179	\$ 1,667,142	\$ 361,037	CBC
129	Demand - Extra Cap Max Day	1,622,139	1,622,139	1,369,957	252,181	CMD
130	Customer Accounts	39,315	39,315	36,996	2,318	CB
131	Customer Services	21,573	21,573	19,941	1,633	CS
132	Fire Hydrants	-	-	-	-	CF
133	Total Working Capital Assets (a)	\$ 3,711,205	\$ 3,711,205	\$ 3,094,036	\$ 617,169	
CONTRIBUTIONS & ADVANCES IN AID OF CONSTRUCTION, ADIT, OTHER						
	Contributions & Advances in Aid of Construction, ADIT, EADIT, Other					
134	Commodity	\$ (1,030,220)	\$ (1,030,220)	\$ (846,830)	\$ (183,390)	CBC
135	Demand - Extra Cap Max Day	(823,970)	(823,970)	(695,874)	(128,096)	CMD
136	Customer Accounts	(19,970)	(19,970)	(18,792)	(1,178)	CB
137	Customer Services	(10,958)	(10,958)	(10,129)	(829)	CS
138	Fire Hydrants	-	-	-	-	CF
139	Total Contributions & Advances in Aid of Construction (a)	\$ (1,885,118)	\$ (1,885,118)	\$ (1,571,625)	\$ (313,493)	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Rate Base Allocation to Rate Schedules/Classes

Line No.	Description	Total Company (a)	Jurisdictional Total (a)	Residential	Commercial	Allocation Factor (b)
RATE BASE						
	<u>Rate Base</u>					
140	Commodity	\$ 7,874,323	\$ 7,874,323	\$ 6,472,611	\$ 1,401,712	
141	Demand - Extra Cap Max Day	6,297,888	6,297,888	5,318,804	979,083	
142	Customer Accounts	152,638	152,638	143,636	9,001	
143	Customer Services	83,757	83,757	77,419	6,339	
144	Fire Hydrants	-	-	-	-	
145	Total Rate Base [A]	\$ 14,408,605	\$ 14,408,605	\$ 12,012,470	\$ 2,396,135	
	<u>Supporting Schedules</u>					<u>Recap Schedules</u>
	(a) G-5, (b) G-7a, (c) F-1.3					[A] G-1

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Revenue and Expense Allocation to Rate Schedules at Present Revenues

Line No.s	Description	Total Company (a)	Other Jurisdictional	Jurisdictional Total (a)	Residential	Commercial	Allocation Code (b)
REVENUES							
1	Revenue Water Service (c)	\$ 2,462,285	\$ -	\$ 2,462,285	\$ 2,062,589	\$ 399,696	Direct
2	Other Revenue	11,106	-	11,106	9,129	1,977	CBC
	Effluent Revenues	-	-	-	-	-	CBC
3	Total Revenue	\$ 2,473,391	\$ -	\$ 2,473,391	\$ 2,071,717	\$ 401,673	
EXPENSES (A)							
Collection Expenses							
<u>Operation</u>							
4	Commodity	\$ 383,164	\$ -	\$ 383,164	\$ 314,957	\$ 68,207	CBC
5	Demand	280,795	-	280,795	237,142	43,653	CMD
6	Customer Accounts	-	-	-	-	-	CB
7	Customer Services	10,016	-	10,016	9,258	758	CS
8	Effluent	-	-	-	-	-	CF
9	Total Operation	\$673,975	\$ -	\$ 673,975	\$ 561,357	\$ 112,618	
<u>Maintenance</u>							
10	Commodity	\$ 18,350	\$ -	\$ 18,350	\$ 15,083	\$ 3,266	CBC
11	Demand	14,676	-	14,676	12,395	2,282	CMD
12	Customer Accounts	-	-	-	-	-	CB
13	Customer Services	523	-	523	484	40	CS
14	Effluent	-	-	-	-	-	CF
15	Total Maintenance	\$ 33,550	\$ -	\$ 33,550	\$ 27,962	\$ 5,588	
<u>Total Source of Collection Expenses</u>							
16	Commodity	\$ 401,514	\$ -	\$ 401,514	\$ 330,040	\$ 71,474	
17	Demand	295,471	-	295,471	249,537	45,935	
18	Customer Accounts	-	-	-	-	-	
19	Customer Services	10,539	-	10,539	9,742	798	
20	Effluent	-	-	-	-	-	
21	Total Collection Expenses	\$ 707,525	\$ -	\$ 707,525	\$ 589,319	\$ 118,206	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Revenue and Expense Allocation to Rate Schedules at Present Revenues

Line No.s	Description	Total Company (a)	Other Jurisdictional	Jurisdictional Total (a)	Residential	Commercial	Allocation Code (b)
<u>Pumping Expenses</u>							
	<u>Operation</u>						
22	Commodity	\$ -	\$ -	\$ -	\$ -	\$ -	CBC
23	Demand	-	-	-	-	-	CMD
24	Customer Accounts	-	-	-	-	-	CB
25	Customer Services	-	-	-	-	-	CS
26	Effluent	-	-	-	-	-	CF
27	Total Operation	\$ -	\$ -	\$ -	\$ -	\$ -	
	<u>Maintenance</u>						
28	Commodity	\$ 4,597	\$ -	\$ 4,597	\$ 3,778	\$ 818	CBC
29	Demand	3,676	-	3,676	3,105	572	CMD
30	Customer Accounts	-	-	-	-	-	CB
31	Customer Services	-	-	-	-	-	CS
32	Effluent	-	-	-	-	-	CF
33	Total Maintenance	\$ 8,273	\$ -	\$ 8,273	\$ 6,883	\$ 1,390	
	<u>Total Pumping Expenses Expenses</u>						
34	Commodity	\$ 4,597	\$ -	\$ 4,597	\$ 3,778	\$ 818	
35	Demand	3,676	-	3,676	3,105	572	
36	Customer Accounts	-	-	-	-	-	
37	Customer Services	-	-	-	-	-	
38	Effluent	-	-	-	-	-	
39	Total Water Treatment	\$ 8,273	\$ -	\$ 8,273	\$ 6,883	\$ 1,390	
	<u>Total Production Expenses</u>						
40	Commodity	\$ 406,111	\$ -	\$ 406,111	\$ 333,819	\$ 72,292	
41	Demand	299,148	-	299,148	252,642	46,506	
42	Customer Accounts	-	-	-	-	-	
43	Customer Services	10,539	-	10,539	9,742	798	
44	Effluent	-	-	-	-	-	
45	Total Production Expenses	\$ 715,797	\$ -	\$ 715,797	\$ 596,202	\$ 119,596	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Revenue and Expense Allocation to Rate Schedules at Present Revenues

Line No.s	Description	Total Company (a)	Other Jurisdictional	Jurisdictional Total (a)	Residential	Commercial	Allocation Code (b)
<u>Treatment and Disposal Expenses</u>							
<u>Operation</u>							
46	Commodity	\$ 66,874	\$ -	\$ 66,874	\$ 54,970	\$ 11,904	CBC
47	Demand	3,625	-	3,625	3,062	564	CMD
48	Customer Accounts	-	-	-	-	-	CB
49	Customer Services	-	-	-	-	-	CS
50	Effluent	-	-	-	-	-	CF
51	Total Operation	\$ 70,500	\$ -	\$ 70,500	\$ 58,032	\$ 12,468	
<u>Maintenance</u>							
52	Commodity	\$ 3,080	\$ -	\$ 3,080	\$ 2,532	\$ 548	CBC
53	Demand	2,464	-	2,464	2,081	383	CMD
54	Customer Accounts	-	-	-	-	-	CB
55	Customer Services	-	-	-	-	-	CS
56	Effluent	-	-	-	-	-	CF
57	Total Maintenance	\$ 5,544	\$ -	\$ 5,544	\$ 4,612	\$ 931	
<u>Total Treatment and Disposal Expenses</u>							
58	Commodity	\$ 69,954	\$ -	\$ 69,954	\$ 57,502	\$ 12,453	
59	Demand	6,089	-	6,089	5,142	947	
60	Customer Accounts	-	-	-	-	-	
61	Customer Services	-	-	-	-	-	
62	Effluent	-	-	-	-	-	
63	Total Treatment and Disposal Expenses	\$ 76,043	\$ -	\$ 76,043	\$ 62,644	\$ 13,399	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Revenue and Expense Allocation to Rate Schedules at Present Revenues

Line No.s	Description	Total Company (a)	Other Jurisdictional	Jurisdictional Total (a)	Residential	Commercial	Allocation Code (b)
<u>Reclaimed Water Expenses</u>							
<u>Operation</u>							
64	Commodity	\$ -	\$ -	\$ -	\$ -	\$ -	CBC
65	Demand	-	-	-	-	-	CMD
66	Customer Accounts	-	-	-	-	-	CB
67	Customer Services	-	-	-	-	-	CS
68	Effluent	-	-	-	-	-	CF
69	Total Operation	\$ -	\$ -	\$ -	\$ -	\$ -	
<u>Maintenance</u>							
70	Commodity	\$ -	\$ -	\$ -	\$ -	\$ -	CBC
71	Demand	-	-	-	-	-	CMD
72	Customer Accounts	-	-	-	-	-	CB
73	Customer Services	-	-	-	-	-	CS
74	Effluent	-	-	-	-	-	CF
75	Total Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	
<u>Total Reclaimed Water Expenses</u>							
76	Commodity	\$ -	\$ -	\$ -	\$ -	\$ -	
77	Demand	-	-	-	-	-	
78	Customer Accounts	-	-	-	-	-	
79	Customer Services	-	-	-	-	-	
80	Effluent	-	-	-	-	-	
81	Total Reclaimed Water Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	
<u>Customer Accounts Expenses</u>							
82	Commodity	\$ -	\$ -	\$ -	\$ -	\$ -	CBC
83	Demand	-	-	-	-	-	CMD
84	Customer Accounts	4,497	-	4,497	4,232	265	CB
85	Customer Services	-	-	-	-	-	CS
86	Effluent	-	-	-	-	-	CF
87	Total Customer Accounts	\$ 4,497	\$ -	\$ 4,497	\$ 4,232	\$ 265	
<u>O&M w/oA&G Expenses</u>							
88	Commodity	\$ 476,065	\$ -	\$ 476,065	\$ 391,320	\$ 84,745	
89	Demand	305,237	-	305,237	257,784	47,453	
90	Customer Accounts	4,497	-	4,497	4,232	265	
91	Customer Services	10,539	-	10,539	9,742	798	
92	Effluent	-	-	-	-	-	
93	Total O&M w/oA&G Expenses	\$ 796,337	\$ -	\$ 796,337	\$ 663,077	\$ 133,260	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Revenue and Expense Allocation to Rate Schedules at Present Revenues

Line No.s	Description	Total Company (a)	Other Jurisdictional	Jurisdictional Total (a)	Residential	Commercial	Allocation Code (b)
<u>Administrative and General Expenses</u>							
94	Commodity	\$ 165,023	\$ -	\$ 165,023	\$ 135,647	\$ 29,376	CBC
95	Demand	127,090	-	127,090	107,332	19,758	CMD
96	Customer Accounts	144,926	-	144,926	136,379	8,546	CB
97	Customer Services	4,039	-	4,039	3,733	306	CS
98	Effluent	-	-	-	-	-	CF
99	Total Administrative and General Expenses	\$ 441,078	\$ -	\$ 441,078	\$ 383,092	\$ 57,986	
<u>Total Operation and Maintenance Expenses</u>							
100	Commodity	\$ 641,088	\$ -	\$ 641,088	\$ 526,968	\$ 114,120	
101	Demand	432,326	-	432,326	365,116	67,210	
102	Customer Accounts	149,422	-	149,422	140,611	8,811	
103	Customer Services	14,578	-	14,578	13,475	1,103	
104	Effluent	-	-	-	-	-	
105	Total Operation and Maintenance Expenses	\$ 1,237,415	\$ -	\$ 1,237,415	\$ 1,046,169	\$ 191,246	
<u>Depreciation & Amort Expense</u>							
106	Commodity	\$ 385,868	\$ -	\$ 385,868	\$ 317,179	\$ 68,688	CBC
107	Demand	308,617	-	308,617	260,639	47,978	CMD
108	Customer Accounts	32,217	-	32,217	30,317	1,900	CB
109	Customer Services	5,848	-	5,848	5,406	443	CS
110	Effluent	-	-	-	-	-	CF
111		-	-	-	-	-	CF
112	Total Depreciation & Amort Expense	\$ 732,550	\$ -	\$ 732,550	\$ 613,541	\$ 119,009	
<u>Taxes Other Than Income</u>							
113	Commodity	\$ 28,893	\$ -	\$ 28,893	\$ 23,749	\$ 5,143	CBC
114	Demand	23,108	-	23,108	19,516	3,592	CMD
115	Customer Accounts	560	-	560	527	33	CB
116	Customer Services	307	-	307	284	23	CS
117	Effluent	-	-	-	-	-	CF
118	Total Taxes Other Than Income	\$ 52,868	\$ -	\$ 52,868	\$ 44,076	\$ 8,792	
<u>O&M, Customer, A&G and Other Taxes</u>							
119	Commodity	\$ 1,055,848	\$ -	\$ 1,055,848	\$ 867,896	\$ 187,952	
120	Demand	764,052	-	764,052	645,271	118,781	
121	Customer Accounts	182,200	-	182,200	171,455	10,745	
122	Customer Services	20,734	-	20,734	19,165	1,569	
123	Effluent	-	-	-	-	-	
124	Total O&M, Customer, A&G and Other Taxes	\$ 2,022,834	\$ -	\$ 2,022,834	\$ 1,703,787	\$ 319,047	
<u>Labor Allocator</u>							
125	Commodity	\$ -	\$ -	\$ -	\$ -	\$ -	CBC
126	Demand	-	-	-	-	-	CMD
127	Customer Accounts	-	-	-	-	-	CB
128	Customer Services	-	-	-	-	-	CS
129	Effluent	-	-	-	-	-	CF
130	Total Labor	\$ -	\$ -	\$ -	\$ -	\$ -	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Revenue and Expense Allocation to Rate Schedules at Present Revenues

Line No.s	Description	Total Company (a)	Other Jurisdictional	Jurisdictional Total (a)	Residential	Commercial	Allocation Code (b)
OPERATING INCOME							
131	Income Before Taxes	\$ 450,557	\$ -	\$ 450,557	\$ 367,931	\$ 82,627	
132	State Income Tax	10,507	-	10,507	8,383	2,125	
133	Federal Income Tax	42,824	-	42,824	34,165	8,659	
134	Total Income Taxes	\$ 53,331	\$ -	\$ 53,331	\$ 42,548	\$ 10,784	
135	Net Income After Tax	\$ 397,226	\$ -	\$ 397,226	\$ 325,383	\$ 71,843	
136	Present Return Rate Of Return	2.76%	0.00%	2.76%	2.71%	3.00%	
137	Present Relative Return Rate Of Return	1.00	-	1.00	0.98	1.09	
State Income Tax							
138	Income Before Tax	\$ 450,557	\$ -	\$ 450,557	\$ 367,931	\$ 82,627	
139	Less: Interest Expense	236,125	-	236,125	196,858	39,267	
140	State Taxable Income	\$ 214,432	\$ -	\$ 214,432	\$ 171,073	\$ 43,359	
141	Pro Forma State Income Tax	\$ 10,507	\$ -	\$ 10,507	\$ 8,383	\$ 2,125	
142	Amortization of Flow Through Tax	0	0	0	0	0	
143	Subtotal State Income Tax	\$ 10,507	\$ -	\$ 10,507	\$ 8,383	\$ 2,125	
144	Deferred State Income Tax	\$ -	\$ -	\$ -	\$ -	\$ -	
145	Total State Income Tax	\$ 10,507	\$ -	\$ 10,507	\$ 8,383	\$ 2,125	
Federal Income Tax							
146	Income Before Tax	\$ 450,557	\$ -	\$ 450,557	\$ 367,931	\$ 82,627	
147	Less: Interest Expense	236,125	-	236,125	196,858	39,267	
148	Less: State Income Tax	10,507	-	10,507	8,383	2,125	
149		-	-	-	-	-	
150	Federal Taxable Income	\$ 203,925	\$ -	\$ 203,925	\$ 162,691	\$ 41,235	
151	Pro Forma Federal Income Tax	\$ 42,824	\$ -	\$ 42,824	\$ 34,165	\$ 8,659	
152	ITC Amortization	-	-	-	-	-	CRB
153	Subtotal Federal Income Tax	\$ 42,824	\$ -	\$ 42,824	\$ 34,165	\$ 8,659	
154	Deferred Federal Income Tax	-	-	-	-	-	
155	Total Federal Income Tax	42,824	-	42,824	34,165	8,659	
156	Total Income Tax	53,331	-	53,331	42,548	10,784	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Revenue and Expense Allocation to Rate Schedules at Present Revenues

Line No.s	Description	Total Company (a)	Other Jurisdictional	Jurisdictional Total (a)	Residential	Commercial	Allocation Code (b)
PRESENT REVENUES TAXES & ROR							
Present Revenues							
157	Revenues	\$ 2,462,285		\$ 2,462,285	\$ 2,062,589	\$ 399,696	
158	Other Revenue	11,106	-	11,106	9,129	1,977	
159	Effluent Revenues	-	-	-	-	-	
160	Total Present Revenue	\$ 2,473,391	\$ -	\$ 2,473,391	\$ 2,071,717	\$ 401,673	
161	O&M, Customer, A&G and Other Taxes	\$ 2,022,834	\$ -	\$ 2,022,834	\$ 1,703,787	\$ 319,047	
162	Income Before Tax	\$ 450,557	\$ -	\$ 450,557	\$ 367,931	\$ 82,627	
163	Less: Interest Expense	236,125	-	236,125	196,858	39,267	
164	State Taxable Income	\$ 214,432	\$ -	\$ 214,432	\$ 171,073	\$ 43,359	
165	Pro Forma State Income Tax	\$ 10,507	\$ -	\$ 10,507	\$ 8,383	\$ 2,125	
166	Amortization of Flow Through Tax	-	-	-	-	-	
167	Subtotal State Income Tax	\$ 10,507	\$ -	\$ 10,507.19	\$ 8,382.58	\$ 2,124.60	
168	Deferred State Income Tax	\$ -	\$ -	\$ -	\$ -	\$ -	
169	Total State Income Tax	\$ 10,507	\$ -	\$ 10,507	\$ 8,383	\$ 2,125	
170	Income Before Tax	\$ 450,557	\$ -	\$ 450,557	\$ 367,931	\$ 82,627	
171	Less: Interest Expense	236,125	-	236,125	196,858	39,267	
172	Less: State Income Tax	10,507	-	10,507	8,383	2,125	
173		-	-	-	-	-	
174	Federal Taxable Income	\$203,925	0	203,925	162,691	41,235	
175	Pro Forma Federal Income Tax	\$ 42,824	0	42,824	34,165	8,659	
176	ITC Amortization	-	0	0	0	0	
177	Subtotal Federal Income Tax	\$42,824	0	42,824	34,165	8,659	CRB
178	Total Federal Income Tax	\$42,824	0	42,824	34,165	8,659	
179	Total Income Tax	\$53,331	0	53,331	42,548	10,784	
180	Income After Tax	\$397,226	\$0	\$397,226	\$325,383	\$71,843	
Present Revenues							
181	Return Rate Of Return	2.76%	0.00%	2.76%	2.71%	3.00%	
182	Realtive Rate Of Return	1.00	-	1.00	0.98	1.09	

Supporting Schedules
(a) C-1, (b) G-7a, (c) H-1

Recap Schedules
[A] G-1

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Revenue and Expense Allocation to Rate Schedules at Proposed Revenues

Line No.s	Description	Total Company (a)	Jurisdictional Total (a)	Residential	Commercial	Allocation Code (b)
REVENUES						
1	Revenue Water Service (c)	\$ 3,341,071	\$ 3,341,071	\$ 2,798,780	\$ 542,290	Direct
2	Other Revenue	11,106	11,106	9,129	1,977	CBC
	Effluent Revenues	-	-	-	-	CBC
3	Total Revenue	\$ 3,352,176	\$ 3,352,176	\$ 2,807,909	\$ 544,267	
EXPENSES (A)						
Collection Expenses						
<u>Operation</u>						
4	Commodity	\$ 383,164	\$ 383,164	\$ 314,957	\$ 68,207	CBC
5	Demand	280,795	280,795	237,142	43,653	CMD
6	Customer Accounts	-	-	-	-	CB
7	Customer Services	10,016	10,016	9,258	758	CS
8	Effluent	-	-	-	-	CF
9	Total Operation	\$673,975	\$ 673,975	\$ 561,357	\$ 112,618	
<u>Maintenance</u>						
10	Commodity	\$ 18,350	\$ 18,350	\$ 15,083	\$ 3,266	CBC
11	Demand	14,676	14,676	12,395	2,282	CMD
12	Customer Accounts	-	-	-	-	CB
13	Customer Services	523	523	484	40	CS
14	Effluent	-	-	-	-	CF
15	Total Maintenance	\$ 33,550	\$ 33,550	\$ 27,962	\$ 5,588	
<u>Total Collection Expenses</u>						
16	Commodity	\$ 401,514	\$ 401,514	\$ 330,040	\$ 71,474	
17	Demand	295,471	295,471	249,537	45,935	
18	Customer Accounts	-	-	-	-	
19	Customer Services	10,539	10,539	9,742	798	
20	Effluent	-	-	-	-	
21	Total Collection Expenses	\$ 707,525	\$ 707,525	\$ 589,319	\$ 118,206	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Revenue and Expense Allocation to Rate Schedules at Proposed Revenues

Line No.s	Description	Total Company (a)	Jurisdictional Total (a)	Residential	Commercial	Allocation Code (b)
<u>Pumping Expenses</u>						
<u>Operation</u>						
22	Commodity	\$ -	\$ -	\$ -	\$ -	CBC
23	Demand	-	-	-	-	CMD
24	Customer Accounts	-	-	-	-	CB
25	Customer Services	-	-	-	-	CS
26	Effluent	-	-	-	-	CF
27	Total Operation	\$ -	\$ -	\$ -	\$ -	
<u>Maintenance</u>						
28	Commodity	\$ 4,597	\$ 4,597	\$ 3,778	\$ 818	CBC
29	Demand	3,676	3,676	3,105	572	CMD
30	Customer Accounts	-	-	-	-	CB
31	Customer Services	-	-	-	-	CS
32	Effluent	-	-	-	-	CF
33	Total Maintenance	\$ 8,273	\$ 8,273	\$ 6,883	\$ 1,390	
<u>Total Pumping Expenses Expenses</u>						
34	Commodity	\$ 4,597	\$ 4,597	\$ 3,778	\$ 818	
35	Demand	3,676	3,676	3,105	572	
36	Customer Accounts	-	-	-	-	
37	Customer Services	-	-	-	-	
38	Effluent	-	-	-	-	
39	Total Pumping Expense	\$ 8,273	\$ 8,273	\$ 6,883	\$ 1,390	
<u>Total Production Expenses</u>						
40	Commodity	\$ 406,111	\$ 406,111	\$ 333,819	\$ 72,292	
41	Demand	299,148	299,148	252,642	46,506	
42	Customer Accounts	-	-	-	-	
43	Customer Services	10,539	10,539	9,742	798	
44	Effluent	-	-	-	-	
45	Total Production Expenses	\$ 715,797	\$ 715,797	\$ 596,202	\$ 119,596	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Revenue and Expense Allocation to Rate Schedules at Proposed Revenues

Line No.s	Description	Total Company (a)	Jurisdictional Total (a)	Residential	Commercial	Allocation Code (b)
<u>Treatment and Disposal Expenses</u>						
<u>Operation</u>						
46	Commodity	\$ 66,874	\$ 66,874	\$ 54,970	\$ 11,904	CBC
47	Demand	3,625	3,625	3,062	564	CMD
48	Customer Accounts	-	-	-	-	CB
49	Customer Services	-	-	-	-	CS
50	Effluent	-	-	-	-	CF
51	Total Operation	\$ 70,500	\$ 70,500	\$ 58,032	\$ 12,468	
<u>Maintenance</u>						
52	Commodity	\$ 3,080	\$ 3,080	\$ 2,532	\$ 548	CBC
53	Demand	2,464	2,464	2,081	383	CMD
54	Customer Accounts	-	-	-	-	CB
55	Customer Services	-	-	-	-	CS
56	Effluent	-	-	-	-	CF
57	Total Maintenance	\$ 5,544	\$ 5,544	\$ 4,612	\$ 931	
<u>Total Treatment and Disposal Expenses</u>						
58	Commodity	\$ 69,954	\$ 69,954	\$ 57,502	\$ 12,453	
59	Demand	6,089	6,089	5,142	947	
60	Customer Accounts	-	-	-	-	
61	Customer Services	-	-	-	-	
62	Effluent	-	-	-	-	
63	Total Treatment and Disposal Expenses	\$ 76,043	\$ 76,043	\$ 62,644	\$ 13,399	
<u>Reclaimed Water Expenses</u>						
<u>Operation</u>						
64	Commodity	\$ -	\$ -	\$ -	\$ -	CBC
65	Demand	-	-	-	-	CMD
66	Customer Accounts	-	-	-	-	CB
67	Customer Services	-	-	-	-	CS
68	Effluent	-	-	-	-	CF
69	Total Operation	\$ -	\$ -	\$ -	\$ -	
<u>Maintenance</u>						
70	Commodity	\$ -	\$ -	\$ -	\$ -	CBC
71	Demand	-	-	-	-	CMD
72	Customer Accounts	-	-	-	-	CB
73	Customer Services	-	-	-	-	CS
74	Effluent	-	-	-	-	CF
75	Total Maintenance	\$ -	\$ -	\$ -	\$ -	
<u>Total Reclaimed Water Expenses</u>						
76	Commodity	\$ -	\$ -	\$ -	\$ -	
77	Demand	-	-	-	-	
78	Customer Accounts	-	-	-	-	
79	Customer Services	-	-	-	-	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Revenue and Expense Allocation to Rate Schedules at Proposed Revenues

Line No.s	Description	Total Company (a)	Jurisdictional Total (a)	Residential	Commercial	Allocation Code (b)
80	Effluent	-	-	-	-	
81	Total Reclaimed Water Expenses	\$ -	\$ -	\$ -	\$ -	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Revenue and Expense Allocation to Rate Schedules at Proposed Revenues

Line No.s	Description	Total Company (a)	Jurisdictional Total (a)	Residential	Commercial	Allocation Code (b)
<u>Customer Accounts Expenses</u>						
82	Commodity	\$ -	\$ -	\$ -	\$ -	CBC
83	Demand	-	-	-	-	CMD
84	Customer Accounts	4,023	4,023	3,785	237	CB
85	Customer Services	-	-	-	-	CS
86	Effluent	-	-	-	-	CF
87	Total Customer Accounts	\$ 4,023	\$ 4,023	\$ 3,785	\$ 237	
<u>O&M w/oA&G Expenses</u>						
88	Commodity	\$ 476,065	\$ 476,065	\$ 391,320	\$ 84,745	
89	Demand	305,237	305,237	257,784	47,453	
90	Customer Accounts	4,023	4,023	3,785	237	
91	Customer Services	10,539	10,539	9,742	798	
92	Effluent	-	-	-	-	
93	Total O&M w/oA&G Expenses	\$ 795,863	\$ 795,863	\$ 662,631	\$ 133,232	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Revenue and Expense Allocation to Rate Schedules at Proposed Revenues

Line No.s	Description	Total Company (a)	Jurisdictional Total (a)	Residential	Commercial	Allocation Code (b)
<u>Administrative and General Expenses</u>						
94	Commodity	\$ 165,023	\$ 165,023	\$ 135,647	\$ 29,376	CBC
95	Demand	127,090	127,090	107,332	19,758	CMD
96	Customer Accounts	144,926	144,926	136,379	8,546	CB
97	Customer Services	4,039	4,039	3,733	306	CS
98	Effluent	-	-	-	-	CF
99	Total Administrative and General Expenses	\$ 441,078	\$ 441,078	\$ 383,092	\$ 57,986	
<u>Total Operation and Maintenance Expenses</u>						
100	Commodity	\$ 641,088	\$ 641,088	\$ 526,968	\$ 114,120	
101	Demand	432,326	432,326	365,116	67,210	
102	Customer Accounts	148,948	148,948	140,165	8,784	
103	Customer Services	14,578	14,578	13,475	1,103	
104	Effluent	-	-	-	-	
105	Total Operation and Maintenance Expenses	\$ 1,236,941	\$ 1,236,941	\$ 1,045,723	\$ 191,218	
<u>Depreciation & Amort Expense</u>						
106	Commodity	\$ 385,868	\$ 385,868	\$ 317,179	\$ 68,688	CBC
107	Demand	308,617	308,617	260,639	47,978	CMD
108	Customer Accounts	32,217	32,217	30,317	1,900	CB
109	Customer Services	5,848	5,848	5,406	443	CS
110	Effluent	-	-	-	-	CF
111		-	-	-	-	CF
112	Total Depreciation & Amort Expense	\$ 732,550	\$ 732,550	\$ 613,541	\$ 119,009	
<u>Taxes Other Than Income</u>						
113	Commodity	\$ 32,320	\$ 32,320	\$ 26,567	\$ 5,753	CBC
114	Demand	25,850	25,850	21,831	4,019	CMD
115	Customer Accounts	627	627	590	37	CB
116	Customer Services	344	344	318	26	CS
117	Effluent	-	-	-	-	CF
118	Total Taxes Other Than Income	\$ 59,140	\$ 59,140	\$ 49,305	\$ 9,835	
<u>O&M, Customer, A&G and Other Taxes</u>						
119	Commodity	\$ 1,059,276	\$ 1,059,276	\$ 870,714	\$ 188,562	
120	Demand	766,793	766,793	647,586	119,207	
121	Customer Accounts	181,792	181,792	171,071	10,721	
122	Customer Services	20,770	20,770	19,198	1,572	
123	Effluent	-	-	-	-	
124	Total O&M, Customer, A&G and Other Taxes	\$ 2,028,631	\$ 2,028,631	\$ 1,708,569	\$ 320,062	
<u>Labor Allocator</u>						
125	Commodity	\$ -	\$ -	\$ -	\$ -	CBC
126	Demand	-	-	-	-	CMD
127	Customer Accounts	-	-	-	-	CB
128	Customer Services	-	-	-	-	CS
129	Effluent	-	-	-	-	CF
130	Total Labor	\$ -	\$ -	\$ -	\$ -	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Revenue and Expense Allocation to Rate Schedules at Proposed Revenues

Line No.s	Description	Total Company (a)	Jurisdictional Total (a)	Residential	Commercial	Allocation Code (b)
OPERATING INCOME						
131	Income Before Taxes	\$ 1,323,545	\$ 1,323,545	\$ 1,099,339	\$ 224,206	
132	State Income Tax	53,284	53,284	44,222	9,062	
133	Federal Income Tax	217,169	217,169	180,235	36,934	
134	Total Income Taxes	\$ 270,452	\$ 270,452	\$ 224,456	\$ 45,996	
135	Net Income After Tax	\$ 1,053,093	\$ 1,053,093	\$ 874,883	\$ 178,210	
136	Present Return Rate Of Return	7.31%	7.31%	7.28%	7.44%	
137	Present Relative Return Rate Of Return	1.00	1.00	1.00	1.02	
State Income Tax						
138	Income Before Tax	\$ 1,323,545	\$ 1,323,545	\$ 1,099,339	\$ 224,206	
139	Less: Interest Expense	236,125	236,125	196,858	39,267	
140	State Taxable Income	\$ 1,087,420	\$ 1,087,420	\$ 902,482	\$ 184,938	
141	Pro Forma State Income Tax	\$ 53,284	\$ 53,284	\$ 44,222	\$ 9,062	
142	Amortization of Flow Through Tax	0	0	0	0	
143	Subtotal State Income Tax	\$ 53,284	\$ 53,284	\$ 44,222	\$ 9,062	
144	Deferred State Income Tax	\$ -	\$ -	\$ -	\$ -	
145	Total State Income Tax	\$ 53,284	\$ 53,284	\$ 44,222	\$ 9,062	
Federal Income Tax						
146	Income Before Tax	\$ 1,323,545	\$ 1,323,545	\$ 1,099,339	\$ 224,206	
147	Less: Interest Expense	236,125	236,125	196,858	39,267	
148	Less: State Income Tax	53,284	53,284	44,222	9,062	
149		-	-	-	-	
150	Federal Taxable Income	\$ 1,034,137	\$ 1,034,137	\$ 858,260	\$ 175,876	
151	Pro Forma Federal Income Tax	\$ 217,169	\$ 217,169	\$ 180,235	\$ 36,934	
152	ITC Amortization	-	-	-	-	CRB
153	Subtotal Federal Income Tax	\$ 217,169	\$ 217,169	\$ 180,235	\$ 36,934	
154	Deferred Federal Income Tax	-	-	-	-	
155	Total Federal Income Tax	217,169	217,169	180,235	36,934	
156	Total Income Tax	270,452	270,452	224,456	45,996	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Revenue and Expense Allocation to Rate Schedules at Proposed Revenues

Line No.s	Description	Total Company (a)	Jurisdictional Total (a)	Residential	Commercial	Allocation Code (b)
PRESENT REVENUES TAXES & ROR						
Proposed Revenues						
157	Revenues	\$ 3,341,071	\$ 3,341,071	\$ 2,798,780	\$ 542,290	
158	Other Revenue	11,106	11,106	9,129	1,977	
		-	-	-	-	
159	Total Present Revenue	\$ 3,352,176	\$ 3,352,176	\$ 2,807,909	\$ 544,267	
160	O&M, Customer, A&G and Other Taxes	\$ 2,028,631	\$ 2,028,631	\$ 1,708,569	\$ 320,062	
161	Income Before Tax	\$ 1,323,545	\$ 1,323,545	\$ 1,099,339	\$ 224,206	
162	Less: Interest Expense	236,125	236,125	196,858	39,267	
163	State Taxable Income	\$ 1,087,420	\$ 1,087,420	\$ 902,482	\$ 184,938	
164	Pro Forma State Income Tax	\$ 53,284	\$ 53,284	\$ 44,222	\$ 9,062	
165	Amortization of Flow Through Tax	-	-	-	-	
166	Subtotal State Income Tax	\$ 53,284	\$ 53,283.58	\$ 44,221.61	\$ 9,061.97	
167	Deferred State Income Tax	\$ -	\$ -	\$ -	\$ -	
168	Total State Income Tax	\$ 53,284	\$ 53,284	\$ 44,222	\$ 9,062	
169	Income Before Tax	\$ 1,323,545	\$ 1,323,545	\$ 1,099,339	\$ 224,206	
170	Less: Interest Expense	236,125	236,125	196,858	39,267	
171	Less: State Income Tax	53,284	53,284	44,222	9,062	
172		-	-	-	-	
173	Federal Taxable Income	\$1,034,137	1,034,137	858,260	175,876	
174	Pro Forma Federal Income Tax	\$ 217,169	217,169	180,235	36,934	
175	ITC Amortization	-	0	0	0	CRB
176	Subtotal Federal Income Tax	\$217,169	217,169	180,235	36,934	
177	Total Federal Income Tax	\$217,169	217,169	180,235	36,934	
178	Total Income Tax	\$270,452	270,452	224,456	45,996	
179	Income After Tax	\$1,053,093	\$1,053,093	\$874,883	\$178,210	
Present Revenues						
180	Return Rate Of Return	7.31%	7.31%	7.28%	7.44%	
181	Realtive Rate Of Return	1.00	1.00	1.00	1.02	

Supporting Schedules
(a) C-1, (b) G-7a, (c) H-1

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Rate Base and Plant Functionalization

Line No.	Acct No.	Description	Jurisdictional Total (a)	Commodity Cost[A]	Demand[A]	Customer Accounts [A]	Customer Services[A]	Allocation Code(b)
PLANT IN SERVICE								
1		<u>Collection Plant</u>						
2	35320	Land and Land Rights	\$ 486,511	\$ 270,314	\$ 216,197	\$ -	\$ -	FCS
3	35420	Structures and Improvements	4,214,032	2,341,388	1,872,644	-	-	FCS
4	36000	Collection Mains - Force	5,019,464	2,788,900	2,230,564	-	-	FCS
5	36100	Collection Mains - Gravity	5,592,253	3,107,151	2,485,101	-	-	FCS
6	36200	Special Collection Structures	765,437	425,290	340,147	-	-	FCS
7	36300	Cutomer Services	258,784	-	-	-	258,784	FCSS
8	36400	Flow Measuring Devices	68,582	38,105	30,477	-	-	FCS
9	36500	Flow Measuring Installations	180,051	100,040	80,012	-	-	FCS
10		Total Collection Plant	\$ 16,585,113	\$ 9,071,188	\$ 7,255,141	\$ -	\$ 258,784	
11		<u>Pumping Plant</u>						
11	35500	Power Generation Equipment	\$ 9,000	\$ 5,000	\$ 3,999	\$ -	\$ -	FPU
12	37000	Receiving Wells	773,931	430,009	343,922	-	-	FPU
13	37100	Pumping Equipment	1,227,460	681,998	545,462	-	-	FPU
14	31130	Other Pumping Equipment	-	-	-	-	-	FPU
15		Total Pumping Plant	\$ 2,010,390	\$ 1,117,007	\$ 893,383	\$ -	\$ -	
16		<u>Treatment and Disposal Plant</u>						
16	35330	Land and Land Rights	\$ -	\$ -	\$ -	\$ -	\$ -	FTD
17	35430	Structures and Improvements	-	-	-	-	-	FTD
18	38000	Treatment and Disposal Equipment	428,771	238,232	190,538	-	-	FTD
19	38100	Plant Sewers	134,805	74,900	59,905	-	-	FTD
20	38200	Outfall Sewer Lines	-	-	-	-	-	FTD
21	38930	Other Sewer Olant and Equipment	1,002,608	557,066	445,542	-	-	FTD
22		Total Treatment and Disposal Plant	\$ 1,566,183	\$ 870,198	\$ 695,985	\$ -	\$ -	
23		<u>Relaimed Water Plant</u>						
23	35340	Land and Land Rights	\$ -	\$ -	\$ -	\$ -	\$ -	FRW
24	35440	Structures and Improvements	-	-	-	-	-	FRW
25	36600	Reuse Services	-	-	-	-	-	FRW
26	36700	Reuse Meters and Installation	-	-	-	-	-	FRW
27	37400	Reuse Distribution Reservoirs	-	-	-	-	-	FRW
28	37500	Reuse Trans and Distribution System	-	-	-	-	-	FRW
29		Total Relcained Water Plant	\$ -	\$ -	\$ -	\$ -	\$ -	
30		Gross Plant In Service before Intangible and Gen.	\$ 20,161,687	\$ 11,058,393	\$ 8,844,510	\$ -	\$ 258,784	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Rate Base and Plant Functionalization

Line No.	Acct No.	Description	Jurisdictional Total (a)	Commodity Cost[A]	Demand[A]	Customer Accounts [A]	Customer Services[A]	Allocation Code(b)
		General Plant						
31	35350	Land and Land Rights	\$ -	\$ -	\$ -	\$ -	\$ -	FGPCC
32	35450	Structures and Improvements	-	-	-	-	-	FGPCC
33	39000	Furniture and Equipment	84,741	23,240	18,587	42,371	544	FGPCC
34	39010	Computer Hardware	-	-	-	-	-	FGPCC
35	39020	Computer Software	50,044	13,724	10,977	25,022	321	FGPCC
36	39100	Transportation Equipment	166,916	45,776	36,611	83,458	1,071	FGPCC
37	39200	Stores Equipment	-	-	-	-	-	FGPCC
38	39300	Tools, Shop and Garage Equipment	34,076	9,345	7,474	17,038	219	FGPCC
39	39400	Laboratory Equipment	14,219	3,899	3,119	7,109	91	FGPCC
40	39500	Power Operated Equipment	-	-	-	-	-	FGPCC
41	39600	Communication Equipment	133,043	36,486	29,182	66,522	854	FGPCC
42	39700	Miscellaneous Equipment	6,892	1,890	1,512	3,446	44	FGPCC
43	39710	Miscellaneous Equipment CNG	-	-	-	-	-	FGPCC
44	39800	Other Tangible Property	-	-	-	-	-	FGPCC
45		Total General Plant	\$ 489,932	\$ 134,360	\$ 107,462	\$ 244,966	\$ 3,144	
		Intangible Plant						
46	35110	Organization	\$ -	\$ -	\$ -	\$ -	\$ -	FGPIS
47	35210	Franchise and Consents	-	-	-	-	-	FGPIS
48	38910	Miscellaneous Intangible Plant	-	-	-	-	-	FGPIS
49		Total Intangible Plant	\$ -	\$ -	\$ -	\$ -	\$ -	
50		Reconciling Amount						
51		Subtotal Gross Plant In Service(c)	\$ 20,651,620	\$ 11,192,754	\$ 8,951,971	\$ 244,966	\$ 261,929	
		Allocated Corporate Plant						
52	903	Land and Land Rights	\$ -	\$ -	\$ -	\$ -	\$ -	FGPCC
53	904	Structures and Improvements	12,847	3,523	2,818	6,424	82	FGPCC
54	940	Office Furniture and Fixtures	359	98	79	179	2	FGPCC
55	940.1	Computers and Software	43,813	12,015	9,610	21,906	281	FGPCC
56	947	Miscellaneous Equipment	-	-	-	-	-	FGPCC
57		Subtotal Allocated Corporate Plant	\$ 57,019	\$ 15,637	\$ 12,506	\$ 28,509	\$ 366	
58		Total Gross Plant In Service(c)	\$ 20,708,639	\$ 11,208,391	\$ 8,964,478	\$ 273,476	\$ 262,295	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Rate Base and Plant Functionalization

Line No.	Acct No.	Description	Jurisdictional Total (a)	Commodity Cost[A]	Demand[A]	Customer Accounts [A]	Customer Services[A]	Allocation Code(b)
ACCUMULATED DEPRECIATION AND AMORTIZATION								
<u>Collection Plant</u>								
59	35320	Land and Land Rights	\$ -	\$ -	\$ -	\$ -	\$ -	FCS
60	35420	Structures and Improvements	1,335,709	742,143	593,566	-	-	FCS
61	36000	Collection Mains - Gravity	107,821	59,907	47,914	-	-	FCS
62	36100	Collection Mains - Force	3,839,843	2,133,482	1,706,360	-	-	FCS
63	36200	Special Collection Structures	(58,791)	(32,665)	(26,126)	-	-	FCS
64	36300	Cutomer Services	187,353	-	-	-	187,353	FCSS
65	36400	Flow Measuring Devices	(26,541)	(14,746)	(11,794)	-	-	FCS
66	36500	Flow Measuring Devices	179,901	99,956	79,945	-	-	FCS
67		Total Collection Plant	\$ 5,565,295	\$ 2,988,077	\$ 2,389,865	\$ -	\$ 187,353	
<u>Pumping Plant</u>								
68	35500	Power Generation Equipment	\$ 2,151	\$ 1,195	\$ 956	\$ -	\$ -	FPU
69	37000	Receiving Wells	561,521	311,991	249,530	-	-	FPU
70	37100	Pumping Equipment	617,882	343,306	274,576	-	-	FPU
71	31130	Other Pumping Equipment	-	-	-	-	-	FPU
72		Total Pumping Plant	\$ 1,181,554	\$ 656,492	\$ 525,062	\$ -	\$ -	
<u>Treatment and Disposal Plant</u>								
73	35330	Land and Land Rights	\$ -	\$ -	\$ -	\$ -	\$ -	FTD
74	35430	Structures and Improvements	-	-	-	-	-	FTD
75	38000	Treatment and Disposal Equipment	155,383	86,334	69,050	-	-	FTD
76	38100	Plant Sewers	107,948	59,978	47,970	-	-	FTD
	38200	Outfall Sewer Lines	-	-	-	-	-	FTD
77	38930	Other Sewer Olant and Equipment	835,574	464,259	371,315	-	-	FTD
78		Total Treatment and Disposal Plant	\$ 1,098,906	\$ 610,571	\$ 488,335	\$ -	\$ -	
<u>Relaimed Water Plant</u>								
79	35340	Land and Land Rights	\$ -	\$ -	\$ -	\$ -	\$ -	FRW
80	35440	Structures and Improvements	-	-	-	-	-	FRW
81	36600	Reuse Services	-	-	-	-	-	FRW
82	36700	Reuse Meters and Installation	-	-	-	-	-	FRW
83	37400	Reuse Distribution Reservoirs	-	-	-	-	-	FRW
84	37500	Reuse Trans and Distribution System	-	-	-	-	-	FRW
85		Total Relaimed Water Plant	\$ -	\$ -	\$ -	\$ -	\$ -	

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Rate Base and Plant Functionalization

Line No.	Acct No.	Description	Jurisdictional Total (a)	Commodity Cost[A]	Demand[A]	Customer Accounts [A]	Customer Services[A]	Allocation Code(b)
		General Plant						
86	35350	Land and Land Rights	\$ -	\$ -	\$ -	\$ -	\$ -	FGPCC
87	35450	Structures and Improvements	-	-	-	-	-	FGPCC
88	39000	Furniture and Equipment	64,075	17,572	14,054	32,037	411	FGPCC
89	39010	Computer Hardware	-	-	-	-	-	FGPCC
90	39020	Computer Software	31,884	8,744	6,993	15,942	205	FGPCC
91	39100	Transportation Equipment	51,429	14,104	11,281	25,715	330	FGPCC
92	39200	Stores Equipment	-	-	-	-	-	FGPCC
93	39300	Tools, Shop and Garage Equipment	8,634	2,368	1,894	4,317	55	FGPCC
94	39400	Laboratory Equipment	5,820	1,596	1,277	2,910	37	FGPCC
95	39500	Power Operated Equipment	-	-	-	-	-	FGPCC
96	39600	Communication Equipment	85,200	23,365	18,688	42,600	547	FGPCC
97	39700	Miscellaneous Equipment	2,412	662	529	1,206	15	FGPCC
98	39710	Miscellaneous Equipment CNG	-	-	-	-	-	FGPCC
99	39800	Other Tangible Property	-	-	-	-	-	FGPCC
100		Total General Plant	\$ 249,454	\$ 68,411	\$ 54,715	\$ 124,727	\$ 1,601	
101		Retirement Work in Progress	\$ -	\$ -	\$ -	\$ -	\$ -	FPIS
102		Advances in Aid of Construction	-	-	-	-	-	FPIS
103		Subtotal Accumulated Depreciation/Amortization(c)	\$ 8,095,209	\$ 4,323,550	\$ 3,457,978	\$ 124,727	\$ 188,954	
104		Allocated Corporate Accumulated Depreciation						
105	95300	Land and Land Rights	-	-	-	-	-	FGPCC
106	95400	Structures and Improvements	1,703	467	374	852	11	FGPCC
107	99000	Office Furniture and Fixtures	142	39	31	71	1	FGPCC
108	99010	Computers and Software	29,067	7,971	6,375	14,533	187	FGPCC
109	94700	Miscellaneous Equipment	-	-	-	-	-	FGPCC
110		Subtotal Allocated Corporate Accumulated Depreciation	\$ 30,911.22	\$ 8,477.18	\$ 6,780.05	\$ 15,455.61	\$ 198.38	
111		Accumulated Depreciation/Amortization(c)	\$ 8,126,120	\$ 4,332,027	\$ 3,464,758	\$ 140,183	\$ 189,152	
112		Net Plant	\$ 12,582,518	\$ 6,876,363	\$ 5,499,720	\$ 133,293	\$ 73,142	
113	10500	Construction Work In Progress	\$ -	\$ -	\$ -	\$ -	\$ -	FNP
114		Plus: Regulatory Assets/Working Capital Assets/Other (net)	\$ 3,711,205	\$ 2,028,179	\$ 1,622,139	\$ 39,315	\$ 21,573	FNPCA
115		Less: Contributions & Advances in Aid of Construction	\$ (1,357,298)	\$ (741,765)	\$ (593,264)	\$ (14,379)	\$ (7,890)	FNP
116		Less: ADIT, EADIT, and IITC	\$ (506,314)	\$ (276,701)	\$ (221,306)	\$ (5,364)	\$ (2,943)	FNPCA
117		Less: Other	\$ (21,507)	\$ (11,754)	\$ (9,401)	\$ (228)	\$ (125)	FNP
118								
119		Total Rate Base	\$ 14,408,605	\$ 7,874,323	\$ 6,297,888	\$ 152,638	\$ 83,757	

Supporting Schedules
(a) B-1, (b) G-7b, (c) B-2

Recap Schedules
[A] G-2

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
O&M Expenses, Depreciation Expenses and Income Functionalization at Present Revenues

Line No.	Acct No.	Description	Adjusted Test Year(a)	Commodity Cost[A]	Demand[A]	Customer Accounts [A]	Customer Services[A]	Allocation Code(b)	Labor
INCOME STATEMENT									
		<u>Collection Expenses</u>							
		<u>Operation</u>							
1	710.1	Purchased Water	3,240	3,240	-	-	-	FBC	
2	715.1	Purchased Power	25,378	25,378	-	-	-	FBC	
3	718.1	Chemicals	721	721	-	-	-	FBC	
4	720.1	Materials and Supplies	2,744	2,744	-	-	-	FBC	
5	733.1	Contractual Services - Legal	1,801	985	788	-	28	FCSP	
6	736.1	Contractual Services - Other	291,773	159,584	127,636	-	4,553	FCSP	
7	750.1	Transportation Expenses	8,930	4,884	3,906	-	139	FCSP	
8		Total Operation	\$ 673,975	\$ 383,164	\$ 280,795	\$ -	\$ 10,016		
		<u>Maintenance</u>							
9	735.2	Contractual Services - Testing	450	246	197	-	7	FCSP	
10	736.2	Contractual Services - Other	33,100	18,104	14,479	-	516	FCSP	
11		Total Maintenance	\$ 33,550	\$ 18,350	\$ 14,676	\$ -	\$ 523		
12		Total Collection Expenses	\$ 707,525	\$ 401,514	\$ 295,471	\$ -	\$ 10,539		
		<u>Pumping Expense</u>							
		<u>Maintenance</u>							
13	736.4	Contractual Services - Other	8,273	4,597	3,676	-	-	FPP	
14		Total Maintenance	\$ 8,273	\$ 4,597	\$ 3,676	\$ -	\$ -		
15		Total Pumping Plant	\$ 8,273	\$ 4,597	\$ 3,676	\$ -	\$ -		
16		Total Production Expenses	\$ 715,797	\$ 406,111	\$ 299,148	\$ -	\$ 10,539		
		<u>Treatment and Disposal Expenses</u>							
17	715.5	Purchased Power	38,313	38,313	-	-	-	FBC	
18	718.5	Chemicals	11,298	11,298	-	-	-	FBC	
19	720.5	Materials and Supplies	618	618	-	-	-	FBC	
20	735.5	Contractual Services - Testing	9,412	9,412	-	-	-	FBC	
21	736.5	Contractual Services - Other	8,158	4,533	3,625	-	-	FTDP	
22		Total Operation	\$70,500	66,874	3,625	0	0		
		<u>Maintenance</u>							
23	736.6	Contractual Services - Other	5,544	3,080	2,464	-	-	FTDP	
24		Total Maintenance	\$ 5,544	\$ 3,080	\$ 2,464	\$ -	\$ -		
25		Total Treatment and Disposal Expenses	\$ 76,043	\$ 69,954	\$ 6,089	\$ -	\$ -		

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
O&M Expenses, Depreciation Expenses and Income Functionalization at Present Revenues

Line No.	Acct No.	Description	Adjusted Test Year(a)	Commodity Cost[A]	Demand[A]	Customer Accounts [A]	Customer Services[A]	Allocation Code(b)	Labor
Customer Accounts Expenses									
<u>Operation</u>									
26	770.7	Bad Debt Expense	4,497	-	-	4,497	-	FCC	
27		Total Customer Accounts Expenses	<u>\$ 4,497</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 4,497</u>	<u>\$ -</u>		
28		Total O&M w/oA&G Expenses	<u>\$ 796,337</u>	<u>\$ 476,065</u>	<u>\$ 305,237</u>	<u>\$ 4,497</u>	<u>\$ 10,539</u>		
Administrative and General Expenses									
<u>Operation</u>									
29	715.8	Purchased Power	1,901	1,070	792	12		27 FTOMWPC	
30	720.8	Materials and Supplies	6,822	2,527	1,945	2,288		62 FTOMPISCC	
31	732.8	Contractual Services - Accounting	7,649	2,833	2,181	2,565		69 FTOMPISCC	
32	734.8	Contractual Services - Professional	346,637	128,411	98,826	116,255	3,145	FTOMPISCC	
33	741.8	Rental of Building/Real Property	25,665	9,507	7,317	8,607		233 FTOMPISCC	
34	750.8	Transportation Expenses	737	273	210	247		7 FTOMPISCC	
35	756.8	Insurance - Vehicle	2,132	790	608	715		19 FTOMPISCC	
36	757.8	Insurance - General Liability	7,086	3,887	3,109	-		91 FGPIIS	
37	775.8	Miscellaneous Expenses	42,449	15,725	12,102	14,236		385 FTOMPISCC	
38		Total Admin and General Expenses	<u>\$ 441,078</u>	<u>\$ 165,023</u>	<u>\$ 127,090</u>	<u>\$ 144,926</u>	<u>\$ 4,039</u>		
39		Total Administrative and General Expenses	<u>\$ 441,078</u>	<u>\$ 165,023</u>	<u>\$ 127,090</u>	<u>\$ 144,926</u>	<u>\$ 4,039</u>		
40		Total Operation and Maintenance Expenses	<u>\$ 1,237,415</u>	<u>\$ 641,088</u>	<u>\$ 432,326</u>	<u>\$ 149,422</u>	<u>\$ 14,578</u>		
41		Depreciation & Amort Expense	<u>\$ 732,550</u>	<u>\$ 385,868</u>	<u>\$ 308,617</u>	<u>\$ 32,217</u>	<u>\$ 5,848</u>		
42		Taxes Other Than Income	<u>\$ 52,868</u>	<u>\$ 28,893</u>	<u>\$ 23,108</u>	<u>\$ 560</u>	<u>\$ 307</u>	FNP	
43		Total Operating Expenses Before Income Taxes	<u>\$ 2,022,834</u>	<u>\$ 1,055,848</u>	<u>\$ 764,052</u>	<u>\$ 182,200</u>	<u>\$ 20,734</u>		
		Total Labor	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>		L

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
O&M Expenses, Depreciation Expenses and Income Functionalization at Present Revenues

Line No.	Acct No.	Description	Adjusted Test Year(a)	Commodity Cost[A]	Demand[A]	Customer Accounts [A]	Customer Services[A]	Allocation Code(b)	Labor
Depreciation Expense									
<u>Collection Plant</u>									
44	35420	Structures and Improvements	140,327	77,968	62,359	-	-	FCS	
45	36000	Collection Mains - Gravity	100,389	55,778	44,611	-	-	FCS	
46	36500.0	Flow Measuring Installations	43	24	19	-	-	FCS	
47		Total Collection Plant	\$ 379,947	\$ 208,229	\$ 166,542	\$ -	\$ 5,176		
<u>Pumping Plant</u>									
48	35500	Power Generation Equipment	450	250	200	-	-	FPU	
49	37000	Receiving Wells	25,772	14,319	11,453	-	-	FPU	
50		Total Pumping Plant	\$ 156,065	\$ 86,712	\$ 69,353	\$ -	\$ -		
<u>Treatment and Disposal Plant</u>									
51	38000	Treatment and Disposal Equipment	19,122	10,625	8,498	-	-	FTD	
52	38100	Plant Sewers	1,429	794	635	-	-	FTD	
53	38930	Other Sewer Olant and Equipment	66,874	37,156	29,718	-	-	FTD	
54		Total Treatment and Disposal Plant	\$ 87,426	\$ 48,575	\$ 38,851	\$ -	\$ -		
<u>General Plant</u>									
55	39000	Furniture and Equipment	5,652	1,550	1,240	2,826		36 FGPC	
56	39020	Computer Software	4,364	1,197	957	2,182		28 FGPC	
57	39100	Transportation Equipment	31,140	8,540	6,830	15,570		200 FGPC	
58	39300	Tools, Shop and Garage Equipment	1,704	467	374	852		11 FGPC	
59	39400	Laboratory Equipment	1,180	324	259	590		8 FGPC	
60	39600	Communication Equipment	9,524	2,612	2,089	4,762		61 FGPC	
61	39700	Miscellaneous Equipment	689	189	151	345		4 FGPC	
62		Total General Plant	\$ 54,253	\$ 14,878	\$ 11,900	\$ 27,126	\$ 348		
63		Subtotal Direct Depreciation Expense	\$ 677,691	\$ 358,396	\$ 286,645	\$ 27,126	\$ 5,524		
		Amortization of Property Losses	\$ -	\$ -	\$ -	\$ -	\$ -		
64	95400	Structures and Improvments	\$ 428	117	94	214		3 FGPC	
65	99000	Office Furniture and Fixtures	\$ 24	7	5	12		0 FGPC	
66	99010	Computers and Software	\$ 8,763	2,403	1,922	4,381		56 FGPC	
67		Subtotal Allocated Depreciation Expense	\$ 9,214	\$ 2,527	\$ 2,021	\$ 4,607	\$ 59		
68		Amortization of Regulatory Assets	\$ 188,135	\$ 102,816	\$ 82,232	\$ 1,993	\$ 1,094	FNPCA	
69		CIAC/AIAC Amortization - General	\$ (60,388)	\$ (33,002)	\$ (26,395)	\$ (640)	\$ (351)	FNP	
70		Excess Deferred Depreciation	\$ (82,102)	\$ (44,869)	\$ (35,886)	\$ (870)	\$ (477)	FNPCA	
71		Total Depreciation & Amortization	\$ 732,550	\$ 385,868	\$ 308,617	\$ 32,217	\$ 5,848		

Supporting Schedules
(a) B-2 ; (b) G-7b

Recap Schedules
[A] G-3

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
O&M Expenses, Depreciation Expenses and Income Functionalization at Proposed Revenues

Line No.	Acct No.	Description	Adjusted Test Year(a)	Commodity Cost[A]	Demand[A]	Customer Accounts [A]	Customer Services[A]	Allocation Code(b)	Labor
INCOME STATEMENT									
		<u>Collection Expenses</u>							
		<u>Operation</u>							
1	710.1	Purchased Water	3,240	3,240	-	-	-	FBC	
2	715.1	Purchased Power	25,378	25,378	-	-	-	FBC	
3	718.1	Chemicals	721	721	-	-	-	FBC	
4	720.1	Materials and Supplies	2,744	2,744	-	-	-	FBC	
5	733.1	Contractual Services - Legal	1,801	985	788	-	28	FCSP	
6	736.1	Contractual Services - Other	291,773	159,584	127,636	-	4,553	FCSP	
7	750.1	Transportation Expenses	8,930	4,884	3,906	-	139	FCSP	
8		Total Operation	\$ 673,975	\$ 383,164	\$ 280,795	\$ -	\$ 10,016		
		<u>Maintenance</u>							
9	735.2	Contractual Services - Testing	450	246	197	-	7	FCSP	
10	736.2	Contractual Services - Other	33,100	18,104	14,479	-	516	FCSP	
11		Total Maintenance	\$ 33,550	\$ 18,350	\$ 14,676	\$ -	\$ 523		
12		Total Collection Expenses	\$ 707,525	\$ 401,514	\$ 295,471	\$ -	\$ 10,539		
		<u>Pumping Expense</u>							
		<u>Maintenance</u>							
13	736.4	Contractual Services - Other	8,273	4,597	3,676	-	-	FPP	
14		Total Maintenance	\$ 8,273	\$ 4,597	\$ 3,676	\$ -	\$ -		
15		Total Water Treatment	\$ 8,273	\$ 4,597	\$ 3,676	\$ -	\$ -		
16		Total Production Expenses	\$ 715,797	\$ 406,111	\$ 299,148	\$ -	\$ 10,539		
		<u>Treatment and Disposal Expenses</u>							
		<u>Operation</u>							
17	715.5	Purchased Power	38,313	38,313	-	-	-	FBC	
18	718.5	Chemicals	11,298	11,298	-	-	-	FBC	
19	720.5	Materials and Supplies	618	618	-	-	-	FBC	
20	735.5	Contractual Services - Testing	9,412	9,412	-	-	-	FBC	
21	736.5	Contractual Services - Other	8,158	4,533	3,625	-	-	FTDP	
22		Total Operation	\$70,500	66,874	3,625	0	0		
		<u>Maintenance</u>							
23	736.6	Contractual Services - Other	5,544	3,080	2,464	-	-	FTDP	
24		Total Maintenance	\$ 5,544	\$ 3,080	\$ 2,464	\$ -	\$ -		
25		Total Treatment and Disposal Expenses	\$ 76,043	\$ 69,954	\$ 6,089	\$ -	\$ -		

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
O&M Expenses, Depreciation Expenses and Income Functionalization at Proposed Revenues

Line No.	Acct No.	Description	Adjusted Test Year(a)	Commodity Cost[A]	Demand[A]	Customer Accounts [A]	Customer Services[A]	Allocation Code(b)	Labor
Customer Accounts Expenses									
<u>Operation</u>									
26	770.7	Bad Debt Expense	4,023	-	-	4,023	-	FCC	
27		Total Customer Accounts Expenses	<u>\$ 4,023</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 4,023</u>	<u>\$ -</u>		
28		Total O&M w/oA&G Expenses	<u>\$ 795,863</u>	<u>\$ 476,065</u>	<u>\$ 305,237</u>	<u>\$ 4,023</u>	<u>\$ 10,539</u>		
Administrative and General Expenses									
<u>Operation</u>									
29	715.8	Purchased Power	1,901	1,070	792	12	27	FTOMWPC	
30	720.8	Materials and Supplies	6,822	2,527	1,945	2,288	62	FTOMPISCC	
31	732.8	Contractual Services - Accounting	7,649	2,833	2,181	2,565	69	FTOMPISCC	
32	734.8	Contractual Services - Management Fees	346,637	128,411	98,826	116,255	3,145	FTOMPISCC	
33	741.8	Rental of Building/Real Property	25,665	9,507	7,317	8,607	233	FTOMPISCC	
34	750.8	Transportation Expenses	737	273	210	247	7	FTOMPISCC	
35	756.8	Insurance - Vehicle	2,132	790	608	715	19	FTOMPISCC	
36	757.8	Insurance - General Liability	7,086	3,887	3,109	-	91	FGPIS	
37	775.8	Miscellaneous Expenses	42,449	15,725	12,102	14,236	385	FTOMPISCC	
38		Total Operation	<u>\$ 441,078</u>	<u>\$ 165,023</u>	<u>\$ 127,090</u>	<u>\$ 144,926</u>	<u>\$ 4,039</u>		
39		Total Administrative and General Expenses	<u>\$ 441,078</u>	<u>\$ 165,023</u>	<u>\$ 127,090</u>	<u>\$ 144,926</u>	<u>\$ 4,039</u>		
40		Total Operation and Maintenance Expenses	<u>\$ 1,236,941</u>	<u>\$ 641,088</u>	<u>\$ 432,326</u>	<u>\$ 148,948</u>	<u>\$ 14,578</u>		
41		Depreciation & Amort Expense	<u>\$ 732,550</u>	<u>\$ 385,868</u>	<u>\$ 308,617</u>	<u>\$ 32,217</u>	<u>\$ 5,848</u>		
42		Taxes Other Than Income	<u>\$ 59,140</u>	<u>\$ 32,320</u>	<u>\$ 25,850</u>	<u>\$ 627</u>	<u>\$ 344</u>	FNP	
43		Total Operating Expenses Before Income Taxes	<u>\$ 2,028,631</u>	<u>\$ 1,059,276</u>	<u>\$ 766,793</u>	<u>\$ 181,792</u>	<u>\$ 20,770</u>		
		Total Labor	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>		L

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
O&M Expenses, Depreciation Expenses and Income Functionalization at Proposed Revenues

Line No.	Acct No.	Description	Adjusted Test Year(a)	Commodity Cost[A]	Demand[A]	Customer Accounts [A]	Customer Services[A]	Allocation Code(b)	Labor
Depreciation Expense									
Collection Plant									
44	35420	Structures and Improvements	140,327	77,968	62,359	-	-	FCS	
45	36000	Collection Mains - Gravity	100,389	55,778	44,611	-	-	FCS	
46	36500.0	Flow Measuring Installations	43	24	19	-	-	FCS	
47		Total Collection Plant	\$ 379,947	\$ 208,229	\$ 166,542	\$ -	\$ 5,176		
Pumping Plant									
48	35500	Power Generation Equipment	450	250	200	-	-	FPU	
49	37000	Receiving Wells	25,772	14,319	11,453	-	-	FPU	
50		Total Pumping Plant	\$ 156,065	\$ 86,712	\$ 69,353	\$ -	\$ -		
Treatment and Disposal Plant									
51	38000	Treatment and Disposal Equipment	19,122	10,625	8,498	-	-	FTD	
52	38100	Plant Sewers	1,429	794	635	-	-	FTD	
53	38930.0	Other Sewer Olant and Equipment	66,874	37,156	29,718	-	-	FTD	
54		Total Treatment and Disposal Plant	\$ 87,426	\$ 48,575	\$ 38,851	\$ -	\$ -		
General Plant									
55	39000	Furniture and Equipment	5,652	1,550	1,240	2,826	36	FGPCC	
56	39020	Computer Software	4,364	1,197	957	2,182	28	FGPCC	
57	39100	Transportation Equipment	31,140	8,540	6,830	15,570	200	FGPCC	
58	39300	Tools, Shop and Garage Equipment	1,704	467	374	852	11	FGPCC	
59	39400	Laboratory Equipment	1,180	324	259	590	8	FGPCC	
60	39600	Communication Equipment	9,524	2,612	2,089	4,762	61	FGPCC	
61	39700	Miscellaneous Equipment	689	189	151	345	4	FGPCC	
62		Total General Plant	\$ 54,253	\$ 14,878	\$ 11,900	\$ 27,126	\$ 348		
63		Subtotal Direct Depreciation Expense	\$ 677,691	\$ 358,396	\$ 286,645	\$ 27,126	\$ 5,524		
64	95400	Structures and Improvments	\$ 428	117	94	214	3	FGPCC	
65	99000	Office Furniture and Fixtures	\$ 24	7	5	12	0	FGPCC	
66	99010	Computers and Software	\$ 8,763	2,403	1,922	4,381	56	FGPCC	
67	94700	Miscellaneous Equipment	\$ -	-	-	-	-	FGPCC	
67		Subtotal Allocated Depreciation Expense	\$ 9,214	\$ 2,527	\$ 2,021	\$ 4,607	\$ 59		
68		Amortization of Regulatory Assets	\$ 188,135	\$ 102,816	\$ 82,232	\$ 1,993	\$ 1,094	FNPCA	
69		CIAC/AIAC Amortization - General	\$ (60,388)	\$ (33,002)	\$ (26,395)	\$ (640)	\$ (351)	FNP	
70		Excess Deferred Depreciation	\$ (82,102)	\$ (44,869)	\$ (35,886)	\$ (870)	\$ (477)	FNPCA	
71		Total Depreciation & Amortization	\$ 732,550	\$ 385,868	\$ 308,617	\$ 32,217	\$ 5,848		

Supporting Schedules
(a) B-2 ; (b) G-7b

Recap Schedules
[A] G-3

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Development of Allocation Factors by Function

Line No	Allocation Factor	Total (1)	Commodity (2)	Demand (3)	Customer Accounts (5)	Customer Services (6)	Effluent (7)
1							
2	ALLOCATION RATIOS						
3							
4	EXTERNAL FACTORS						
5							
6	DEMAND						
7							
8	Commodity	FBC	100.0000%	100.0000%	0.0000%	0.0000%	0.0000%
9	Demand	FECMD	100.0000%	55.5617%	44.4383%	0.0000%	0.0000%
10							
11							
12	Pumping Plant	FPU	100.0000%	55.5617%	44.4383%	0.0000%	0.0000%
13	Treatment and Disposal	FTD	100.0000%	55.5617%	44.4383%	0.0000%	0.0000%
14	Collection System	FCS	100.0000%	55.5617%	44.4383%	0.0000%	0.0000%
15	Reclaimed Water System	FRW	100.0000%	55.5617%	44.4383%	0.0000%	0.0000%
16							
17	CUSTOMER						
18							
19	Customer Accounts	FCC	100.0000%	0.0000%	0.0000%	100.0000%	0.0000%
20							
21	Customer Services	FCSS	100.0000%	0.0000%	0.0000%	0.0000%	100.0000%
22							
23	Effluent						
24	Effluent	EFF	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
25							
26	Purchased Power						
27	Purchased Power	FPP	100.0000%	55.5617%	44.4383%	0.0000%	0.0000%
28							
29	INTERNAL FACTORS						
30							
31	Net Plant	FNP	100.0000%	54.6501%	43.7092%	1.0593%	0.5813%
32	Net Plant w/CIAC	FNPCA	100.0000%	54.6501%	43.7092%	1.0593%	0.5813%
33	Gross Plant In Service (excl Intangible and Gen.)	FGPIS	100.0000%	54.8486%	43.8679%	0.0000%	1.2835%
34	Total O&M w/oA&G Expenses	FTOM	100.0000%	59.7818%	38.3301%	0.5647%	1.3235%
35	Labor	FLA	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
36	Collection System Plant	FCSP	100.0000%	54.6948%	43.7449%	0.0000%	1.5603%
37	Pumping Plant	FPP	100.0000%	55.5617%	44.4383%	0.0000%	0.0000%
38	Treatment and Disposal Plant	FTDP	100.0000%	55.5617%	44.4383%	0.0000%	0.0000%
39	Reclaimed Water System	FRWP	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
40	General & Admin. Plant (See Note 1)	FGPCC	100.0000%	27.4243%	21.9340%	50.0000%	0.6418%
41	General & Admin Expenses (See Note 2)	FTOMPISCC	100.0000%	37.0447%	28.5100%	33.5379%	0.9074%
42	Plant In Service	FPIS	100.0000%	54.1242%	43.2886%	1.3206%	1.2666%
43	Total O&M w/oA&G Expenses w/o power & chemicals	FTOMWPC	100.0000%	56.2855%	41.6622%	0.6138%	1.4385%
44							

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Development of Allocation Factors by Function

Line No	Allocation Factor	Total (1)	Commodity (2)	Demand (3)	Customer Accounts (5)	Customer Services (6)	Effluent (7)
45	INPUTS FOR RATIOS						
46							
47	EXTERNAL INPUTS						
48							
49	DEMAND						
50							
51	Peak Day WW Flows (MGD)	0.429					
52	Annual Inflows (MG)	69.623					
53							
54							
55							
56							
57							
58							
59							
60							
61							
62	Purchased Power	FPP	100.0	100.0	55.6	44.4	
63	Treatment and Disposal	FTD	100.0	100.0	55.6	44.4	
64							
65	INTERNAL INPUTS						
66							
67							
68							
69	Gross Plant In Service (excludes intangibles & Gen)	FGPIS	\$ 20,161,687	\$ 20,161,687	\$ 11,058,393	\$ 8,844,510	\$ -
70	Plant In Service	FPIS	\$ 20,708,639	\$ 20,708,639	\$ 11,208,391	\$ 8,964,478	\$ 273,476
71	Net Plant w/CIAC	FNPCA	\$ 12,582,518	\$ 12,582,518	\$ 6,876,363	\$ 5,499,720	\$ 133,293
72	Net Plant	FNPP	\$ 12,582,518	\$ 12,582,518	\$ 6,876,363	\$ 5,499,720	\$ 133,293
73	Total O&M w/oA&G Expenses	FTOM	\$ 796,337	\$ 796,337	\$ 476,065	\$ 305,237	\$ 4,497
74	Labor	FLA	\$ -	\$ -	\$ -	\$ -	\$ -
75	Collection System Plant	FCSP	\$ 16,585,113	\$ 16,585,113	\$ 9,071,188	\$ 7,255,141	\$ -
76	Pumping Plant	FPP	\$ 2,010,390	\$ 2,010,390	\$ 1,117,007	\$ 893,383	\$ -
77	Treatment and Disposal Plant	FTDP	\$ 1,566,183	\$ 1,566,183	\$ 870,198	\$ 695,985	\$ -
78	Reclaimed Water System	FRWP	\$ -	\$ -	\$ -	\$ -	\$ -
79	Total O&M w/oA&G Expenses w/o power & chemicals	FTOMWPC	\$ 732,646	\$ 732,646	\$ 412,374	\$ 305,237	\$ 4,497

Note 1: Based upon a two-factor formula equal weighting FCC allocation factor and the FGPIS allocation factor.

Note 2: Based upon a three-factor formula equal weighting FCC allocation factor, FGPIS, and the FTOMWPC allocation factor.

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Development of Allocation Factors by Customer Class

Line No	Allocation Factor	Total (1)	Residential (2)	Commercial (3)
1	ALLOCATION RATIOS			
2				
3	EXTERNAL FACTORS			
4				
5	COMMODITY			
6	Commodity	CBC	100.0000%	82.1990% 17.8010%
7				
8	DEMAND			
9	Demand	CMD	100.0000%	84.4538% 15.5462%
10				
11	CUSTOMER			
12	Bills	CB	100.0000%	94.1029% 5.8971%
13	Services	CS	100.0000%	92.4321% 7.5679%
14				
15	REVENUES			
16	Sewer Sales	CRWC	100.0000%	83.7602% 16.2398%
17	Sewer Sales excluding effluent	CRWXEFF	100.0000%	83.7602% 16.2398%
18				
19	INTERNAL FACTORS			
20				
21	Effluent	CF	100.0000%	94.1029% 5.8971%
22	Rate Base	CRB	100.0000%	83.3701% 16.6299%
23				
24	INPUTS FOR RATIOS			
25				

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
Test Year Ended December 31, 2018
Development of Allocation Factors by Customer Class

Line No	Allocation Factor	Total (1)	Residential (2)	Commercial (3)
26	EXTERNAL INPUTS			
27	DEMAND AND COMMODITY	100.00%	82.39%	17.61%
28	Annual Flows (MG)	69.623	57.361	12.262
29	Average Daily Flows (mgd)	0.191	0.157	0.034
30	Max Day Capacity Factor		2.28	2.10
31	Maximum Day Flows (mgd)	0.429	0.358	0.071
32	Maximum Day Excess	0.238	0.201	0.037
33				
34				
35	CUSTOMER			
36	Bills	26,674	25,101	1,573
37	Services		2,080	131
38	Cost Factor		1.00	1.30
39	Equivalent Services	2,250	2,080	170
40				
41	REVENUES			
42	Test Year Sewer Sales	\$ 2,473,391	\$ 2,071,717	\$ 401,673
43	Test Year Sewer Sales excluding effluent	\$ 2,473,391	\$ 2,071,717	\$ 401,673
44				
45				
46	Rate of Return (ROR)		7.31%	
47	Revenue Conversion Factor		1.3399	
48				
49	TAX FACTORS			
50	Wtd Cost of Debt		1.6388%	
51	State Tax Rate		4.90%	
52	Federal Tax Rate		21.00%	
53				
54				
55	INTERNAL INPUTS			
56				
57	Rate Base	CRB \$14,408,605	14,408,605	12,012,470 2,396,135