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Attorneys for Liberty Utilities (Entrada Del Oro Sewer) Corp.

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANTS AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON.	DOCKET NO: SW-04316A-21- **APPLICATION**

Liberty Utilities (Entrada Del Oro Sewer) Corp. ("Liberty EDO") hereby applies for an order establishing the fair value of its plant and property used for the provision of public wastewater utility service and based on such finding approving permanent rates and charges for utility service designed to produce a fair return thereon. In this application, Liberty EDO is also requesting approval to consolidate its rates with the rates for Liberty Utilities (Gold Canyon Sewer) Corp.'s ("Liberty Gold Canyon") which is concurrently filing for new rates and approval to consolidate its rates with Liberty EDO's.

As explained in this Application and supporting testimony, following sufficiency Liberty EDO and Liberty Gold Canyon (jointly referred to as "Applicants") will seek to consolidate the two rate applications into the same docket so that the Commission may consider both Applicants' requests for consolidation into what is generally referred to as

"Liberty Gold Canyon (Consolidated)" in Applicants' filings. Included with this Application by Liberty EDO are all of the standard rate filing schedules and analysis for Liberty EDO as a stand-alone wastewater utility.[1] Liberty EDO will subsequently file an application pursuant to A.R.S. § 40-285 for approval to transfer all of its utility plant and assets and its separate CC&N to Liberty Gold Canyon.

In support of this Application, Liberty EDO states as follows:

LIBERTY EDO

A. Background.

1. Liberty EDO is an Arizona public service corporation engaged in providing wastewater utility services in portions of Pinal County, Arizona, pursuant to certificates of convenience and necessity granted by the Arizona Corporation Commission. During the test year, Liberty EDO served approximately 365 customers.

2. Liberty EDO's business office is located at 14920 W. Camelback Road, Litchfield Park, Arizona 85340 and its telephone number is (623) 935-9367. The primary management contact is Matthew Garlick. Mr. Garlick is President of Liberty Utilities – Arizona/Texas.

B. Liberty EDO's Proposed Stand-Alone Rate Increase.

3. Liberty EDO's present rates and charges for utility service were approved by the Commission in Decision No. 76019 (March 22, 2017) using a test year ending October 31, 2015. There have been no other changes to Liberty EDO's rates since the current rates went into effect on or after April 1, 2017.

[1] Applicants will also each file applications for financing approval and then move to consolidate those dockets with the two rate case dockets and Liberty EDO's application pursuant to § 40-285. Applicants will file the three additional applications during the sufficiency review period for the two rate applications and upon sufficiency will file a request in each docket to merge the five dockets into one consolidated docket for hearing and decision on these matters.

4. Liberty EDO's revenues from its utility operations are presently inadequate to provide a fair rate of return on the fair value of its utility plant and property devoted to public service. Operating expenses have also changed since the current rates were set. Therefore, Liberty EDO requests that certain adjustments to its rates and charges for utility service be approved by the Commission so that Liberty EDO may recover its operating expenses and be given an opportunity to earn a just and reasonable rate of return on the fair value of its rate base. Liberty EDO agrees to use its original cost rate base as its fair value rate base in this proceeding to minimize disputes and reduce rate case expense.

5. Filed concurrently herewith are the schedules required pursuant to A.A.C. R14-2-103 for rate applications by Class "B" utilities. The test year utilized by Liberty EDO in connection with the preparation of such schedules is the 12-month period that ended December 31, 2020. Liberty EDO requests that the Commission utilize such test year in connection with this Application, with appropriate adjustments to obtain a normal or more realistic relationship between revenues, rate base and expenses during the period in which the rates established in this proceeding are in effect.

6. During the test year, Liberty EDO's adjusted gross revenues were $476,317. The adjusted operating income was $104,400 leading to an operating income deficiency of $(14,800). The adjusted fair value rate base was $1,716,795. Thus, the rate of return during the test year was 6.08 percent.

7. Liberty EDO submits that these rates of return are inadequate to allow it to obtain debt, pay a reasonable return to its stockholder, maintain a sound credit rating, and/or enable Liberty EDO to attract additional capital on reasonable and acceptable terms to continue the investment in utility plant necessary to adequately serve customers.

8. Liberty EDO is seeking total revenues of $496,422. Liberty EDO seeks an increase in total revenues of $20,105, an increase of approximately 4.22 percent over the adjusted and annualized test year revenues of $476,317. The revenue amount is inclusive

of the revenues required to recover (1) operating expenses; (2) a return on rate base; and is exclusive of rate case expense. Specifically, the increase in annual revenues to provide for recovery of operating expenses and a 6.94 percent return on rate base is approximately $20,105. Rate case expense recovery is being requested through a separate surcharge recovery mechanism.

9. In accordance with A.A.C. R14-2-103.B(5) and per the Commission's request, attached hereto as **Attachment 1** are wastewater plant descriptions, and wastewater flows for January 2020-December 2020.

10. Attached hereto as **Attachment 2** is Liberty EDO's proposed tariff of rates and charges, which includes a request for a Purchased Power Adjuster Mechanism ("PPAM"), a Property Tax Adjuster Mechanism ("PTAM"), a Customer Assistance Tariff ("CAT"), and a pretreatment tariff.

C. <u>Request to Consolidate and Proposed Rates for Liberty Gold Canyon (Consolidated)</u>.

11. Applicants are requesting to consolidate rates because they are located approximately eight miles apart and are operated by the same personnel. They also share common administration and management as well as common support services like financial, accounting, and regulatory support. Consolidation presents the prospect for furthering the existing shared services model and achieving further economies of scale. One regulated entity will further reduce the administrative burden on all stakeholders.

12. For Liberty Gold Canyon (Consolidated), Applicants seek a total revenue requirement of $4,965,645 based on a finding of fair value rate base equal to $13,362,944 and a 6.94 percent return on rate. The revenue amount is inclusive of the revenues required to recover the proposed (1) operating expenses; (2) a return on rate base; and is exclusive of rate case expense surcharge revenues. Rate case expense recovery is being requested through a separate surcharge recovery mechanism.

13. The proposed tariff of consolidated rates and charges, which includes a request for a PPAM, PTAM, CAT, and pretreatment tariff is provided with Liberty Gold Canyon's rate application.

SUPPORTING TESTIMONY AND SCHEDULES[2]

14. Filed concurrently in support of this Application and the Applicants' request for consolidation of rates are the following direct testimonies:

a. Direct testimony of Jill Schwartz – Ms. Schwartz provides an overview of the proposal for new rates for Liberty Gold Canyon separately and jointly with Liberty EDO. Ms. Schwartz also provides testimony regarding shared services and the Cost Allocation Manual. Ms. Schwartz also addresses rate case expense.

b. Direct Testimony of Matthew Garlick – Mr. Garlick discusses the request for consolidation of Liberty EDO into Liberty Gold Canyon.

c. Direct Testimony of Eric G. Burkett – Mr. Burkett discusses Liberty EDO's operations and the capital investments that Liberty EDO has undertaken since 2015, the prior test year.

d. Direct Testimony of Manuel Cifuentes, Jr. – Mr. Cifuentes discusses Liberty EDO's overall revenue requirement including rate base and income statement (revenue and operating expenses), the recommended corresponding adjustments, and the recommended changes to the tariff of rates and charges.

e. David Heighway, P.E. – Mr. Heighway addresses Liberty EDO's proposed pretreatment tariff and Off-Site Facilities Hook-Up Fee.

f. Direct Testimony of Thomas J. Bourassa – Mr. Bourassa discusses cost of capital, rate design, the revenue annualization and the determination of accumulated

[2] The schedules attached to this Application pertain only to Liberty EDO as a stand-alone utility.

deferred income taxes and excess accumulated deferred income taxes included in rate base. Mr. Bourassa also addresses the requests for approval of a PPAM and a PTAM.

15. All supporting schedules for Liberty EDO are attached following the direct testimonies.

CONTACT INFORMATION

16. The person responsible for overseeing and directing the conduct of this rate application is Jill Schwartz, Director of Regulatory Shared Services for Liberty Utilities. Ms. Schwartz was assisted by Thomas J. Bourassa, rate consultant, and undersigned legal counsel. Ms. Schwartz's mailing address is 602 S. Joplin Avenue, Joplin, Missouri 64801; her telephone number is (573) 352-0045; and her e-mail address is Jill.Schwartz@libertyutilities.com. Mr. Bourassa's mailing address is 139 W. Wood Drive, Phoenix, Arizona 85029; his telephone number is (602) 246-7150; and his e-mail address is tjb114@cox.net.

17. All discovery, data requests and other requests for information concerning this Application should be directed to Ms. Schwartz at Jill.Schwartz@libertyutilities.com, Mr. Garlick at Matthew.Garlick@libertyutilities.com, and Mr. Bourassa at tjb114@cox.net, with a copy to undersigned counsel, Jay Shapiro at jay@shapslawaz.com and whitney@shapslawaz.com, and Todd C. Wiley at Todd.Wiley@LibertyUtilties.com and Judy.JenkinsHitchye@libertyutilities.com.

RELIEF REQUESTED

WHEREFORE, Liberty EDO requests the following relief:

A. That the Commission, upon proper notice and at the earliest possible time, conduct a hearing in accordance with A.R.S. § 40-251 and determine the fair value of Liberty EDO's utility plants and property devoted to providing wastewater utility service;

B. Based upon such determination, that the Commission (1) grant the request to consolidate Liberty EDO into Liberty Gold Canyon; and (2) approve permanent

adjustments to the rates and charges for wastewater utility service provided by Liberty Gold Canyon on a consolidated basis as proposed herein, or approve such other rates and charges as will produce a just and reasonable rate of return on the fair value of Liberty EDO's consolidated utility plant and property;

C. That the Commission approve the request for a PPAM and a PTAM; and

D. That the Commission authorize such other and further relief as may be appropriate to ensure that Liberty EDO has an opportunity to earn a just and reasonable return on the fair value of its utility plant and property and as may otherwise be required under Arizona law.

RESPECTFULLY SUBMITTED this 30th day of September, 2021.

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Attorneys for Liberty Utilities (Entrada Del Oro Sewer) Corp.

ORIGINAL eFiled
this 30th day of September, 2021, with:

Docket Control
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, AZ 85007

By: */s/ Whitney Birk*

ATTACHMENT 1

Plant Descriptions and Wastewater Flows

Liberty Utilities (Entrada Del Oro Sewer) Corp
Annual Report
Wastewater Utility Plant Description

12/31/20

Wastewater Utility Plant Description	
Name of System:	Liberty Utilities (Entrada Del Oro)
Wastewater Inventory Number (if applicable):	APP105488
Type of Treatment	Extended Aeration
Design Capacity of Plant (Gallons per day)	150,000 gpd

LIFT STATION FACILITIES					
Location	Quantity of Pumps	Horsepower Per Pump	Rated Capacity Per Pump (GPM)	Wet Well Capacity (gals)	Year Constructed
Entrance to Plant	2	7.5HP	600	1080	2006
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA

FORCE MAINS		
Size	Material	Length (Feet)
4 inch	0	0
6 inch	0	0
8 inch	0	0
8 inch	C-900 Purple Effluent	6,000
NA	NA	NA
NA	NA	NA
NA	NA	NA
NA	NA	NA
NA	NA	NA

MANHOLES	
Type	Quantity
Standard	63
Drop	7

CLEANOUTS
Quantity
7x2 Way
NA
NA
NA

Note: If you are filing for more than one system, please provide separate sheets for each system.

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report. Copy and paste this sheet as many times as is necessary.

Wastewater Utility Plant Description (Continued)

GRAVITY MAINS			SERVICES/LATERALS		
Sizes (inches)	Material	Length (feet)	Size (inches)	Material	Quantity
4	0	0	4	ABS Drain Pipe	302
6	ABS/SDR.DIP	15	NA	NA	NA
8	ABS/SDR.DIP	14,863	NA	NA	NA
10	ABS/SDR.DIP	927	NA	NA	NA
12	ABS/SDR.DIP	1,800	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA

For the following five items, list the utility owned assets in each category for each system.

SOLIDS PROCESSING AND HANDLING FACILITIES	Raptor screen, Aerobic Sludge Digester, Sludge pumping
DISINFECTION EQUIPMENT (Chlorinator, Ultra-Violet, Etc.)	(2) Wedeco LBX-200 Ultra-Violet Disinfection Units
FILTRATION EQUIPMENT (Rapid Sand, Slow Sand, Activated Carbon, Etc.)	Kruger Rotating drum disk filter
STRUCTURES (Buildings, Fences, Etc.)	Perimeter Wall, Operations (MCC Room / Blower Room / Garage) building, (2) anoxic chamber, (2) aerobic chamber, (2) clarifier, equalization tank, Paving, Curbing, lift station, splitter box.
Other (Laboratory Equipment, Tools, Vehicles, Standby, Power Generators, Etc.)	300 KW Generator, Lab Equipment: Oven, scale, mixer, fiber filter vacuum w/beaker, Hach HQ40d/w ph probe, Hach PHC101 probe, and Hach LDO probe

Note: If you are filing for more than one system, please provide separate sheets for each system.

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report. Copy and paste this sheet as many times as is necessary.

Liberty Utilities (Entrada Del Oro Sewer) Corp
Annual Report
Wastewater Flows
12/31/20

Wastewater Flows					
Month	Number of Services	Total Monthly Sewage Flow (Gallons)	Sewage Flow on Peak Day	Purchased Power Expense[1]	Purchased Power (kWh)[2]
January	355	1,404,000	65,000	$1,963	21,749
February	357	1,343,000	81,000	1,597	17,474
March	359	1,504,000	68,000	1,628	18,134
April	367	1,284,000	65,000	1,588	17,384
May	365	1,299,000	62,000	1,681	16,612
June	367	1,163,000	65,000	1,728	18,465
July	367	1,238,000	69,000	1,819	17,351
August	367	1,223,000	61,000	1,765	16,978
September	367	1,271,000	75,000	1,714	17,830
October	367	1,167,000	58,000	2,002	19,598
November	365	1,254,000	66,000	1,817	20,960
December	365	1,336,000	75,000	1,896	22,048
	Totals	**15,486,000**	**810,000**	**$21,197**	**224,583**

Provide the following information as applicable per wastewater system:

Method of Effluent Disposal	Surface Water Discharge
Groundwater Permit Number	N/A
ADEQ Aquifer Protection Permit ("APP") Number	APP105488
ADEQ Reuse Permit Number	N/A
EPA NPDES Permil Number	AZ0024899
APP Effluent Treatment Requirement (Class)?	A+
Permitted Flow Rate	300,000
Permitted Organic Capacity	NA
Hydraulic Capacity	NA
Type of Biological Treatment	N/A

In the space below, list all violations within the past 12 months:

Fecal 4 of 7 exceedance Q2

Note: If you are filing for more than one system, please provide separate sheets for each system.

1 Enter the total purchased power costs for the power meters associated with this system.
2 Enter the total purchased kWh used by the power meters associated with this system.

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

ATTACHMENT 2

Liberty EDO

Proposed Tariff

TABLE OF CONTENTS

PART ONE
STATEMENT OF CHARGES

I. RATES

In Decision No. XXXXX, dated _____, the Commission approved the following rates and charges to become effective _____:

A. Monthly Minimum

Customer Class	Charge[1]
Residential - per month	$112.64
School Service, per student	$8.995
Commercial Service	$140.00
Commercial (per gallon per day)*	$6.26
Effluent (per acre foot / per 1,000 gallons)	Market Price

*Based upon actual water usage provided by Arizona Water Company.

If water usage data cannot be obtained, the following flat rate design based upon the following meter size will be used:

Meter Size	Charge
1 inch and smaller	$140.00
1 ½ inch	$280.00
2 inch	$448.00
3 inch	$896.00
4 inch	$1,400.00
6 inch	$2,800.00
8 inch	$4,480.00
10 inch	$6,440.00

[1] Customer Assistance Tariff ("CAT") – A 15% discount is available on monthly minimum and commodity charges to qualified residential customers meeting the CAT qualifications.

PART ONE
STATEMENT OF CHARGES

B. Other Service-Related Charges

Description	Charge
Establishment	$25.00
Re-Establishment of Service (within 12 months)	(a)
Reconnection (Delinquent)	(b)
Disconnection	Cost (c)
After Hours Service	$90.00 (d)
Deposit Requirement	(e)
Deposit Interest	6.00%
NSF Check	$25.00
Deferred Payment Finance Charge (per month)	1.50%
Late Payment Charge (per month)	Greater of $5.00 or 1.50% per month of unpaid balance
Main Extension Tariff	(f)
Industrial Pretreatment Costs	(g)
Off-Site Facilities Hook-Up Fee	Per Tariff

(a) Per A.A.C. R14-2-603(D), within 12 months. Residential and non-residential customers shall pay the applicable minimum charge times the number of months disconnected.

(b) Customer shall pay the actual cost of physical disconnection and establishment (if same customer) and there shall be no charge for disconnection if no work is performed.

(c) Customer shall pay the actual cost including costs for excavation and trenching, pipeline modification, sewer block, backfill and grading, road repairs and permitting. Customer will be provided copies of invoices for actual costs incurred. There shall be no charge if no work is performed

(d) After Hours Service charge applies to all services performed after regular business hours at the customer's request or for the customer's convenience.

(e) Per A.A.C. R14-2-603(B):
Residential – two times the average bill.
Non-residential – two and one-half times the average bill.

(f) All Main Extensions shall be completed at cost and shall be treated as refundable advances-in-aid of construction.

(g) Customers that qualify as Industrial Users and are subject to compliance with Utility's Industrial Pretreatment Program shall pay the actual costs incurred by Utility relating to Utility's review of such Customer's discharges, and actual costs incurred by Utility for engineering and design of necessary Pre-Treatment requirements and agreements.

PART ONE
STATEMENT OF CHARGES

II. TAXES AND ASSESSMENTS

In addition to all other rates and charges authorized herein, the Company shall collect from its customers all applicable sales, transaction, privilege, regulatory or other taxes and assessments as may apply now or in the future, per Rule R14-2-608(D)(5).

Under applicable law, any contributions or advances provided by a Developer are taxable income to the Utility. In accordance with the Gross-Up Sharing Method policy adopted by the Commission in Decision No. 76974, the Company will collect from the Developer an applicable share of income taxes for the Company's state and federal tax liability on all funds contributed and/or advanced. The funds will be collected prior to the commencement of service.

PART TWO
STATEMENT OF TERMS AND CONDITIONS

I. PERMITTED COSTS

A. Costs shall be verified by invoice.

B. For services that are provided by Company at cost, costs shall include labor, materials, other charges incurred, and overhead. However, prior to any such service being provided, the estimated cost of such service will be provided by Company to the customer. After review of the cost estimate, the customer will pay the amount of the estimated cost to Company.

C. In the event that the actual cost is less than the estimated cost, Company will refund the excess to the customer within 30 days after completion of the provision of the service or after Company's receipt of invoices, timesheets or other related documents, whichever is later.

D. In the event the actual cost is more than the estimated cost, Company will bill the customer for the amount due within 30 days after completion of the invoices, timesheets or other related documents, whichever is later. The amount so billed will be due and payable 30 days after the invoice date.

E. At the customer's request, Company shall make available to the customer all invoices, timesheets or related documents that support the cost for providing such service.

F. Permitted costs shall include any Federal, State or local taxes that are or may be payable by Company as a result of any tariff or contract for wastewater facilities under which the Customer advances or contributes funds or facilities to Company.

PART TWO
STATEMENT OF TERMS AND CONDITIONS

II. CUSTOMER DISCHARGE TO SYSTEM

A. Service Subject to Regulation

Company provides wastewater service using treatment and collection facilities that are regulated by numerous county, state and federal statutes and regulations. Those regulations include limitations as to domestic strength wastewater and the type of wastewater that may be discharged into the system by any person directly or indirectly connected to the plant.

B. Waste Limitations

Company has established the permissible limits of concentration as domestic strength wastewater and will limit concentration for various specific substances, materials, waters, or wastes that can be accepted in the sewer system, and to specify those substances, materials, waters, or wastes that are prohibited from entering the sewer system. Each permissible limit so established shall be placed on file in the business office of Company, with a copy filed with the Commission. No person shall discharge, or cause to be discharged, any new sources of inflow including, but not limited to, storm water, surface water, groundwater, roof runoffs, subsurface drainage, cooling water, or polluted industrial process waters into the sanitary sewer. Company will require an affidavit from all non-residential customers, and their professional engineer, stating that the wastewater discharged to the system does not exceed domestic strength or applicable pre-treatment standards.

PART TWO
STATEMENT OF TERMS AND CONDITIONS

II. CUSTOMER DISCHARGE TO SYSTEM (cont.)

C. Inspection and Right of Entry

Every facility that is involved directly or indirectly with the discharge of wastewater to the Treatment Plant may be inspected by Company as it deems necessary. These facilities shall include but not be limited to sewer; sewage pumping plants; all processes; devices and connection sewer; and all similar sewerage facilities. Inspections may be made to determine that such facilities are maintained and operated properly and are adequate to meet the provisions of these rules and this tariff. Inspections may include the collection of samples. Authorized personnel of Company shall be provided immediate access to all of the above facilities or to other facilities directly or indirectly connected to the Treatment Plant at all reasonable times including those occasioned by emergency conditions. Any permanent or temporary obstruction to easy access to the user's facility to be inspected shall promptly be removed by the facility user or owner at the written or verbal request of Company and shall not be replaced. No person shall interfere with, delay, resist or refuse entrance to an authorized Company representative attempting to inspect any facility involved directly or indirectly with a discharge of wastewater to the Treatment Plant. Adequate identification shall be provided by Company for all inspectors and other authorized personnel and these persons shall identify themselves when entering any property for inspection purposes or when inspecting the work of any contractor.

All transient motor homes, travel trailers and other units containing holding tanks must arrive at the Company's service area in an empty condition. Inspection will be required of said units prior to their being allowed to hookup to the wastewater system.

D. **Termination of Service for Violation of Wastewater Rules and Regulations**

The Company is authorized to discontinue service to any person connected to its sewer system who violates the Company's wastewater terms and conditions as set forth in this PART TWO or in any way creates a public health hazard or the likelihood of such a public health hazard. This termination authority also applies to non-payment for wastewater services.

PART TWO
STATEMENT OF TERMS AND CONDITIONS

III. RULES AND REGULATIONS

Company has adopted the Rules and Regulations established by the Commission as the basis for its operating procedures. A.A.C. R14-2-601 through A.A.C. R14-2-609 will be controlling of Company procedures, unless specifically approved tariffs or Commission Order(s) provide otherwise.

PART THREE
CUSTOMER ASSISTANCE TARIFF
DOMESTIC SERVICE-SINGLE FAMILY ACCOMODATION

APPLICABILITY

Applicable to residential wastewater service for domestic use rendered to individuals who meet all the program qualifications and special conditions of this rate schedule.

PROGRAMS

This Customer Assistance Tariff (CAT) contains the following programs: (1) Low-Income Program; (2) Deployed Services Member Program; and (3) Disabled Veteran Program. Collectively, these three programs are referred to as the "Customer Assistance Programs."

TERRITORY

Within all customer service areas served by Liberty Utilities (Entrada Del Oro Sewer) Corp. ("Liberty Utilities").

RATES

Fifteen percent (15%) discount applied to the regular filed tariff.

PROGRAM QUALIFICATIONS

1. The Liberty bill must be in your name and the address must be your primary residence.
2. You may not be claimed as a dependent on another person's tax return.
3. You must reapply each time you move residences.
4. You must renew your application once every year, or sooner, if requested.
5. You must notify Liberty within thirty (30) days if you become ineligible for the CAT.

PART THREE
CUSTOMER ASSISTANCE TARIFF
DOMESTIC SERVICE - SINGLE FAMILY ACCOMMODATION

SPECIAL CONDITIONS

1. Application: An application is required for each request for service under this schedule. A customer must reapply every year or sooner, if requested.

2. Commencement of Rate: Eligible customers whose applications have been approved shall be billed on this schedule commencing with the next regularly scheduled billing period that follows approval of application by Liberty.

3. Verification: Information provided by the applicant is subject to verification by Liberty. Refusal or failure of a customer to provide documentation of eligibility acceptable to Liberty, upon request by Liberty, shall result in removal from this rate schedule.

4. Notice from Customer: It is the customer's responsibility to notify Liberty if there is a change of eligibility status.

5. Rebilling: Customers may be re-billed retroactively for periods of ineligibility under the applicable rate schedule.

6. Participation Limit: The CAT (for all three programs included) is limited to 35 customers of the Company. Applications will be reviewed and approved on a first come, first served basis. Applicants will be placed on a waiting list if the participation limit has been met.

7. Qualification: A customer that qualifies for more than one program will only receive benefits from one program per year. CAT benefits will not be combined or accumulated.

PART THREE
CUSTOMER ASSISTANCE TARIFF
DOMESTIC SERVICE - SINGLE FAMILY ACCOMMODATION

LOW INCOME PROGRAM

To qualify for the low-income program, the total gross annual income of all persons living in your household cannot exceed the income levels below:

Effective _____

No. of Person in Household	Total Gross Annual Income*
1	$XXXXX
2	$XXXXX
3	$XXXXX
4	$XXXXX
5	$XXXXX
6	$XXXXX

For each additional person residing in the household add $XXXXX

***Qualifying annual incomes are set at 150 percent of the 202_ federal poverty levels.**

Acceptance into the program is subject to verification of income source.

For the purpose of the program the "gross household income" means all money and non-cash benefits, available for living expenses, from all sources, both taxable and non-taxable, before deductions for all people who live in your home. This includes, but is not limited to:

Wages or salaries	Social Security, SSI, SSP	Rental or royalty income
Interest or dividends from:	Scholarships, grants, or other aid	Profit from self-employment
Savings account, stocks or bonds	used for living expenses	(IRS form Schedule C,
Unemployment benefits	Disability payments	Line 29)
TANF (AFDC)	Food Stamps	Worker's Compensation
Pensions	Insurance settlements	Child Support
Gifts		Spousal Support

PART THREE
CUSTOMER ASSISTANCE TARIFF
DOMESTIC SERVICE - SINGLE FAMILY ACCOMMODATION

DEPLOYED SERVICES MEMBER PROGRAM

This program allows the Company to provide a 15% discount to deployed service members of the United States Military. The Company will provide the credit on the deployed service member's bill provided that the following criteria are met:

1. Deployment is not a "permanent change of station." Permanent change of station requires a service member to permanently change his or her place of residence, paid for by the applicable military branch. A service member's decision to keep a secondary residence in Arizona would be discretionary and would not qualify for this credit.
2. Deployed member does not have family living in the premises. Short term deployments, where a spouse and/or dependents remain in the United States would not qualify, as the service member would receive separate compensation from the military to cover domestic expenses while deployed.
3. The deployed service member is an active member of the military (*e.g.,* Air Force, Army, Coast Guard, Marines, and Navy) as defined by 10 U.S.C. § 101(a)(4) and includes any member of the Reserves or National Guard called to active duty.

ADMINISTRATION

1. Participation shall be determined on a first come, first served basis.
2. Each service member's eligibility must be verified based on written orders from the service member's command.
3. Continued eligibility will be determined periodically through a recertification process.
4. The Company is permitted to seek Commission approval to change participant limits based on level of participation.
5. Qualifying annual incomes are set at 200 percent of the 202__ federal poverty levels.

PART THREE
CUSTOMER ASSISTANCE TARIFF
DOMESTIC SERVICE - SINGLE FAMILY ACCOMMODATION

DEPLOYED SERVICES MEMBER PROGRAM

Effective _____

No. of Person in Household	Total Gross Annual Income*
1	$XXXXX
2	$XXXXX
3	$XXXXX
4	$XXXXX
5	$XXXXX
6	$XXXXX

For each additional person residing in the household add $XXXXX

For the purpose of the program the "gross household income" means all money and non-cash benefits, available for living expenses, from all sources, both taxable and non-taxable, before deductions for all people who live in your home. This includes, but is not limited to:

Wages or salaries	Social Security, SSI, SSP	Rental or royalty income
Interest or dividends from:	Scholarships, grants, or other aid	Profit from self-employment (IRS form Schedule C, Line 29)
Savings account, stocks or bonds	used for living expenses	
Unemployment benefits	Disability payments	Worker's Compensation
TANF (AFDC)	Food Stamps	Child Support
Pensions	Insurance settlements	Spousal Support
Gifts		

PART THREE
CUSTOMER ASSISTANCE TARIFF
DOMESTIC SERVICE - SINGLE FAMILY ACCOMMODATION

DISABLED MILITARY VETERAN PROGRAM

This program allows the Company to provide a 15% discount to disabled military veterans of the United States Military.

The Company will provide the credit on the disabled military veteran's bill provided that the following criteria are met:

1. Disabled military veteran was honorably discharged from the armed forces.
2. Disabled military veteran must have a permanent disability rating related to their military duty service.
3. The disabled military veteran must have been an active member of the military (*e.g.*, Air Force, Army, Coast Guard, Marines, and Navy) as defined by 10 U.S.C. § 101(a)(4) and includes any member of the Reserves or National Guard called to active duty.

ADMINISTRATION

1. Participation shall be determined on a first come, first served basis.
2. Each service member's eligibility must be verified based on documentation demonstrating a medical discharge or other written documentation from the United States Department of Defense or Department of Veteran Affairs.
3. Continued eligibility will be determined periodically through a recertification process.
4. The Company is permitted to seek Commission approval to change participant limits based on level of participation.
5. Qualifying annual incomes are set at 200 percent of the 202__ federal poverty levels.

PART THREE
CUSTOMER ASSISTANCE TARIFF
DOMESTIC SERVICE - SINGLE FAMILY ACCOMMODATION

DISABLED MILITARY VETERAN PROGRAM

Effective _____

No. of Person in Household	Total Gross Annual Income*
1	$XXXXX
2	$XXXXX
3	$XXXXX
4	$XXXXX
5	$XXXXX
6	$XXXXX

For each additional person residing in the household add $XXXXX

Acceptance into the program is subject to verification of income source.

For the purpose of the program the "gross household income" means all money and non-cash benefits, available for living expenses, from all sources, both taxable and non-taxable, before deductions for all people who live in your home. This includes, but is not limited to:

Wages or salaries	Social Security, SSI, SSP	Rental or royalty income
Interest or dividends from: Savings account, stocks or bonds	Scholarships, grants, or other aid used for living expenses	Profit from self-employment (IRS form Schedule C, Line 29)
Unemployment benefits	Disability payments	Worker's Compensation
TANF (AFDC)	Food Stamps	Child Support
Pensions	Insurance settlements	Spousal Support
Gifts		

PART THREE
CUSTOMER ASSISTANCE TARIFF
DOMESTIC SERVICE - SINGLE FAMILY ACCOMMODATION

Recovery of Cost of Customer Assistance Tariff and Customer Surcharges

The Company shall recover the CAT costs from a monthly CAT surcharge on all residential and non-residential wastewater customers who are not participating in the CAT. Liberty is entitled to seek recovery of direct costs (*i.e.*, those costs directly associated with the programs, which costs would not be incurred in the absence of the programs). The Company shall account for those direct costs separately from other operating costs.

Liberty shall be entitled to implement a CAT surcharge on non-participating residential and non-residential wastewater as follows.

- For customers participating in the CAT, the Company shall maintain a balancing account detailing the beginning and ending balance of the cumulative unrecovered program costs each month.

- Liberty's authorized rate of return shall be applied monthly to the average of the beginning balances of the cumulative unrecovered program costs for wastewater service and included in the beginning balances for the following month.

- Using the balancing account, Liberty shall calculate the monthly surcharge for each customer as follows:

  (Ending Balance for Low-Income Tariff Balancing Account including amortized carrying costs during recovery period/Number of active non-participating wastewater connections at year end)/12

- The ending balance in the balancing account shall equal the beginning balances plus discounts allowed on bills for the twelve-month tracking period, plus direct program costs incurred in the twelve-month period plus the return less surcharge fees billed in the twelve month tracking period.

- Liberty shall implement a monthly surcharge for the CAT for each twelve month period of the CAT. The Company shall calculate the monthly surcharge each year based on the active number of customer connections as of December 31 of the prior year. The Company shall file notice of the surcharge, along with a report on the CAT, with the Arizona Corporation Commission on or before January 31 and the surcharge shall be implemented on customer bills in February of each year with the recovery period ending in January of the following year.

PART FOUR
OFF-SITE FACILITIES HOOK-UP FEE

I. Purpose and Availability

The purpose of the off-site facilities hook-up fees payable to **Liberty Utilities (Entrada Del Oro Sewer) Corp.** ("Company") pursuant to this tariff is to equitably apportion the costs of constructing additional off-site facilities to provide wastewater treatment and disposal facilities among all new service laterals. These charges are applicable to all new service laterals undertaken via Collection Main Extension Agreements, or requests for service not requiring a Collection Main Extension Agreement, entered into after the effective date of this tariff. The charges are one-time charges and are payable as a condition to Company's establishment of service, as more particularly provided below.

II. Definitions

Unless the context otherwise requires, the definitions set forth in R-14-2-601 of the Arizona Corporation Commission's ("Commission") rules and regulations governing sewer utilities shall apply interpreting this tariff schedule.

"Applicant" means any party entering into an agreement with Company for the installation of wastewater facilities to serve new service laterals and may include developers and/or builders of new residential subdivisions, and non-residential properties.

"Company" means Liberty Utilities (Entrada Del Oro Sewer) Corp.

"Collection Main Extension Agreement" means an agreement whereby an Applicant, Developer and/or Builder agrees to advance the costs of the installation of wastewater facilities necessary to serve new service laterals, or install wastewater facilities to serve new service laterals and transfer ownership of such wastewater facilities to Company, which agreement does not require the approval of the Commission pursuant to A.A.C. R-14-2-606, and shall have the same meaning as "Wastewater Facilities Agreement."

"Off-Site Facilities" means the wastewater treatment plant, sludge disposal facilities, effluent disposal facilities and related appurtenances necessary for proper operation, including engineering and design costs. Off-site facilities may also include lift stations, force mains, transportation mains and related appurtenances necessary for proper operation if these facilities are not for the exclusive use of the Applicant and benefit the entire wastewater system.

"Service Lateral" means and includes all service laterals for single-family residential, commercial, industrial or other uses.

PART FOUR
OFF-SITE FACILITIES HOOK-UP FEE

III. Wastewater Hook-up Fee

For each new residential service lateral, Company shall collect a Hook-Up Fee of $1,100 based on the Equivalent Residential Unit ("ERU") of 270 gallons per day. Non-residential applicants shall pay based on the total ERUs of their development calculated by dividing the estimated total daily wastewater capacity usage needed for service using standard engineering standards and criteria by the ERU factor of 270 gallons per day. For "Active Adult" communities with demonstrated age-restricted zoning and/or CCR's providing for age-restricted living, the Hook-Up Fee for residential properties shall be $775, based on an ERU factor of 190 gallons per day.

IV. Terms and Conditions

A. Assessment of One Time Off-Site Facilities Hook-up Fee: The off-site facilities hook-up fee may be assessed only once per residential parcel. For non-residential properties that reside on the one parcel but have future additional construction that adds additional impact to the Company's existing wastewater infrastructure, an incremental Hook-Up Fee shall be applied based upon the additional EDU equivalents added by such construction activity.

B. Use of Off-Site Facilities Hook-up Fee: Off-site facilities hook-up fees may only be used to pay for capital items of off-site facilities, repay loans obtained to fund the cost of installation of off-site facilities. Off-site hook-up fees shall not be used to cover repairs, maintenance, or other operational purposes. The Company shall record amounts collected under the tariff as CIAC; however, such amounts shall not be deducted from rate base until such amounts have been expended for plant.

C. Time of Payment:

1. In the event that the person or entity that will be constructing improvements ("Applicant," "Developer," or "Builder") is otherwise required to enter into a Collection Main Extension Agreement, payment of the fees required hereunder shall be made by the Applicant, Developer or Builder within 15 days of execution of a Main Extension Agreement.

2. In the event that the Applicant, Developer or Builder for service is not required to enter into a Collection Main Extension Agreement, the hook-up fee charges hereunder shall be due and payable at the time wastewater service is requested for the property.

PART FOUR
OFF-SITE FACILITIES HOOK-UP FEE

D. Off-Site Facilities Construction by Developer: Company and Applicant, Developer, or Builder may agree to construction of off-site facilities necessary to serve a particular development by Applicant, Developer or Builder, which facilities are then conveyed to Company. In that event, Company shall credit the total cost of such off-site facilities as an offset to off-site hook-up fees due under this Tariff. If the total cost of the off-site facilities constructed by Applicant, Developer or Builder and conveyed to Company is less than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall pay the remaining amount of off-site hook-up fees owed hereunder. If the total cost of the off-site facilities contributed by Applicant, Developer or Builder and conveyed to Company is more than the applicable off-site hook-up fees under this Tariff, Developer or Builder shall be refunded the difference upon acceptance of the off-site facilities by the Company.

E. Failure to Pay Charges; Delinquent Payments: Company will not be obligated to make an advance commitment to provide or actually provide wastewater service to any Developer, Builder or other applicant for service in the event that the Developer, Builder or other applicant for service has not paid in full all charges hereunder. Under no circumstances will Company connect service or otherwise allow service to be established if the entire amount of any payment has not been paid.

F. Large Subdivision and/or Development Projects: In the event that the Applicant, Developer or Builder is engaged in the development of a residential subdivision and/or development containing more than 150 lots, the Company may, in its reasonable discretion, agree to payment of off-site hook- up fees in installments. Such installments may be based on the residential subdivision and/or development's phasing and should attempt to equitably apportion the payment of charges hereunder based on the Applicant's, Developer's or Builder's construction schedule and water service requirements. In the alternative, the Applicant, Developer, or Builder shall post an irrevocable letter of credit in favor of the Company in a commercially reasonable form, which may be drawn by the Company consistent with the actual or planned construction and hook up schedule for the subdivision and/or development.

G. Off-Site Hook-Up Fees Non-refundable: The amounts collected by Company pursuant to the off-site hook-up fee tariff shall be non-refundable contributions in aid of construction ("CIAC").

H. Use of Off-Site Hook-Up Fees Received: All funds collected by Company as off-site facilities hook-up fees shall be deposited into a separate account and bear interest and shall be used for the purposes of paying for the costs of installation of off-site facilities, including repayment of loans obtained for the installation of off-site facilities.

PART FOUR
OFF-SITE FACILITIES HOOK-UP FEE

I. Off-Site Facilities Hook-Up Fee in Addition to On-site Facilities: The off-site facilities hook-up fee shall be in addition to any costs associated with the construction of on-site facilities under a Collection Main Extension Agreement.

J. Disposition of Excess Funds: After all necessary and desirable off-site facilities are constructed utilizing funds collected pursuant to the off-site facilities hook-up fees, or if the off-site facilities hook-up fee has been terminated by order of the Arizona Corporation Commission, any funds remaining in the trust account shall be refunded. The manner of the refund shall be determined by the Commission at the time a refund becomes necessary.

K. Status Reporting Requirements to the Commission: Company shall submit a calendar year Off-Site Facilities Hook-Up Fee status report each January to Docket Control for the prior twelve (12) month period, beginning January 2022, until the hook-up fee tariff is no longer in effect. This status report shall contain a list of all customers that have paid the hook-up fee tariff, the amount each has paid, the physical location/address of the property in respect of which such fee was paid, the amount of money spent from the account, the amount of interest earned on the funds within the tariff account, and an itemization of all facilities that have been installed using the tariff funds during the 12-month period.

PART FIVE

PURCHASED POWER ADJUSTMENT MECHANISM

PART FIVE
PURCHASED POWER ADJUSTMENT MECHANISM ("PPAM")

Whenever Liberty Utilities (Entrada Del Oro Sewer) Corp's ("Liberty") electric power provider alters the rates they charge, relative to the rates reflected in the purchased power expense adopted by the Arizona Corporation Commission in the Company's last general rate case for that system, Liberty may, in accordance with the provisions of this PPAM, file a new schedule with the Commission for that system, setting forth an adjustment designed to recover such increased or decreased purchased power expenses due to the provider rate decrease or increase, provided that:

1. The total change in the purchased power expense will be calculated by comparing Liberty's purchased power cost during the test year utilized in its last general rate case with Liberty's cost of power for that same test year computed at Liberty's new rate for power.

2. The calculated change in surcharge rates for the system must amount to at least $0.01 per Equivalent Residential Unit ("ERU") (rounded up from five) before an adjustment can be made.

3. All revised schedules filed with the Arizona Corporation Commission pursuant to the provisions of this PPAM will be accompanied by workpapers prepared by Liberty in a format approved by the Utilities Division Staff of the Commission and will be in sufficient detail to enable the Commission to test the accuracy of Liberty's calculations.

4. The new schedules filed by Liberty under the provisions of this PPAM will become effective 30 days after such filing, unless suspended by Staff.

5. Illustration of the calculation of the above PPAM, assuming the following test year data:

    A. Purchased Power Expense = $100,000
    B. kWh = 1,250,000 kWh
    C. Total Connections = 370

    Should Electric Purchased Power Rates increase at a future date such that the new Power Rates x (B) = $112,500, a Purchased Power Expense pass thru calculation would be initiated.

    Pass Thru Calculation Steps:
    1) Total Electric Purchased Power Increase = $112,500 - $100,000 = $12,500
    2) Monthly PPAM Surcharge/Connection = Total Electric Purchased Power Increase / Total Connections / 12 months
       = $12,500 / 370 connection / 12 months
       = $2.815 per connection on bill

LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP.

PLAN OF ADMINISTRATION FOR
PURCHASED POWER ADJUSTMENT MECHANISM

I. GENERAL DESCRIPTION.

This document is the Plan of Administration ("POA") for the Purchased Power Adjustment Mechanism ("PPAM") for Liberty Utilities (Entrada Del Oro Sewer) Corp. ("Liberty") approved by the Arizona Corporation Commission ("Commission") in Decision No. _____ on _____, 2021. The PPAM allows Liberty to pass through to its customers the increase or decrease in purchased power costs that result from a rate change for its electric service provider supplying retail electric service to Liberty.

II. PPAM RELATED FILINGS.

A. Liberty shall file with Docket Control an analysis of the actual impact on the energy portion of Liberty's electric service costs once a change in the rates of Liberty's electric service provider is known.

B. Liberty will provide the Commission with spreadsheets detailing Liberty's purchased power expenses during the test year utilized in its last general rate case, prior to a change in the rate of Liberty's electric service provider. The details will include basic service charges and rate and volume figures. That is, Liberty will break down its total purchased power bill into the amount due to fixed fees, volume of electricity used, and the rates paid per unit of electricity. For the period following the rate change, Liberty will provide the same information, then compare the two periods, isolating any change in purchased power cost that is due exclusively to a rate change. The specific intent is to show exactly how much of any increase or decrease is due to changes in rates beyond Liberty's control and how much is due to a change in the amount of power that Liberty consumes. Liberty will only recover increases or refund decreases that are due to changes in rates.

C. All revised schedules filed with the Commission pursuant to the provisions of this PPAM will be accompanied by documentation prepared by Liberty in a format approved by Utilities Division Staff of the Commission and will contain sufficient detail to enable the Commission to verify accuracy of Liberty's calculations.

D. The surcharges will not become effective until approved by the Commission.

E. Once a surcharge or credit has been approved, the Company shall provide notice (in a form acceptable to Staff) of the rate increases to customers with the bill where the rate increase first appears.

III. APPLICATION TO SEWER CUSTOMERS.

A. The increase or decrease in purchased power costs that are due to changes in rates at the Company's sewer facilities will be allocated on a per capita basis.

B. The surcharge or credit will be calculated based on Equivalent Residential Units ("ERU").

C. Pass through calculation example:

Residential Customer	
Connections	370
ERU Rating	1
Number of ERUs (Connections x ERU Rating)	370

Test Year Data	
a) kWh	1,250,000
b) Purchased Power Expense	$100,000
c) Purchased Power Rate	$0.0800
Calculation	
d) New Purchased Power Rate	$0.0900
e) New Purchased Power Expense (d x a)	$112,500
f) Total Purchased Power Expense Increase / (Decrease) (e – b)	$12,500
g) Monthly Surcharge/ERU (f / total ERUs / 12)	$2.815
h) Monthly Surcharge per Residential Connection (g x ERU rating)	$2.815

PART SIX

PROPERTY TAX ADJUSTMENT MECHANISM

PART SIX
PROPERTY TAX ADJUSTMENT MECHANISM ("PTAM")

The PTAM allows the Company to pass through to its customers the increases or decreases in property tax expenses that result from changes to the assessment ratio or property tax rate. Pass through costs will be divided equally between residential and non-residential customer classes to collect the total increase over a 12-month period. Details can be found in the Company's Property Tax Adjustment Mechanism Plan of Administration.

Applicability Applicable to all customers served by this service area.

Terms and Conditions

The Company will annually file with the Commission by March 1 the proposed annual PTAM surcharge for the current calendar year. The filing shall detail how the Company's property tax expenses were calculated by parcel by year. These calculations will include full cash value, assessment ratio, and tax rates by parcel. All documentation to support the proposed surcharge will be included. As part of each annual filing, the Company will perform a reconciliation for the prior reporting period comparing the amounts recovered from/refunded to customers to the amount of increase/decrease in property tax expenses due to changes in rates for that same period resulting in either an under / (over) recovery. This true-up will be included in the annual calculation. The revised PTAM surcharge will be effective on June 1 of each year. The PTAM surcharge will appear on each applicable customer bill as a separate line item. All rates in this Schedule shall be subject to their proportionate part of any taxes or other governmental imposts that are assessed directly or indirectly on the basis of revenues derived from this Schedule.

LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP.

PLAN OF ADMINISTRATION FOR
PROPERTY TAX ADJUSTMENT MECHANISM

I. GENERAL DESCRIPTION.

This document is the Plan of Administration ("POA") for the Property Tax Adjustment Mechanism ("PTAM") for Liberty Utilities (Entrada Del Oro Sewer) Corp. ("Liberty EDO" or "Company") approved by the Arizona Corporation Commission ("Commission") in Decision No. _____ on _____. The PTAM allows Liberty EDO to pass through to its customers the increase or decrease in property taxes that results from a change in the applicable assessment ratio and/or property tax rates.

II. PTAM RELATED FILINGS.

A. Within 60 days of the effective date of a change in the assessment ratio and/or property tax rates applicable to the Company, the Company shall file with Docket Control an analysis of the actual impact on the Company's property tax expenses.

B. The Company will provide the Commission with spreadsheets detailing exactly how the Company's property tax expenses were calculated in the time period prior to a change in the assessment ratio and/or property tax rate that affects the Company's property tax expenses. These calculations will include the assessment ratio, the property tax rates, and the value of the property that was taxed. For the period following the change(s), the Company will provide the same information, then compare the two periods, isolating any change in property tax expense that is due exclusively to changes in the assessment ratio and/or property tax rates. The specific intent is to show exactly how much of any increase or decrease in property tax expense is due to changes in the assessment ratio and tax rates beyond the Company's control and how much is due to changes in the value of the property the Company owns. The Company will only recover increases or refund decreases that are due to changes in the assessment ratio and tax rates.

C. All revised schedules filed with the Commission pursuant to the provisions of this PTAM will be accompanied by documentation prepared by the Company in a format approved by Utilities Division Staff of the Commission and will contain sufficient detail to enable the Commission to verify accuracy of the Company's calculations.

D. The surcharges will not become effective until approved by the Commission.

E. The Company will file annually with the Commission a report detailing the Company's property tax expenses.

F. The Company shall provide notice (in a form acceptable to Staff) of the rate increases to customers with the bill where the rate increase first appears.

III. APPLICATION TO SEWER CUSTOMERS.

A. The increase or decrease in property tax expenses that are due to changes in the assessment ratio and/or property tax rates at the Company's sewer facilities will be allocated on a per capita basis.

B. See the examples on the next page:

Change in Assessment Ratio Example

Test Year	
Assessment Ratio	**20.00%**
Property Full Cash Value	$10,000,000
Assessed Valuation	$2,000,000

Current Year	
Assessment Ratio	**21.00%**
Property Full Cash Value	$10,000,000
Assessed Valuation	$2,100,000

Change in Assessed Valuation	
Current Year Assessed Valuation	$2,100,000
Test Year Assessed Valuation	$2,000,000
Increase in Assessed Valuation Due to Increase in Assessment Ratio	$100,000

Test Year	
Total Property Tax Rate	10.00%
Assessed Valuation	$2,000,000
Property Tax Expense	$200,000

Current Year	
Total Property Tax Rate	10.00%
Assessed Valuation	$2,100,000
Property Tax Expense	$210,000

PTAM Charge on Sample Customer Bill	
Increase in Property Tax Expense Due to Increase in Assessment Ratio	$10,000
Number of Sewer Customers	20,000
PTAM Charge on Sample Customer Bill	$0.50

Change in Total Property Tax Rate Example

Test Year	
Total Property Tax Rate	**10.00%**
Assessed Valuation	$2,000,000
Property Tax Expense	$200,000

Current Year	
Total Property Tax Rate	**11.00%**
Assessed Valuation	$2,000,000
Property Tax Expense	$220,000

Pass Through Calculation	
Current Year Property Tax Expense	$220,000
Test Year Property Tax Expense	$200,000
Increase in Property Tax Expense Due to Rate Increase	$20,000

PTAM Charge on Sample Customer Bill	
Increase in Property Tax Expense Due to Rate Increase	$20,000
Number of Sewer Customers	20,000
PTAM Charge on Sample Customer Bill	$1.00

PART SEVEN

PRETREATMENT STANDARDS

LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP.

INDUSTRIAL PRETREATMENT PROGRAM

LIBERTY UTILITIES

14920 W. Camelback Road
Litchfield Park, AZ 85340

PRETREATMENT PROGRAM

The objective of a Pretreatment Program (the General Pretreatment Regulations (40 CFR, Part 403) of Clean Water Act of 1977) is to protect the water quality and is designed to reduce the level of pollutants discharged by industry and other non-domestic wastewater sources into municipal sewer systems, and thereby, reduce the amount of pollutants released into the environment through wastewater. Liberty Utilities (Entrada Del Oro Sewer) Corp. ("Liberty") enforces requirements of the pretreatment program by enforcing the EPA established limits and the state or local authority on the amount of pollutants allowed to be discharged. This requires dischargers to treat their wastewater prior to its discharge in Liberty 's collection system.

Specific objectives of this ordinance are outlined below:

1. To prevent the introduction of pollutants into Liberty wastewater collection system that will interfere with the operation of the system or contaminate the resulting sludge.
2. To prevent the introduction of pollutants into the Liberty wastewater collection system that will pass through the system, inadequately treated, into receiving waters or the atmosphere or otherwise be incompatible with the system.
3. To improve the opportunity to recycle and reclaim waste waters and sludges from the system.
4. To provide for equitable distribution of the cost of operating and maintaining the Liberty 's wastewater system.

Liberty will enforce these standards by limiting the following discharges and will review pretreatment prior to approval of a discharge into its wastewater system:

1. Discharge of any liquids, solids or gases that by reason of their nature or quantity are, or may be, sufficient either alone or by interaction to cause fire or explosion or be injurious in any other way to the operation of the Liberty wastewater collection system or the integrity of the sewer system or cause a danger to the public health or safety is prohibited. This prohibition includes but is not limited to waste streams with a closed cup flash point of less than one hundred forty degrees Fahrenheit or sixty degrees Centigrade using the test methods specified in federal regulations, 40 CFR 261.21.
2. Discharge of any solid or viscous substances that will or may cause obstruction to the flow in a sewer or other interference with the operation of the wastewater system is prohibited.
3. Any trucked or hauled pollutants, unless the hauler has first obtained written approval from Liberty.
4. Discharge of any wastewater having a pH less than 5.5 or greater than 10.5 SU or having any other corrosive property capable of causing damage or hazard to structures, equipment, or personnel of the system is prohibited.
5. Discharge of any wastewater containing hazardous substances, toxic, conventional, or non conventional pollutants in sufficient quantity, either singly or

by interaction, which could injure or interfere with any wastewater treatment process, constitutes a health or safety hazard to humans or animals, or exceed the limitations set forth in the LOCAL REGULATORY LIMITS or the categorical pretreatment standards appropriate for the specific industrial user is prohibited. Hazardous substances, toxic, conventional or non conventional pollutants will include, but not be limited to, any pollutant identified in 40 CFR 122 Appendix D Tables II, III, IV, AND V (AZPDES Permit Limits that are applicable), or substances alone or in combination with other constituents that are determined to be toxic by the toxicity test as defined in 40 CFR Part 136 for wastewater or the toxicity characteristic leaching procedure (TCLP) test as defined in 40 CFR Part 261 for biosolids.

6. Discharge of any noxious or malodorous liquids, gases or solids which, either singly or by interaction, are capable of creating a public nuisance or hazard to life or are sufficient to prevent entry into the sewers without special hazardous material protective equipment or clothing for their maintenance and repair is prohibited.
7. Discharge of any substance which may cause treatment residues, biosolids or scum to be unsuitable for reclamation and reuse or which may interfere with such reclamation and reuse process is prohibited. In no case will a substance discharged to the Liberty wastewater collection system cause the Entrada Del Oro Wastewater Treatment Facility (EDOWWTF) to be in a noncompliance with biosolids use or disposal criteria, guidelines or regulations developed under Section 405 of the Clean Water Act, any criteria, guidelines or regulations affecting biosolids uses or disposal developed pursuant to the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substances Control Act or state or local standards applicable to the biosolids management method adopted by the Liberty and/or local and state authorities.
8. Discharge of any substances which will inhibit the operation or performance of the EDOWWTF or pass through the system and cause the EDOWWTF to violate any requirements of any discharge permit issued by the state or federal government is prohibited.
9. Discharge of any substance with objectionable color not removed in the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions, is prohibited.
10. Discharge of any wastewater having a temperature which will inhibit biological activity in the EDOWWTF treatment plant resulting in interference; but in no case, wastewater with a temperature at the introduction into the EDOWWTF which exceeds thirty-eight degrees Celsius (one hundred degrees Fahrenheit) is prohibited.
11. Discharge of any slug load, which will mean any pollutant, including oxygen demanding pollutants (BOD, etc.), released in a single extraordinary discharge episode of such volume or strength as to cause interference to the EDOWWTF is prohibited.
12. Discharge of any wastewater containing any radioactive wastes or isotopes of such half-life or concentration as to exceed limits established by state and federal regulations is prohibited.

13. Discharge of any wastewater which causes the EDOWWTF effluent to exhibit toxicity to test organisms in a standard biological toxicity test as defined by local, state or federal requirements, or which Liberty determines would be toxic to or impede the treatment capabilities of the biological processes in the EDOWWTF is prohibited.
14. Discharge of any petroleum oil, non biodegradable cutting oil or products of mineral oil origin that will cause interference or pass through the EDOWWTF is prohibited.
15. No industrial user of Liberty's wastewater collection system may discharge wastes or waste waters containing concentrations of pollutants higher than those listed in TABLE 1.1.

ORGANIC CONTAMINANTS (µg/L)	
Benzene	35
Chloroform	2,000
4,4' - DOE	Not allowed
4,4' – DDT	Not allowed
Aldrin	Not allowed
BHC-Alpha	Not allowed
BHC-Gamma (Lindane)	Not allowed
Heptachlor	Not allowed
Heptachlor Epoxide	Not allowed
Polychlorinated byphenyl compounds (PCBs)	Not allowed

TRACE METALS	
PARAMETER	Daily Average Effluent Limitation (mg/L)

Arsenic (As)	0.13
Cadmium (Cd)	0.047
Copper (Cu)	1.5
Cyanide (CN)	2.0
Lead (Pb)	0.41
Mercury (Hg)	0.0023
Selenium (Se)	0.10
Silver (Ag)	1.2
Zinc (Zn)	3.5

16. Liberty can accept certain pollutants which are compatible with the EDOWWTF treatment processes; however, the discharge would pay a surcharge, established on quantity, to cover the costs of such treatment.
17. Dilution of a waste is not an acceptable pretreatment strategy.

Waste Discharge Permits

A waste discharge permit is required for industrial and non-domestic wastewater generators for the following conditions:

1. Any discharger subject to National Categorical Pretreatment Standards
2. Any Significant Industrial discharge as defined by Liberty
3. Any discharger whose discharge who would be in violation with local limits in Table 1.1.
4. Any discharger by State Pretreatment requirements to obtain a permit
5. Any other discharger directed by the Liberty to apply for a permit

Permit Applications and Fees (to be developed based on site specific conditions)

Violations and enforcement (to be developed based on site specific conditions)

Penalties

Installation of Meter

Liberty will be responsible, unless the responsibility is given to the discharger by Liberty for the reading of water and/or wastewater meters when installed in discharger's establishment. All meters shall be installed at a location approved by Liberty. All meters will be accessible to Liberty at all times.

LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP.
INDUSTRIAL PRETREATMENT PROGRAM STANDARD OPERATING PROCEDURES

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LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP.
PRETREATMENT PROGRAM STANDARD
OPERATING PROCEDURES

1. INTRODUCTION

To control the discharge of pollutants to the Nation's waters, the Clean Water Act (CWA) requires the Environmental Protection Agency (EPA) to promulgate regulations related to discharges. Discharges from non-domestic dischargers can impact the operations of the Publicly Owned Treatment Works (POTWs) as the pollutants can pass through or interfere with the operations of the plants, threaten worker's health and safety, or contaminate sludges. POTWs are designed to treat domestic sewage. The non-domestic discharges are regulated by the National Pretreatment Program. Industrial and commercial dischargers known as IUs are required to obtain permits or other control mechanisms to discharge wastewater to the POTW under the National Pretreatment Program. EPA promulgated the General Pretreatment Regulations (Title 40 Code of Federal Regulations [CFR] Section 403 [40 CFR 403]), which defines the National Pretreatment Program. The Arizona Administrative Code (AAC) R18-9-A905(A)(8)(b) incorporates the General Pretreatment Regulations.

The Liberty Utilities (Entrada Del Oro Sewer) Corp. (Liberty) operates a wastewater collection and conveyance system and treats these flows at the Entrada Del Oro Wastewater Treatment Facility (EDOWWTF). Liberty can regulate discharges from IUs for potential contaminants of concern to minimize impact on the EDOWWTF under the Liberty CODE OF PRACTICE (Liberty).

The discharge of toxic and other harmful pollutants from IUs can be effectively controlled through a local pretreatment program that is based on these regulations, structured to address specific local concerns, and enforced through the Code of Practice.

The objectives of the pretreatment SOP are:

- To prevent the introduction of pollutants into the POTWs that will interfere with its operation;
- To prevent the introduction of pollutants into the POTWs that will pass through the POTWs, inadequately treated, into receiving waters, or otherwise be incompatible with the POTWs;
- To protect both POTWs personnel who may be affected by wastewater and sludge in the course of their employment and the general public;
- To promote reuse and recycling of industrial wastewater and sludge from the POTWs;
- To provide for fees for the equitable distribution of the cost of operation, maintenance, and improvement of the POTWs; and
- To enable Liberty to comply with its Arizona Pollutant Discharge Elimination System permit conditions, sludge use and disposal requirements, and any other Federal or State laws to which the POTWs is subject.

These Standard Operating Procedures (SOPs) shall apply to all IUs of the Liberty wastewater collection and conveyance system. The SOPs include the issuance of individual wastewater discharge permits; provides for monitoring, compliance, and enforcement activities; establishes administrative review procedures; requires IUs reporting; and provides for the setting of fees for the equitable distribution of costs resulting from the program established herein.

1.1 ADMINISTRATION

Except as otherwise provided herein, the Liberty Operations Manager shall administer, implement, and enforce the provisions of these SOPs. Any powers granted to or duties imposed upon the Liberty Operations Manager may be delegated by the Liberty Operations Manager to a duly authorized Liberty employee.

1.2 ABBREVIATIONS

The following abbreviations, when used in this SOP, shall have the designated meanings:

APP - Aquifer Protection Permit
BOD - Biochemical Oxygen Demand
BMP - Best Management Practice
BMR - Baseline Monitoring Report
CFR - Code of Federal Regulations
CIU - Categorical Industrial User
COD - Chemical Oxygen Demand
EPA - U.S. Environmental Protection Agency
GPD - gallons per day
IU - Industrial User
MG/l - milligrams per liter
NPDES - National Pollutant Discharge Elimination System
NSCIU - Non-Significant Categorical Industrial User
POTW - Publicly Owned Treatment Works
RCRA - Resource Conservation and Recovery Act
SIU - Significant Industrial User
SNC - Significant Noncompliance
TSS - Total Suspended Solids
U.S.C. - United States Code

1.3 DEFINITIONS

A. Act or "the Act." The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 U.S.C. section 1251 et seq.

B. Approval Authority. Arizona Department of Environmental Quality, the Arizona Administrative Code (AAC) R18-9-A905(A)(8)(b)

C. Authorized or Duly Authorized Representative of the IU

a. If the IU is a corporation:

i. The president, secretary, treasurer, or a vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

ii. The manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for individual wastewater discharge permit requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b. If the IU is a partnership or sole proprietorship: a general partner or proprietor, respectively.

c. If the IU is a Federal, State, or local governmental facility: a director or highest official appointed or designated to oversee the operation and performance of the activities of the government facility, or their designee.

d. The individuals described in paragraphs 1 through 3, above, may designate a Duly Authorized Representative if the authorization is in writing, the authorization specifies the individual or position responsible for the overall operation of the facility from which the discharge originates or having overall responsibility for environmental matters for the company, and the written authorization is submitted to Liberty.

D. Biochemical Oxygen Demand or BOD. The quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedures for five (5) days at 20 degrees centigrade, usually expressed as a concentration (e.g., mg/l).

E. Best Management Practices or BMPs means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to implement the prohibitions listed in Section 2.1 A and B [40CFR 403.5(a)(1) and (b)] and/or the Arizona Administrative Code (AAC) R18-9-A905(A)(8)(b). BMPs include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

F. Brewery Discharge. A brewery discharge qualifies as a non-categorical IU and requires a permit for compliance.

G. Categorical Pretreatment Standard or Categorical Standard. Any regulation containing pollutant discharge limits promulgated by EPA in accordance with sections 307(b) and (c) of the Act (33 U.S.C. section 1317) that apply to a specific category of IUs and that appear in 40CFR Chapter I, Subchapter N, Parts 405 471.

H. Categorical Industrial User. An IU subject to a categorical Pretreatment Standard or categorical Standard.

I. Liberty Organizational Structure. The Liberty Operations Manager or their designee shall be responsible official who will administer this pretreatment program and the permitting process.

J. Chemical Oxygen Demand or COD. A measure of the oxygen required to oxidize all compounds, both organic and inorganic, in water.

K. Control Authority. Liberty

L. Daily Maximum. The arithmetic average of all effluent samples for a pollutant collected during a calendar day.

M. Daily Maximum Limit. The maximum allowable discharge limit of a pollutant during a calendar day. Where Daily Maximum Limits are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where Daily Maximum Limits are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.

N. Environmental Protection Agency or EPA. The U.S. Environmental Protection Agency or, where appropriate, the Regional Water Management Division Director, the Regional Administrator, or other duly authorized official of said agency.

O. Existing Source. Any source of discharge that is not a "New Source."

P. Grab Sample. A sample that is taken from a waste stream without regard to the flow in the waste stream and over a period of time not to exceed fifteen (15) minutes.

Q. Indirect Discharge or Discharge. The introduction of pollutants into the POTW from any nondomestic source.

R. Instantaneous Limit. The maximum concentration of a pollutant allowed to be discharged at any time, determined from the analysis of any discrete or composited sample collected independent of the industrial flow rate and the duration of the sampling event.

S. Interference. A discharge that, alone or in conjunction with a discharge or discharges from other sources, inhibits or disrupts the POTW, its treatment processes or operations or its sludge processes, use or disposal; and therefore, is a cause of a violation of Liberty's APP or of the prevention of sewage sludge use or disposal in compliance with any of the following statutory/regulatory provisions or permits issued there under, or any more stringent State or local regulations: section 405 of the Act; the Solid Waste Disposal Act, including Title II commonly referred to as the Resource Conservation and Recovery Act (RCRA); any State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the Solid Waste Disposal Act; the Clean Air Act; the Toxic Substances Control Act; and the Marine Protection, Research, and Sanctuaries Act.

T. Local Limit. Specific discharge limits developed and enforced by the Liberty upon industrial or commercial facilities to implement the general and specific discharge prohibitions listed in 40 CFR 403.5(a)(1) and (b).

U. Medical Waste. Isolation wastes, infectious agents, human blood and blood products, pathological wastes, sharps, body parts, contaminated bedding, surgical wastes, potentially contaminated laboratory wastes, and dialysis wastes.

V. Monthly Average. The sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

W. Monthly Average Limit. The highest allowable of "daily maximum discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

X. New Source.

a. Any building, structure, facility, or installation from which there is (or may be) a discharge of pollutants, the construction of which commenced after the publication of proposed Pretreatment Standards under section 307(c) of the Act that will be applicable to such source if such Standards are thereafter promulgated in accordance with that section, provided that:

i. The building, structure, facility, or installation is constructed at a site at which no other source is located; or
ii. The building, structure, facility, or installation totally replaces the process or production equipment that causes the discharge of pollutants at an Existing

Source; or

iii. The production or wastewater generating processes of the building, structure, facility, or installation are substantially independent of an Existing Source at the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the Existing Source, should be considered.

b. Construction on a site at which an Existing Source is located results in a modification rather than a New Source if the construction does not create a new building, structure, facility, or installation meeting the criteria of Section (1)(b) or (c) above but otherwise alters, replaces, or adds to existing process or production equipment.

c. Construction of a New Source as defined under this paragraph has commenced if the owner or operator has:

i. Begun, or caused to begin, as part of a continuous onsite construction program
   1. any placement, assembly, or installation of facilities or equipment; or
   2. significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or

ii. Entered into a binding contractual obligation for the purchase of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.

Y. Noncontact Cooling Water. Water used for cooling that does not come into direct contact with any raw material, intermediate product, waste product, or finished product.

Z. Pass Through. A discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the Liberty's APP including an increase in the magnitude or duration of a violation.

AA. Person. Any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, governmental entity, or any other legal entity; or their legal representatives, agents, or assigns. This definition includes all Federal, State, and local governmental entities.

BB. pH. A measure of the acidity or alkalinity of a solution expressed in standard units.

CC. Pollutant. Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage,

sewage sludge, munitions, Medical Wastes, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, municipal, agricultural and industrial wastes, and certain characteristics of wastewater (e.g., pH, temperature, TSS, turbidity, color, BOD, COD, toxicity, or odor).

DD. Pretreatment. The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to, or in lieu of, introducing such pollutants into the POTW. This reduction or alteration can be obtained by physical, chemical, or biological processes; by process changes; or by other means, except by diluting the concentration of the pollutants unless allowed by an applicable Pretreatment Standard.

EE. Pretreatment Requirements. Any substantive or procedural requirement related to pretreatment imposed on an IU, other than a Pretreatment Standard.

FF. Pretreatment Standards or Standards. Pretreatment Standards shall mean prohibited discharge standards, categorical Pretreatment Standards, and Local Limits.

GG. Prohibited Discharge Standards or Prohibited Discharges. Absolute prohibitions against the discharge of certain substances; these prohibitions appear in Section 2.1 of this SOPs.

HH. Publicly Owned Treatment Works or POTW. A treatment works, as defined by section 212 of the Act (33 U.S.C. section 1292), which is owned by Liberty to which Liberty's conveyance system discharges. This definition includes any devices or systems used in the collection, storage, treatment, recycling, and reclamation of sewage or industrial wastes of a liquid nature and any conveyances, which convey wastewater to a treatment plant.

II. Septic Tank Waste. Any sewage from holding tanks such as vessels, chemical toilets, campers, trailers, and septic tanks.

JJ. Sewage. Human excrement and gray water (household showers, dishwashing operations, etc.).

KK. Significant Industrial User (SIU). Except as provided in paragraphs (3) and (4) of this Section, a Significant Industrial User is:

a. An IU subject to categorical Pretreatment Standards; or

b. An IU that:
   i. Discharges an average of twenty-five thousand (25,000) gpd or more of process wastewater to the POTW (excluding sanitary, noncontact cooling and boiler blow down wastewater);
   ii. Contributes a process waste stream which makes up five (5) percent or more of the average dry weather hydraulic or organic (BOD, ammonia, and/or total nitrogen) capacity of the POTW treatment plant; or
   iii. Is designated as such by Liberty on the basis that it has a reasonable potential

for adversely affecting the POTW's operation or for violating any Pretreatment Standard or Requirement.

c. Liberty may determine that an IU subject to categorical Pretreatment Standards is a Non-Significant Categorical IU rather than a Significant IU on a finding that the IU never discharges more than 100 gallons per day (gpd) of total categorical wastewater (excluding sanitary, non-contact cooling and boiler blowdown wastewater, unless specifically included in the Pretreatment Standard) and the following conditions are met:
   i. The IU, prior to Liberty's finding, has consistently complied with all applicable categorical Pretreatment Standards and Requirements;
   ii. The IU annually submits the certification statement required in Section 6.14 B [see 40 CFR 403.12(q)], together with any additional information necessary to support the certification statement; and
   iii. The IU never discharges any untreated concentrated wastewater.

d. Upon a finding that a IU meeting the criteria in Subsection (2) of this part has no reasonable potential for adversely affecting the POTW's operation or for violating any Pretreatment Standard or Requirement, Liberty may at any time, on its own initiative or in response to a petition received from an IU, and in accordance with procedures in 40 CFR 403.8(f)(6), determine that such IU should not be considered a Significant IU.

LL. Slug Load or Slug Discharge. Any discharge at a flow rate or concentration, which could cause a violation of the prohibited discharge standards in Section 2.1 of this SOP. A Slug Discharge is any Discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch Discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate the POTW's regulations, Local Limits or Permit conditions.

MM. Storm Water. Any flow occurring during or following any form of natural precipitation, and resulting from such precipitation, including snowmelt.

NN. Liberty Operations Manager. The person designated by Liberty to supervise the operation of the POTW, and who is charged with certain duties and responsibilities by this SOP. The term also means a Duly Authorized Representative of the Liberty Operations Manager.

OO. Total Suspended Solids or Suspended Solids. The total suspended matter that floats on the surface of, or is suspended in, water, wastewater, or other liquid, and that is removable by laboratory filtering.

PP. User or Industrial User. A source of indirect discharge.

QQ. Wastewater. Liquid and water-carried industrial wastes and sewage from residential dwellings, commercial buildings, industrial and manufacturing facilities, and institutions, whether treated or untreated, which are contributed to the POTW.

RR. Wastewater Treatment Plant or Treatment Plant. That portion of the POTW which is designed to provide treatment of municipal sewage and industrial waste.

2. GENERAL SEWER USE REQUIREMENTS

2.1 Prohibited Discharge Standards

A. General Prohibitions. No IU shall introduce or cause to be introduced into the POTW any pollutant or wastewater which causes Pass Through or Interference. These general prohibitions apply to all IUs of the POTW whether or not they are subject to categorical Pretreatment Standards or any other National, State, or local Pretreatment Standards or Requirement.

B. Specific Prohibitions. No IU shall introduce or cause to be introduced into the POTW the following pollutants, substances, or wastewater:

a. Pollutants which create a fire or explosive hazard in the POTW, including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees F (60 degrees C) using the test methods specified in 40 CFR 261.21;

b. Wastewater having a pH less than 5.5 or more than 10.5, or otherwise causing corrosive structural damage to the POTW or equipment;

c. Solid or viscous pollutants, fats, oils, or grease in amounts or sizes which will cause obstruction of the flow in the wastewater collection system and/or POTW or result in interference or otherwise disrupt the operation of the POTW or any private sewer;

d. Pollutants, including oxygen demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which, either singly or by interaction with other pollutants, will cause Interference with the POTW;

e. Wastewater having a temperature greater than 104 degrees F (40 degrees C), or any wastewater at temperature greater than 150 degrees F (65 degrees C), or which will inhibit biological activity in the treatment plant resulting in Interference;

f. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin, in amounts that will cause Interference or pass through;

g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

h. Trucked or hauled pollutants, except at discharge points designated by Liberty's Operations Manager in accordance with Section 3.4 of this SOP;

i. Hazardous waste that violates any local limit contained in this article;

j. Noxious or malodorous liquids, gases, solids, or other wastewater which either alone or by interaction with other wastes are sufficient to create a nuisance or a hazard to life, generate odor complaints, or to prevent entry into the sewers for maintenance or repair;

k. Wastewater containing any radioactive wastes or isotopes except in compliance with applicable state or federal regulations;

l. Hazardous waste that violates any local limit contained in this article;

m. Storm water, surface water, ground water, artesian well water, roof runoff, subsurface drainage, condensate, noncontact cooling water and unpolluted wastewater unless specifically authorized by the Liberty

n. Sludges, screenings, and other residues from the pretreatment of industrial wastes or from the cleaning of interceptors or sewer collection systems;

o. Medical wastes except as specifically authorized by the division in a wastewater discharge permit;

p. Wastewater causing, alone or in conjunction with other sources, the POTW's effluent to fail a toxicity test;

q. Detergents, surface active agents, or other substances which might cause excessive foaming in the POTW;

r. Wastewater causing a reading on an explosion hazard meter at the point of discharge into the POTW, or at any point in the POTW, of more than ten percent.

Pollutants, substances, or wastewater prohibited by this Section shall not be processed or stored in such a manner that they could be discharged to the POTW.

2.2 National Categorical Pretreatment Standards

IUs must comply with the categorical Pretreatment Standards found at 40CFR Chapter I, Subchapter N, Parts 405-471.

A. Where a categorical Pretreatment Standard is expressed only in terms of either the mass or the concentration of a pollutant in wastewater, Liberty Operations Manager may impose equivalent concentration or mass limits in accordance with Section 2.2E & 2.2F.

B. When the limits in a categorical Pretreatment Standard are expressed only in terms of mass of pollutant per unit of production, the Liberty Operations Manager may convert the limits to

equivalent limitations expressed either as mass of pollutant discharged per day or effluent concentration for purposes of calculating effluent limitations applicable to individual IUs.

C. When wastewater subject to a categorical Pretreatment Standard is mixed with wastewater not regulated by the same Standard, Liberty Operations Manager shall impose an alternate limit in accordance with 40CFR 403.6(e).

D. A user may obtain a net/gross adjustment to a categorical pretreatment standard in accordance with 40CFR §403.15.

2.3 State Pretreatment Standards

IUs must comply with The Arizona Administrative Code (AAC) R18-9-A905(A)(8)(b) incorporates the General Pretreatment Regulations.

2.4 Local Limits

A. The Liberty Operations Manager is authorized to establish Local Limits pursuant to 40CFR 403.5(c).

B. The following pollutant limits are established to protect against Pass Through and Interference. No person shall discharge wastewater containing in excess of the Daily Maximum Limits shown on the table atop the following page.

CONTAMINANTS (mg/L)	
Benzene	0.035
Chloroform	2.0
4,4’ - DOE	Not allowed
4,4’ – DDT	Not allowed
Aldrin	Not allowed
BHC-Alpha	Not allowed
BHC-Gamma (Lindane)	Not allowed
Heptachlor	Not allowed
Heptachlor Epoxide	Not allowed

Polychlorinated byphenyl (PCB's)	Not allowed
Arsenic (As)	0.13
Cadmium (Cd)	0.047
Copper (Cu)	1.5
Cyanide (CN)	2.0
Lead (Pb)	0.41
Mercury (Hg)	0.0023
Selenium (Se)	0.10
Silver (Ag)	1.2
Zinc	3.5

The above limits apply at the point where the wastewater is discharged to the POTW. All concentrations for metallic substances are for total metal unless indicated otherwise. Liberty Operations Manager may impose mass limitations in addition to the concentration-based limitations above.

C. The division may develop Best Management Practices (BMPs) for any significant industrial user or other user, as needed, to implement this article. BMPs may be implemented through a permit, order, or regulation. For purposes of this article, BMPs are pretreatment requirements.

D. All users subject to a categorical pretreatment standard shall comply with all requirements of such standard and shall also comply with any limitations and prohibitions contained in this article. Where the same pollutant is limited by more than one pretreatment standard, the limitations which are more stringent shall prevail. Compliance with categorical pretreatment standards for existing sources shall be within the timeframe specified in the applicable categorical pretreatment standard. Compliance with categorical pretreatment standards for new sources shall be upon commencement of discharge.

E. Liberty may establish more stringent pretreatment standards or additional site-specific effluent limits, when, in the judgment of the division, such limitations are necessary to implement the objectives of this article.

2.5 Liberty Right of Revision

Liberty reserves the right to establish, by SOP or in individual wastewater discharge permits, more stringent Standards or Requirements on discharges to the POTW consistent with the purpose of this SOP.

2.6 Dilution

No IU shall ever increase the use of process water, or in any way attempt to dilute a discharge, as a partial or complete substitute for adequate treatment to achieve compliance with a discharge limitation unless expressly authorized by an applicable Pretreatment Standard or Requirement. Liberty Operations Manager may impose mass limitations on IU who are using dilution to meet applicable Pretreatment Standards or Requirements or in other cases when the imposition of mass limitations is appropriate.

3. PRETREATMENT OF WASTEWATER

3.1 Pretreatment Facilities

IUs shall provide wastewater treatment as necessary to comply with this SOPs and shall achieve compliance with all categorical Pretreatment Standards, Local Limits, and the prohibitions set out in Section 2.1 of this SOPs within the time limitations specified by EPA, the State, or Liberty Operations Manager, whichever is more stringent. Any facilities necessary for compliance shall

be provided, operated, and maintained at the IU's expense. Detailed plans describing such facilities and operating procedures shall be submitted to Liberty Operations Manager for review and shall be acceptable to Liberty Operations Manager before such facilities are constructed. The review of such plans and operating procedures shall in no way relieve the IU from the responsibility of modifying such facilities as necessary to produce a discharge acceptable to Liberty under the provisions of this SOP. Administrative Fees for design review and approval of Pretreatment facilities that Liberty may charge to the IU shall be the lesser of actual costs incurred or $2,500.

3.2 Additional Pretreatment Measures

A. Whenever deemed necessary, Liberty Operations Manager may require IUs to restrict their discharge during peak flow periods, designate that certain wastewater be discharged only into specific sewers, relocate and/or consolidate points of discharge, separate sewage waste streams from industrial waste streams, and such other conditions as may be necessary to protect the POTW and determine the IU's compliance with the requirements of this SOP.

B. Liberty Operations Manager may require any person discharging into the POTW to install and maintain, on their property and at their expense, a suitable storage and flow control facility to ensure equalization of flow. An individual wastewater discharge permit may be issued solely for flow equalization.

C. Grease, oil, and sand interceptors shall be provided when, in the opinion of Liberty Operations Manager, they are necessary for the proper handling of wastewater containing excessive amounts of grease and oil, or sand; except that such interceptors shall not be required for residential users. All interception units shall be of a type and capacity approved by Liberty Operations Manager, shall be so located to be easily accessible for cleaning and inspection. Such interceptors shall be inspected, cleaned, and repaired by the IU at their expense.

D. IUs with the potential to discharge flammable substances may be required to install and maintain an approved combustible gas detection meter.

3.3 Accidental Discharge/Slug Discharge Control Plans

Liberty Utilities Operations Manager shall evaluate whether each SIU needs an accidental discharge/slug discharge control plan or other action to control Slug Discharges. Liberty Utilities Operations Manager may require any IU to develop, submit for approval, and implement such a plan or take such other action that may be necessary to control Slug Discharges. Alternatively, Liberty Operations Manager may develop such a plan for any IU. An accidental discharge/slug discharge control plan shall address, at a minimum, the following:

A. Description of discharge practices, including non-routine batch discharge;

B. Description of stored chemicals;

C. Procedures for immediately notifying Liberty Operations Manager of any accidental or Slug Discharge, as required by Section 6.6 of this SOP; and

D. Procedures to prevent adverse impact from any accidental or Slug Discharge. Such procedures include, but are not limited to, inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site runoff, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants, including solvents, and/or measures and equipment for emergency response.

3.4 Hauled Wastewater

A. Septic tank waste may be introduced into the POTW only at locations designated by Liberty Operations Manager, and at such times as are established by Liberty Operations Manager. Such waste shall not violate Section 2 of this SOP or any other requirements established by Liberty. Liberty Operations Manager may require septic tank waste haulers to obtain individual wastewater discharge permits.

B. Liberty Operations Manager may require haulers of industrial waste to obtain individual wastewater discharge permits. Liberty Operations Manager may require generators of hauled industrial waste to obtain individual wastewater discharge permits. Liberty Operations Manager also may prohibit the disposal of hauled industrial waste. The discharge of hauled industrial waste is subject to all other requirements of this SOP.

C. Industrial waste haulers may discharge loads only at locations designated by Liberty Operations Manager. No load may be discharged without prior consent of Liberty Operations Manager. Liberty Operations Manager may collect samples of each hauled load to ensure compliance with applicable Standards. Liberty Operations Manager may require the industrial waste hauler to provide a waste analysis of any load prior to discharge.

D. Industrial waste haulers must provide a waste tracking form for every load. This form shall include, at a minimum, the name and address of the industrial waste hauler, permit number, truck identification, names and addresses of sources of waste, and volume and characteristics of waste. The form shall identify the type of industry, known or suspected waste constituents, and whether any wastes are RCRA hazardous wastes.

3.5 Brewery Waste

A. A brewery discharge qualifies as a non-categorical IU, and therefore, requires a permit for compliance. Assuming that there are no toxics in the brewery discharge, IU should comply with the Liberty Pretreatment Program Local Limits.

4. INDIVIDUAL WASTEWATER DISCHARGE PERMITS

4.1 Wastewater Analysis

When requested by Liberty Operations Manager, an IU must submit information on the nature and characteristics of its wastewater within 30 days of the request. Liberty Operations Manager is authorized to prepare a form for this purpose and may periodically require IUs to update this information.

4.2 Individual Wastewater Discharge Permit Requirement

A. No Significant IU shall discharge wastewater into the POTW without first obtaining an individual wastewater discharge permit from Liberty Operations Manager, except that a Significant IU that has filed a timely application pursuant to Section 4.3 of this SOP may continue to discharge for the time period specified therein.

B. Liberty Operations Manager may require other IUs to obtain individual wastewater discharge permits as necessary to carry out the purposes of this SOP.

C. Any violation of the terms and conditions of an individual wastewater discharge permit shall be deemed a violation of this SOP and subjects the wastewater discharge permittee to the sanctions set out in Sections 10 through 12 of this SOP. Obtaining an individual wastewater discharge permit does not relieve a permittee of its obligation to comply with all Federal and State Pretreatment Standards or Requirements or with any other requirements of Federal, State, and local law.

4.3 Individual Wastewater Discharge Permitting: Existing Connections

Any IU required to obtain an individual wastewater discharge permit who was discharging wastewater into the POTW prior to the effective date of this SOP and who wishes to continue such discharges in the future, shall, within 90 days after said date, apply to Liberty Operations Manager for an individual wastewater discharge permit in accordance with Section 4.5 of this SOP, and shall not cause or allow discharges to the POTW to continue after 30 days of the effective date of this SOP except in accordance with an individual wastewater discharge permit issued by Liberty Operations Manager.

4.4 Individual Wastewater Discharge Permitting: New Connections

Any IU required to obtain an individual wastewater discharge permit who proposes to begin or recommence discharging into the POTW must obtain such permit prior to the beginning or recommencing of such discharge. An application for this individual wastewater discharge permit, in accordance with Section 4.5 of this SOP, must be filed at least 90 days prior to the date upon which any discharge will begin or recommence.

4.5 Individual Wastewater Discharge Permit Application Contents

A. All IUs required to obtain an individual wastewater discharge permit must submit a permit application. Liberty Operations Manager may require IUs to submit all or some of the following information as part of a permit application:

a. Identifying Information
   i. The name and address of the facility, including the name of the operator and owner.
   ii. Contact information, description of activities, facilities, and plant production processes on the premises;

b. Environmental Permits. A list of any environmental control permits held by or for the facility.

c. Description of Operations
   i. A brief description of the nature, average rate of production (including each product produced by type, amount, processes, and rate of production), and standard industrial classifications of the operation(s) carried out by such IU. This description should include a schematic process diagram, which indicates points of discharge to the POTW from the regulated processes.
   ii. Types of wastes generated, and a list of all raw materials and chemicals used or stored at the facility which are, or could accidentally or intentionally be, discharged to the POTW;
   iii. Number and type of employees, hours of operation, and proposed or actual hours of operation;
   iv. Type and amount of raw materials processed (average and maximum per day);
   v. Site plans, floor plans, mechanical and plumbing plans, and details to show all sewers, floor drains, and appurtenances by size, location, and elevation, and all points of discharge;

d. Time and duration of discharges;

e. The location for monitoring all wastes covered by the permit;

f. Flow Measurement. Information showing the measured average daily and maximum daily flow, in gallons per day, to the POTW from regulated process streams and other streams, as necessary, to allow use of the combined waste stream formula set out in Section 2.2C (40 CFR 403.6(e)).

g. Measurement of Pollutants.
   i. The categorical Pretreatment Standards applicable to each regulated process and any new categorically regulated processes for Existing Sources.

ii. The results of sampling and analysis identifying the nature and concentration, and/or mass, where required by the Standard or by Liberty Operations Manager, of regulated pollutants in the discharge from each regulated process.
iii. Instantaneous, Daily Maximum, and long-term average concentrations, or mass, where required, shall be reported.
iv. The sample shall be representative of daily operations and shall be analyzed in accordance with procedures set out in Section 6.10 of this SOP. Where the Standard requires compliance with a BMP or pollution prevention alternative, the IU shall submit documentation as required by the Liberty Operations Manager or the applicable Standards to determine compliance with the Standard.
v. Sampling must be performed in accordance with procedures set out in Section 6.11 of this SOP.

h. Any other information as may be deemed necessary by Liberty Operations Manager to evaluate the permit application.

B. Incomplete or inaccurate applications will not be processed and will be returned to the IU for revision.

4.6 Application Signatories and Certification

A. All wastewater discharge permit applications, IU reports and certification statements must be signed by an Authorized Representative of the IU and contain the certification statement in Section 6.14 A. [see Section 1.4 C for definition].

B. If the designation of an Authorized Representative is no longer accurate because a different individual or position has responsibility for the overall operation of the facility or overall responsibility for environmental matters for the company, a new written authorization satisfying the requirements of this Section must be submitted to Liberty Operations Manager prior to or together with any reports to be signed by an Authorized Representative.

4.7 Individual Wastewater Discharge Permit Decisions

Liberty Operations Manager will evaluate the data furnished by the IU and may require additional information. Within 30 days of receipt of a complete permit application, Liberty Operations Manager will determine whether to issue an individual wastewater discharge permit. Liberty Operations Manager may deny any application for an individual wastewater discharge permit.

5. INDIVIDUAL WASTEWATER DISCHARGE PERMIT ISSUANCE

5.1 Individual Wastewater Discharge Permit Duration

An individual wastewater discharge permit shall be issued for a specified time period, not to exceed five (5) years from the effective date of the permit. An individual wastewater discharge permit may be issued for a period less than five (5) years, at the discretion of Liberty Operations Manager. Each individual wastewater discharge permit will indicate a specific date upon which it will expire.

5.2 Individual Wastewater Discharge Permit Contents

An individual wastewater discharge permit shall include such conditions as are deemed reasonably necessary by Liberty Operations Manager to prevent Pass Through or Interference, protect the quality of the water body receiving the treatment plant's effluent, protect worker health and safety, facilitate sludge management and disposal, and protect against damage to the POTW.

A. Individual wastewater discharge permits must contain:

a. A statement that indicates the wastewater discharge permit issuance date, expiration date and effective date;

b. A statement that the wastewater discharge permit is nontransferable without prior notification to Liberty in accordance with Section 5.5 of these SOPs, and provisions for furnishing the new owner or operator with a copy of the existing wastewater discharge permit;

c. Effluent limits, including Best Management Practices, based on applicable Pretreatment Standards;

d. Self-monitoring, sampling, reporting, notification, and record-keeping requirements. These requirements shall include an identification of pollutants (or best management practice) to be monitored, sampling location, sampling frequency, and sample type based on Federal, State, and local law.

e. A statement of applicable civil and criminal penalties for violation of Pretreatment Standards and Requirements, and any applicable compliance schedule. Such schedule may not extend the time for compliance beyond that required by applicable Federal, State, or local law.

f. Requirements to control Slug Discharge, if determined by the Liberty Operations Manager to be necessary.

B. Individual wastewater discharge permits may contain, but need not be limited to, the following conditions:

a. Limits on the average and/or maximum rate of discharge, time of discharge, and/or requirements for flow regulation and equalization;

b. Requirements for the installation of pretreatment technology, pollution control, or construction of appropriate containment devices, designed to reduce, eliminate, or prevent the introduction of pollutants into the treatment works;

c. Requirements for the development and implementation of spill control plans or other special conditions including management practices necessary to adequately prevent accidental, unanticipated, or non-routine discharges;

d. Development and implementation of waste minimization plans to reduce the amount of pollutants discharged to the POTW;

e. The unit charge or schedule of IU charges and fees for the management of the wastewater discharged to the POTW;

f. Requirements for installation and maintenance of inspection and sampling facilities and equipment, including flow measurement devices;

g. A statement that compliance with the individual wastewater discharge permit does not relieve the permittee of responsibility for compliance with all applicable Federal and State Pretreatment Standards, including those which become effective during the term of the individual wastewater discharge permit; and

h. Other conditions as deemed appropriate by Liberty Operations Manager to ensure compliance with this SOP, and State and Federal laws, rules, and regulations.

5.3 Permit Modification

A. Liberty Operations Manager may modify an individual wastewater discharge permit for good cause, including, but not limited to, the following reasons:

a. To incorporate any new or revised Federal, State, or local Pretreatment Standards or Requirements;

b. To address significant alterations or additions to the IU's operation, processes, or wastewater volume or character since the time of the individual wastewater discharge permit issuance;

c. A change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;

d. Information indicating that the permitted discharge poses a threat to Liberty POTW, Liberty personnel, or the receiving waters;

e. Violation of any terms or conditions of the individual wastewater discharge permit;

f. Misrepresentations or failure to fully disclose all relevant facts in the wastewater discharge permit application or in any required reporting;

g. Revision of or a grant of variance from categorical Pretreatment Standards pursuant to 40 CFR 403.13;

h. To correct typographical or other errors in the individual wastewater discharge permit; or

i. To reflect a transfer of the facility ownership or operation to a new owner or operator where requested in accordance with Section 5.5.

5.4 Individual Wastewater Discharge Permit Transfer

Individual wastewater discharge permits may be transferred to a new owner or operator only if the permittee gives at least 60 days advance notice to Liberty Operations Manager and Liberty Operations Manager approves the individual wastewater discharge permit transfer. The notice to Liberty Operations Manager must include a written certification by the new owner or operator which:

A. States that the new owner and/or operator has no immediate intent to change the facility's operations and processes;

B. Identifies the specific date on which the transfer is to occur; and

C. Acknowledges full responsibility for complying with the existing individual wastewater discharge permit.

Failure to provide advance notice of a transfer renders the individual wastewater discharge permit void as of the date of facility transfer.

5.5 Individual Wastewater Discharge Permit Revocation

Liberty Operations Manager may revoke an individual wastewater discharge permit for good cause, including, but not limited to, the following reasons:

A. Failure to notify Liberty Operations Manager of significant changes to the wastewater prior to the changed discharge;

B. Failure to provide prior notification to Liberty Operations Manager of changed conditions pursuant to Section 6.5 of this SOP;

C. Misrepresentation or failure to fully disclose all relevant facts in the wastewater discharge permit application;

D. Falsifying self-monitoring reports and certification statements;

E. Tampering with monitoring equipment;

F. Refusing to allow Liberty Operations Manager timely access to the facility premises and records;

G. Failure to meet effluent limitations;

H. Failure to pay fines;

I. Failure to pay sewer charges;

J. Failure to meet compliance schedules;

K. Failure to complete a wastewater survey or the wastewater discharge permit application;

L. Failure to provide advance notice of the transfer of business ownership of a permitted facility; or

M. Violation of any Pretreatment Standard or Requirement, or any terms of the wastewater discharge permit or this SOP.

Individual wastewater discharge permits shall be voidable upon cessation of operations or transfer of business ownership. All individual wastewater discharge permits issued to an IU are void upon the issuance of a new individual wastewater discharge permit to that IU.

5.6 Individual Wastewater Discharge Permit Reissuance

An IU with an expiring individual wastewater discharge permit shall apply for individual wastewater discharge permit reissuance by submitting a complete permit application, in accordance with Section 4.5 of this SOP, a minimum of 90 days prior to the expiration of the IU's existing individual wastewater discharge permit.

6. REPORTING REQUIREMENTS

6.1 Baseline Monitoring Reports

A. Within either one hundred eighty (180) days after the effective date of a categorical Pretreatment Standard, or the final administrative decision on a category determination under 40CFR 403.6(a)(4), whichever is later, existing Categorical IUs currently discharging to or scheduled to discharge to the POTW shall submit to Liberty Operations Manager a report which contains the information listed in paragraph B, below. At least ninety (90) days prior to commencement of their discharge, New Sources, and sources that become Categorical IUs subsequent to the promulgation of an applicable categorical Standard, shall submit to Liberty Operations Manager a report which contains the information listed in paragraph B, below. A New Source shall report the method of pretreatment it intends to use to meet applicable categorical Standards. A New Source also shall give estimates of its anticipated flow and quantity of pollutants to be discharged.

B. IUs described above shall submit the information set forth below.

a. All information required in Section 4.5A (1) (a), Section 4.5A (2), Section 4.5A (3) (a), and Section 4.5A (6).

b. Measurement of pollutants.
   i. The IU shall provide the information required in Section 4.5 A (7) (a) through (d)
   ii. The IU shall take a minimum of one representative sample to compile that data necessary to comply with the requirements of this paragraph.
   iii. Samples should be taken immediately downstream from pretreatment facilities if such exist or immediately downstream from the regulated process if no pretreatment exists. If other wastewaters are mixed with the regulated wastewater prior to pretreatment the IU should measure the flows and concentrations necessary to allow use of the combined waste stream formula in 40 CFR 403.6(e) to evaluate compliance with the Pretreatment Standards.
   iv. Where an alternate concentration or mass limit has been calculated in accordance with 40 CFR 403.6(e) this adjusted limit along with supporting data shall be submitted to the Control Authority;
   v. Sampling and analysis shall be performed in accordance with Section 6.10;
   vi. The Liberty Operations Manager may allow the submission of a baseline report which utilizes only historical data so long as the data provides

information sufficient to determine the need for industrial pretreatment measures;

vii. The baseline report shall indicate the time, date and place of sampling and methods of analysis, and shall certify that such sampling and analysis is representative of normal work cycles and expected pollutant Discharges to the POTW.

c. Compliance Certification. A statement, reviewed by the IU's Authorized Representative as defined in Section 1.4 C and certified by a qualified professional, indicating whether Pretreatment Standards are being met on a consistent basis, and, if not, whether additional operation and maintenance (O&M) and/or additional pretreatment is required to meet the Pretreatment Standards and Requirements.

d. Compliance Schedule. If additional pretreatment and/or O&M will be required to meet the Pretreatment Standards, the shortest schedule by which the IU will provide such additional pretreatment and/or O&M must be provided. The completion date in this schedule shall not be later than the compliance date established for the applicable Pretreatment Standard. A compliance schedule pursuant to this Section must meet the requirements set out in Section 6.2 of this SOP.

e. Signature and Report Certification. All baseline monitoring reports must be certified in accordance with Section 6.14 A of this SOP and signed by an Authorized Representative as defined in Section 1.4C.

6.2 Compliance Schedule Progress Reports

The following conditions shall apply to the compliance schedule required by Section 6.1(B)(4) of this SOP:

A. The schedule shall contain progress increments in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the IU to meet the applicable Pretreatment Standards (such events include, but are not limited to, hiring an engineer, completing preliminary and final plans, executing contracts for major components, commencing and completing construction, and beginning and conducting routine operation);

B. No increment referred to above shall exceed nine (9) months;

C. The IU shall submit a progress report to Liberty Operations Manager no later than fourteen (14) days following each date in the schedule and the final date of compliance including, as a minimum, whether or not it complied with the increment of progress, the reason for any delay, and, if appropriate, the steps being taken by the IU to return to the established schedule; and

D. In no event shall more than nine (9) months elapse between such progress reports to Liberty Operations Manager.

6.3 Reports on Compliance with Categorical Pretreatment Standard Deadline

Within ninety (90) days following the date for final compliance with applicable categorical Pretreatment Standards, or in the case of a New Source following commencement of the introduction of wastewater into the POTW, any IU subject to such Pretreatment Standards and Requirements shall submit to Liberty Operations Manager a report containing the information described in Section 4.5A(6) and (7) and 6.1(B)(2) of this SOP. For IUs subject to equivalent mass or concentration limits established in accordance with the procedures in Section 2.2, this report shall contain a reasonable measure of the IU's long-term production rate. For all other IUs subject to categorical Pretreatment Standards expressed in terms of allowable pollutant discharge per unit of production (or other measure of operation), this report shall include the IU's actual production during the appropriate sampling period. All compliance reports must be signed and certified in accordance with Section 6.14 A of this SOP. All sampling will be done in conformance with Section 6.11.

6.4 Periodic Compliance Reports

A. Except as specified in Section 6.4.C, all IUs must, at a frequency determined by Liberty Operations Manager submit no less than once per year (January 15) report indicating the nature, concentration of pollutants in the discharge which are limited by Pretreatment Standards and the measured or estimated average and maximum daily flows for the reporting period. In cases where the Pretreatment Standard requires compliance with a Best Management Practice (BMP) or pollution prevention alternative, the IU must submit documentation required by Liberty Operations Manager or the Pretreatment Standard necessary to determine the compliance status of the IU.

B. The Liberty may authorize an IU subject to a categorical Pretreatment Standard to forego sampling of a pollutant regulated by a categorical Pretreatment Standard if the IU has demonstrated through sampling and other technical factors that the pollutant is neither present nor expected to be present in the Discharge, or is present only at background levels from intake water and without any increase in the pollutant due to activities of the IU [see 40 CFR 403.12(e)(2)]. This authorization is subject to the following conditions:

    a. The waiver may be authorized where a pollutant is determined to be present solely due to sanitary wastewater discharged from the facility provided that the sanitary wastewater is not regulated by an applicable categorical Standard and otherwise includes no process wastewater.

    b. The monitoring waiver is valid only for the duration of the effective period of the individual wastewater discharge permit, but in no case longer than 5 years. The IU must submit a new request for the waiver before the waiver can be granted for each subsequent individual wastewater discharge permit. See Section 4.5A(8).

c. In making a demonstration that a pollutant is not present, the IU must provide data from at least one sampling of the facility's process wastewater prior to any treatment present at the facility that is representative of all wastewater from all processes.

d. The request for a monitoring waiver must be signed in accordance with Section 1.4C, and include the certification statement in 6.14 A (40 CFR 403.6(a)(2)(ii)).

e. Non-detectable sample results may be used only as a demonstration that a pollutant is not present if the EPA approved method from 40CFR Part 136 with the lowest minimum detection level for that pollutant was used in the analysis.

f. Any grant of the monitoring waiver by the Liberty Operations Manager must be included as a condition in the IU's permit. The reasons supporting the waiver and any information submitted by the IU in its request for the waiver must be maintained by the Liberty Operations Manager for 3 years after expiration of the waiver.

g. Upon approval of the monitoring waiver and revision of the IU's permit by the Liberty Operations Manager, the IU must certify on each report with the statement in Section 6.14 C below, that there has been no increase in the pollutant in its waste stream due to activities of the IU.

h. In the event that a waived pollutant is found to be present or is expected to be present because of changes that occur in the IU's operations, the IU must immediately: Comply with the monitoring requirements of Section 6.4 A, or other more frequent monitoring requirements imposed by the Liberty Operations Manager, and notify the Liberty Operations Manager.

i. This provision does not supersede certification processes and requirements established in categorical Pretreatment Standards, except as otherwise specified in the categorical Pretreatment Standard.

C. Reduced reporting is not available to IUs that have in the last two (2) years been in Significant Noncompliance, as defined in Section 9 of this SOP. In addition, reduced reporting is not available to an IU with daily flow rates, production levels, or pollutant levels that vary so significantly that, in the opinion of the Liberty Operations Manager, decreasing the reporting requirement for this IU would result in data that are not representative of conditions occurring during the reporting period.

D. All periodic compliance reports must be signed and certified in accordance with Section 6.14 A of this SOP.

E. All wastewater samples must be representative of the IU's discharge. Wastewater monitoring and flow measurement facilities shall be properly operated, kept clean, and maintained in good working order at all times. The failure of an IU to keep its monitoring

facility in good working order shall not be grounds for the IU to claim that sample results are unrepresentative of its discharge.

F. If an IU subject to the reporting requirement in this section monitors any regulated pollutant at the appropriate sampling location more frequently than required by Liberty Operations Manager, using the procedures prescribed in Section 6.11 of this SOP, the results of this monitoring shall be included in the report. [Note: See 40CFR 403.12(g)(6)].

6.5 Reports of Changed Conditions

Each IU must notify Liberty Operations Manager of any significant changes to the IU's operations or system which might alter the nature, quality, or volume of its wastewater at least 90 days before the change.

A. Liberty Operations Manager may require the IU to submit such information as may be deemed necessary to evaluate the changed condition, including the submission of a wastewater discharge permit application under Section 4.5 of this SOP.

B. Liberty Operations Manager may issue an individual wastewater discharge permit under Section 5.7 of this SOP or modify an existing wastewater discharge permit under Section 5.4 of this SOP in response to changed conditions or anticipated changed conditions.

6.6 Reports of Potential Problems

A. In the case of any discharge, including, but not limited to, accidental discharges, discharges of a non-routine, episodic nature, a non-customary batch discharge, a Slug Discharge or Slug Load, that might cause potential problems for the POTW, the IU shall immediately telephone and notify Liberty Operations Manager of the incident. This notification shall include the location of the discharge, type of waste, concentration and volume, if known, and corrective actions taken by the IU.

B. Within five (5) days following such discharge, the IU shall, unless waived by Liberty Operations Manager, submit a detailed written report describing the cause(s) of the discharge and the measures to be taken by the IU to prevent similar future occurrences. Such notification shall not relieve the IU of any expense, loss, damage, or other liability which might be incurred as a result of damage to the POTW, natural resources, or any other damage to person or property; nor shall such notification relieve the IU of any fines, penalties, or other liability which may be imposed pursuant to this SOP.

C. A notice shall be permanently posted on the IU's bulletin board or other prominent place advising employees who to call in the event of a discharge described in paragraph A, above. Employers shall ensure that all employees, who could cause such a discharge to occur, are advised of the emergency notification procedure.

D. Significant Industrial IUs are required to notify the Liberty Operations Manager immediately

of any changes at its facility affecting the potential for a Slug Discharge.

6.7 Reports from Unpermitted IUs

All IUs not required to obtain an individual wastewater discharge permit shall provide appropriate reports to Liberty Operations Manager as Liberty Operations Manager may require.

6.8 Notice of Violation/Repeat Sampling and Reporting

If sampling performed by an IU indicates a violation, the IU must notify Liberty Operations Manager within twenty-four (24) hours of becoming aware of the violation. The IU shall also repeat the sampling and analysis and submit the results of the repeat analysis to Liberty Operations Manager within thirty (30) days after becoming aware of the violation. Resampling by the IU is not required if Liberty performs sampling at the IU's facility at least once a month, or if Liberty performs sampling at the IU between the time when the initial sampling was conducted and the time when the IU or Liberty receives the results of this sampling, or if Liberty has performed the sampling and analysis in lieu of the IU.

6.9 Notification of the Discharge of Hazardous Waste

A. Any IU who commences the discharge of hazardous waste shall notify the POTW, the EPA Regional Waste Management Division Director, and State hazardous waste authorities, in writing, of any discharge into the POTW of a substance which, if otherwise disposed of, would be a hazardous waste under 40 CFR Part 261. Such notification must include the name of the hazardous waste as set forth in 40 CFR Part 261, the EPA hazardous waste number, and the type of discharge (continuous, batch, or other). If the IU discharges more than one hundred (100) kilograms of such waste per calendar month to the POTW, the notification also shall contain the following information to the extent such information is known and readily available to the IU: an identification of the hazardous constituents contained in the wastes, an estimation of the mass and concentration of such constituents in the waste stream discharged during that calendar month, and an estimation of the mass of constituents in the waste stream expected to be discharged during the following twelve (12) months. All notifications must take place no later than one hundred and eighty (180) days after the discharge commences. Any notification under this paragraph need be submitted only once for each hazardous waste discharged. However, notifications of changed conditions must be submitted under Section 6.5 of this SOP. The notification requirement in this Section does not apply to pollutants already reported by IUs subject to categorical Pretreatment Standards under the self-monitoring requirements of Sections 6.1, 6.3, and 6.4 of this SOP.

B. Dischargers are exempt from the requirements of paragraph A, above, during a calendar month in which they discharge no more than fifteen (15) kilograms of hazardous wastes, unless the wastes are acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e). Discharge of more than fifteen (15) kilograms of nonacute hazardous wastes in

a calendar month, or of any quantity of acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e), requires a one-time notification. Subsequent months during which the IU discharges more than such quantities of any hazardous waste do not require additional notification.

C. In the case of any new regulations under section 3001 of RCRA identifying additional characteristics of hazardous waste or listing any additional substance as a hazardous waste, the IU must notify Liberty Operations Manager, the EPA Regional Waste Management Waste Division Director, and State hazardous waste authorities of the discharge of such substance within ninety (90) days of the effective date of such regulations.

D. In the case of any notification made under this Section, the IU shall certify that it has a program in place to reduce the volume and toxicity of hazardous wastes generated to the degree it has determined to be economically practical.

E. This provision does not create a right to discharge any substance not otherwise permitted to be discharged by this SOP, a permit issued there under, or any applicable Federal or State law.

6.10 Analytical Requirements

All pollutant analyses, including sampling techniques, to be submitted as part of a wastewater discharge permit application or report shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto, unless otherwise specified in an applicable categorical Pretreatment Standard. If 40 CFR Part 136 does not contain sampling or analytical techniques for the pollutant in question, or where the EPA determines that the Part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analyses shall be performed by using validated analytical methods or any other applicable sampling and analytical procedures, including procedures suggested by the Liberty Operations Manager or other parties approved by EPA.

6.11 Sample Collection

Samples collected to satisfy reporting requirements must be based on data obtained through appropriate sampling and analysis performed during the period covered by the report, based on data that is representative of conditions occurring during the reporting period.

A. Except as indicated in Section B and C below, the IU must collect wastewater samples using 24-hour flow proportional composite sampling techniques, unless time proportional composite sampling or grab sampling is authorized by Liberty Operations Manager. Where time proportional composite sampling or grab sampling is authorized by Liberty, the samples must be representative of the discharge. Using protocols (including appropriate preservation) specified in 40CFR Part 136 and appropriate EPA guidance, multiple grab samples collected during a 24-hour period may be composited prior to the analysis as

follows: for cyanide, total phenols, and sulfides the samples may be composited in the laboratory or in the field; for volatile organics and oil and grease, the samples may be composited in the laboratory. Composite samples for other parameters unaffected by the compositing procedures as documented in approved EPA methodologies may be authorized by Liberty, as appropriate. In addition, grab samples may be required to show compliance with Local Limits.

B. Samples for oil and grease, temperature, pH, cyanide, total phenols, sulfides, and volatile organic compounds must be obtained using grab collection techniques.

C. For sampling required in support of baseline monitoring and 90 day compliance reports required in Section 6.1 and 6.3 [40 CFR 403.12(b) and (d)], a minimum of four (4) grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide and volatile organic compounds for facilities for which historical sampling data do not exist; for facilities for which historical sampling data are available, Liberty Operations Manager may authorize a lower minimum. For the reports required by paragraphs Section 6.4 (40 CFR 403.12(e) and 403.12(h)), the IU is required to collect the number of grab samples necessary to assess and assure compliance by with applicable Pretreatment Standards and Requirements.

6.12 Date of Receipt of Reports

Written reports will be deemed to have been submitted on the date postmarked or if hand delivered, date received by Liberty.

6.13 Recordkeeping

IUs subject to the reporting requirements of this SOP shall retain, and make available for inspection and copying, all records of information obtained pursuant to any monitoring activities required by this SOP, any additional records of information obtained pursuant to monitoring activities undertaken by the IU independent of such requirements, and documentation associated with Best Management Practices established under Section 2.4 C. Records shall include the date, exact place, method, and time of sampling, and the name of the person(s) taking the samples; the dates analyses were performed; who performed the analyses; the analytical techniques or methods used; and the results of such analyses. These records shall remain available for a period of at least three (3) years. This period shall be automatically extended for the duration of any litigation concerning the IU or Liberty, or where the IU has been specifically notified of a longer retention period by Liberty Operations Manager.

6.14 Certification Statements

A. Certification of Permit Applications, IU Reports and Initial Monitoring Waiver-The following certification statement is required to be signed and submitted by IUs submitting permit applications in accordance with Section 4.7; IUs submitting baseline monitoring reports under Section 6.1 B (5); IUs submitting reports on compliance with the categorical Pretreatment Standard deadlines under Section 6.3; IUs submitting periodic compliance reports required by Section 6.4 A-D, and IUs submitting an initial request to forego sampling

of a pollutant on the basis of Section 6.4B(4). The following certification statement must be signed by an Authorized Representative as defined in Section 1.3 C:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

B. Annual Certification for Non-Significant Categorical Industrial IUs-A facility determined to be a Non Significant Categorical IU by Liberty Operations Manager pursuant to 1.3 GG(3) and 4.7 C [Note: See 40 CFR 403.3(v)(2)] must annually submit the following certification statement signed in accordance with the signatory requirements in 1.3 C [Note: See 40 CFR 403.120(l)]. This certification must accompany an alternative report required by Liberty Operations Manager:

Based on my inquiry of the person or persons directly responsible for managing compliance with the categorical Pretreatment Standards under 40 CFR _____, I certify that, to the best of my knowledge and belief that during the period from _____, _____ to _____, _____ [months, days, year]:

(a) The facility described as _____ [facility name] met the definition of a Non-Significant Categorical IU as described in 1.4 GG (3); [Note: See 40 CFR 403.3(v)(2)]

(b) The facility complied with all applicable Pretreatment Standards and requirements during this reporting period; and

(c) The facility never discharged more than 100 gallons of total categorical wastewater on any given day during this reporting period.

This compliance certification is based on the following information:

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7. COMPLIANCE MONITORING

7.1 Right of Entry: Inspection and Sampling

Liberty Operations Manager shall have the right to enter the premises of any IU to determine whether the IU is complying with all requirements of this SOP and any individual wastewater discharge

permit or order issued hereunder. IUs shall allow Liberty Operations Manager ready access to all parts of the premises for the purposes of inspection, sampling, records examination and copying, and the performance of any additional duties.

A. Where an IU has security measures in force which require proper identification and clearance before entry into its premises, the IU shall make necessary arrangements with its security guards so that, upon presentation of suitable identification, Liberty Operations Manager shall be permitted to enter without delay for the purposes of performing specific responsibilities.

B. Liberty Operations Manager shall have the right to set up on the IU's property, or require installation of, such devices as are necessary to conduct sampling and/or metering of the IU's operations.

C. Liberty Operations Manager may require the IU to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the IU at its own expense. All devices used to measure wastewater flow and quality shall be calibrated [insert desired frequency] to ensure their accuracy.

D. Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the IU at the written or verbal request of Liberty Operations Manager and shall not be replaced. The costs of clearing such access shall be born by the IU.

E. Unreasonable delays in allowing Liberty Operations Manager access to the IU's premises shall be a violation of this SOP.

7.2 Search Warrants

If Liberty Operations Manager has been refused access to a building, structure, or property, or any part thereof, and is able to demonstrate probable cause to believe that there may be a violation of this SOP, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program of Liberty designed to verify compliance with this SOP or any permit or order issued hereunder, or to protect the overall public health, safety and welfare of the community, Liberty Operations Manager may seek issuance of a search warrant from the Maricopa County Court or other authorities as applicable.

8. CONFIDENTIAL INFORMATION

Information and data on a IU obtained from reports, surveys, wastewater discharge permit applications, individual wastewater discharge permits, and monitoring programs, and from the Liberty inspection and sampling activities, shall be available to the public without restriction, unless the IU specifically requests, and is able to demonstrate to the satisfaction of Liberty Operations Manager, that the release of such information would divulge information, processes, or methods of

production entitled to protection as trade secrets under applicable State law. Any such request must be asserted at the time of submission of the information or data. When requested and demonstrated by the IU furnishing a report that such information should be held confidential, the portions of a report which might disclose trade secrets or secret processes shall not be made available for inspection by the public, but shall be made available immediately upon request to governmental agencies for uses related to the NPDES program or pretreatment program, and in enforcement proceedings involving the person furnishing the report. Wastewater constituents and characteristics and other effluent data, as defined at 40 CFR 2.302 shall not be recognized as confidential information and shall be available to the public without restriction.

9. PUBLICATION OF IU'S IN SIGNIFICANT NONCOMPLIANCE

Liberty Operations Manager shall publish annually, in a newspaper of general circulation that provides meaningful public notice within the jurisdictions served by Liberty, a list of the IUs which, at any time during the previous twelve (12) months, were in Significant Noncompliance with applicable Pretreatment Standards and Requirements. The term Significant Noncompliance shall be applicable to all Significant IUs (or any other IU that violates paragraphs (C), (D) or (H) of this Section) and shall mean:

A. Chronic violations of wastewater discharge limits, defined here as those in which sixty six percent (66%) or more of all the measurements taken for the same pollutant parameter taken during a six (6) month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including Instantaneous Limits as defined in Section 2;

B. Technical Review Criteria (TRC) violations, defined here as those in which thirty three percent (33%) or more of wastewater measurements taken for each pollutant parameter during a six (6) month period equals or exceeds the product of the numeric Pretreatment Standard or Requirement including Instantaneous Limits, as defined by Section 2 multiplied by the applicable criteria (1.4 for BOD, TSS, fats, oils and grease, and 1.2 for all other pollutants except pH);

C. Any other violation of a Pretreatment Standard or Requirement as defined by Section 2 (Daily Maximum, long term average, Instantaneous Limit, or narrative standard) that Liberty Operations Manager determines has caused, alone or in combination with other discharges, Interference or Pass Through, including endangering the health of POTW personnel or the general public;

D. Any discharge of a pollutant that has caused imminent endangerment to the public or to the environment, or has resulted in Liberty Operations Manager's exercise of its emergency authority to halt or prevent such a discharge;

E. Failure to meet, within ninety (90) days of the scheduled date, a compliance schedule milestone contained in an individual wastewater discharge permit or enforcement order for starting construction, completing construction, or attaining final compliance;

F. Failure to provide within forty-five (45) days after the due date, any required reports, including baseline monitoring reports, reports on compliance with categorical Pretreatment Standard deadlines, periodic self-monitoring reports, and reports on compliance with compliance schedules;

G. Failure to accurately report noncompliance; or

H. Any other violation(s), which may include a violation of Best Management Practices, which Liberty Operations Manager determines will adversely affect the operation or implementation of the local pretreatment program.

10. ADMINISTRATIVE ENFORCEMENT REMEDIES

10.1 Notification of Violation

When Liberty Operations Manager finds that an IU has violated, or continues to violate, any provision of this SOP, an individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, Liberty Operations Manager may serve upon that IU a written Notice of Violation. Within 14 days of the receipt of such notice, an explanation of the violation and a plan for the satisfactory correction and prevention thereof, to include specific required actions, shall be submitted by the IU to Liberty Operations Manager. Submission of such a plan in no way relieves the IU of liability for any violations occurring before or after receipt of the Notice of Violation. Nothing in this Section shall limit the authority of Liberty Operations Manager to take any action, including emergency actions or any other enforcement action, without first issuing a Notice of Violation.

A. Enforcement Actions In enforcing compliance with this Industrial Pretreatment Program, Liberty may take any of the following actions relating to an IU that has violated or continues to violate any provision of the Industrial Pretreatment Program and/or SOP.

(1) Contact by inspector;

(2) Provide educational material of BMP and TCC requirements and/or prohibitions;

(3) Warning letter;

(4) Notice of Violation;

(5) Administrative Orders, which may include:

(a) Modification of wastewater discharge permits,

(b) Affirmative obligations, such as increased monitoring,

(c) Prohibited actions or obligations to cease and desist,

(d) Other appropriate orders;

(6) Administrative Fines;

(7) Emergency suspension or permanent termination of service;

(8) Hearings to show cause;

(9) Publication of significant violators and imposition of fines;

(10) Judicial enforcement action, including injunctive relief and criminal prosecution.

B. Enforcement Timeframes Enforcement Actions under this tariff shall be conducted in accordance with the following timeframes.

(1) Enforcement responses to initial Pretreatment Program Violations will be initiated within ten (10) days of discovery or at the discretion of Liberty. Whenever use of an NOV as an enforcement response is selected, immediate issuance is allowed.

(2) When appropriate, follow-up inspections will occur within ten (10) days of a due date specified in a Notice of Violation.

(3) Follow-up escalated action for repeat or reoccurring offenses will be taken within ten (10) days of discovery of the repeat or reoccurring offenses and may include additional Administrative Enforcement, including Administrative Orders and Administrative Fines, and Judicial Enforcement.

(4) In emergency situations caused by Violations, including imminent danger to the public health, safety, or welfare, and endangerment to persons or the environment, Liberty may initiate enforcement responses, including without limitation:

(a) Issuance of cease and desist orders;

(b) Service termination;

(c) Revocation or termination of any permits issued under this Industrial Pretreatment Program.

10.2 Consent Orders

Liberty Operations Manager may enter into Consent Orders, assurances of compliance, or other similar documents establishing an agreement with any IU responsible for noncompliance. Such documents shall include specific action to be taken by the IU to correct the noncompliance within a time period specified by the document. Such documents shall have the same force and effect as the administrative orders issued pursuant to Sections 10.4 and 10.5 of this SOP and shall be

judicially enforceable.

10.3 Show Cause Hearing

Liberty Operations Manager may order an IU which has violated, or continues to violate, any provision of this SOP, an individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, to appear before Liberty Operations Manager and show cause why the proposed enforcement action should not be taken. Notice shall be served on the IU specifying the time and place for the meeting, the proposed enforcement action, the reasons for such action, and a request that the IU show cause why the proposed enforcement action should not be taken. The notice of the meeting shall be served personally or by registered or certified mail (return receipt requested) at least 30 days prior to the hearing. Such notice may be served on any Authorized Representative of the IU as defined in Section 1.4 C and required by Section 4.7 A. A show cause hearing shall not be a bar against, or prerequisite for, taking any other action against the IU.

10.4 Compliance Orders

When Liberty Operations Manager finds that a IU has violated, or continues to violate, any provision of this SOP, an individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, Liberty Operations Manager may issue an order to the IU responsible for the discharge directing that the IU come into compliance within a specified time. If the IU does not come into compliance within the time provided, sewer service may be discontinued unless adequate treatment facilities, devices, or other related appurtenances are installed and properly operated. Compliance orders also may contain other requirements to address the noncompliance, including additional self-monitoring and management practices designed to minimize the amount of pollutants discharged to the sewer. A compliance order may not extend the deadline for compliance established for a Pretreatment Standard or Requirement, nor does a compliance order relieve the IU of liability for any violation, including any continuing violation. Issuance of a compliance order shall not be a bar against, or a prerequisite for, taking any other action against the IU.

10.5 Cease and Desist Orders

When Liberty finds that a User has violated, or continues to violate, any provision of this ordinance, an individual wastewater discharge permit, [or a general permit] or order issued hereunder, or any other Pretreatment Standard or Requirement, or that the User's past violations are likely to recur, Liberty may issue an order to the User directing it to cease and desist all such violations and directing the User to:

A. Immediately comply with all requirements;

Take such appropriate remedial or preventive action as may be needed to properly address a continuing or threatened violation, including halting operations and/or terminating the discharge. Issuance of a cease and desist order shall not be a bar against, or a prerequisite for, taking any other action against the User

10.6 Administrative Fines

A. When Liberty finds that a User has violated, or continues to violate, any provision of this ordinance, an individual wastewater discharge permit, [or a general permit] or order issued hereunder, or any other Pretreatment Standard or Requirement, Liberty may fine such User in an amount not to exceed [insert maximum fine allowed under State Law]. Such fines shall be assessed on a per-violation, per-day basis. In the case of monthly or other long-term average discharge limits, fines shall be assessed for each day during the period of violation.

B. Unpaid charges, fines, and penalties shall, after [_____ (____)] calendar days, be assessed an additional penalty of [_____ percent (____%)] of the unpaid balance, and interest shall accrue thereafter at a rate of [_____ percent (____%)] per month. A lien against the User's property shall be sought for unpaid charges, fines, and penalties.

C. Users desiring to dispute such fines must file a written request for [the Superintendent] to reconsider the fine along with full payment of the fine amount within [_____ (____)] days of being notified of the fine. Where a request has merit, Liberty may convene a hearing on the matter. In the event the User's appeal is successful, the payment, together with any interest accruing thereto, shall be returned to the User. Liberty may add the costs of preparing administrative enforcement actions, such as notices and orders, to the fine.

   Issuance of an administrative fine shall not be a bar against, or a prerequisite for, taking any other action against the IU.

10.7 Emergency Suspensions

Liberty Operations Manager may immediately suspend a IU's discharge, after informal notice to the IU, whenever such suspension is necessary to stop an actual or threatened discharge, which reasonably appears to present, or cause an imminent or substantial endangerment to the health or welfare of persons. Liberty Operations Manager may also immediately suspend an IU's discharge, after notice and opportunity to respond, that threatens to interfere with the operation of the POTW, or which presents, or may present, an endangerment to the environment.

A. Any IU notified of a suspension of its discharge shall immediately stop or eliminate its contribution. In the event of an IU's failure to immediately comply voluntarily with the suspension order, Liberty Operations Manager may take such steps as deemed necessary, including immediate severance of the sewer connection, to prevent or minimize damage to the POTW, its receiving stream, or endangerment to any individuals. Liberty Operations Manager may allow the IU to recommence its discharge when the IU has demonstrated to the satisfaction of Liberty Operations Manager that the period of endangerment has passed, unless the termination proceedings in Section 10.8 of this SOP are initiated against the IU.

B. A IU that is responsible, in whole or in part, for any discharge presenting imminent endangerment shall submit a detailed written statement, describing the causes of the harmful contribution and the measures taken to prevent any future occurrence, to Liberty Operations Manager prior to the date of any show cause or termination hearing under Sections 10.3 or 10.8 of this SOP.

Nothing in this Section shall be interpreted as requiring a hearing prior to any Emergency Suspension under this Section.

10.8 Termination of Discharge

In addition to the provisions in Section 5.6 of this SOP, any IU who violates the following conditions is subject to discharge termination:

A. Violation of individual wastewater discharge permit conditions;

B. Failure to accurately report the wastewater constituents and characteristics of its discharge;

C. Failure to report significant changes in operations or wastewater volume, constituents, and characteristics prior to discharge;

D. Refusal of reasonable access to the IU's premises for the purpose of inspection, monitoring, or sampling; or

E. Violation of the Pretreatment Standards in Section 2 of this SOP.

Such IU will be notified of the proposed termination of its discharge and be offered an opportunity to show cause under Section 10.3 of this SOP why the proposed action should not be taken. Exercise of this option by Liberty Operations Manager shall not be a bar to, or a prerequisite for, taking any other action against the IU.

11. JUDICIAL ENFORCEMENT REMEDIES

11.1 Injunctive Relief

When Liberty Operations Manager finds that a IU has violated, or continues to violate, any provision of this SOP, an individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, Liberty Operations Manager may petition the Maricopa County through Attorney for the issuance of a temporary or permanent injunction, as appropriate, which restrains or compels the specific performance of the individual wastewater discharge permit, order, or other requirement imposed by this SOP on activities of the IU. Liberty Operations Manager may also seek such other action as is appropriate for legal and/or equitable relief, including a requirement for the IU to conduct environmental remediation. A petition for

injunctive relief shall not be a bar against, or a prerequisite for, taking any other action against an IU.

11.2 Civil Penalties

A. An IU who has violated, or continues to violate, any provision of this SOP, an individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement shall be liable to Liberty for a maximum civil penalty of $250 per violation, per day. In the case of a monthly or other long-term average discharge limit, penalties shall accrue for each day during the period of the violation.

B. Liberty Operations Manager may recover reasonable attorneys' fees, court costs, and other expenses associated with enforcement activities, including sampling and monitoring expenses, and the cost of any actual damages incurred by Liberty.

C. In determining the amount of civil liability, the Court shall take into account all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the magnitude and duration of the violation, any economic benefit gained through the IU's violation, corrective actions by the IU, the compliance history of the IU, and any other factor as justice requires.

D. Filing a suit for civil penalties shall not be a bar against, or a prerequisite for, taking any other action against an IU.

11.3 Criminal Prosecution

A. An IU who willfully or negligently violates any provision of this SOP, an individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement shall be punishable by a fine of not more than $250 per violation, per day and subject to misdemeanor violations, as applicable by law.

B. An IU who willfully or negligently introduces any substance into the POTW which causes personal injury or property damage shall, $250 per violation, per day and subject to misdemeanor violations, as applicable by law. This penalty shall be in addition to any other cause of action for personal injury or property damage available under State law.

C. A IU who knowingly makes any false statements, representations, or certifications in any application, record, report, plan, or other documentation filed, or required to be maintained, pursuant to this SOP, individual wastewater discharge permit, or order issued hereunder, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under this SOP shall, upon conviction, be punished by a fine of not more than $250 fine per day.

D. In the event of a second conviction, an IU shall be punished by a fine of not more than $500 fine per day.

11.4 Remedies Nonexclusive

The remedies provided for in this SOP are not exclusive. Liberty Operations Manager may take any, all, or any combination of these actions against a noncompliant IU. Enforcement of pretreatment violations will generally be in accordance with [the Liberty's] enforcement response plan. However, Liberty Operations Manager may take other action against any IU when the circumstances warrant. Further, Liberty Operations Manager is empowered to take more than one enforcement action against any noncompliant IU.

12. SUPPLEMENTAL ENFORCEMENT ACTION

12.1 Penalties for Late Reports

A penalty of $100 shall be assessed to any IU for each day that a report required by this SOP, a permit or order issued hereunder is late, beginning five days after the date the report is due [higher penalties may also be assessed where reports are more than 30-45 days late]. Actions taken by Liberty Operations Manager to collect late reporting penalties shall not limit Liberty Operations Manager authority to initiate other enforcement actions that may include penalties for late reporting violations.

12.2 Performance Bonds {Optional}

Liberty Operations Manager may decline to issue or reissue an individual wastewater discharge permit to any IU who has failed to comply with any provision of this SOP, a previous individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, unless such IU first files a satisfactory bond, payable to Liberty, in a sum not to exceed a value determined by Liberty Operations Manager to be necessary to achieve consistent compliance.

12.3 Liability Insurance {Optional}

Liberty Operations Manager may decline to issue or reissue an individual wastewater discharge to any IU who has failed to comply with any provision of this SOP, a previous individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, unless the IU first submits proof that it has obtained financial assurances sufficient to restore or repair damage to the POTW caused by its discharge.

12.4 Payment of Outstanding Fees and Penalties {Optional}

Liberty Operations Manager may decline to issue or reissue an individual wastewater discharge permit to any IU who has failed to pay any outstanding fees, fines or penalties incurred as a result of any provision of this SOP, a previous individual wastewater discharge permit, or order issued hereunder.

12.5 Contractor Listing {Optional}

IUs which have not achieved compliance with applicable Pretreatment Standards and Requirements are not eligible to receive a contractual award for the sale of goods or services to Liberty. Existing contracts for the sale of goods or services to Liberty held by an IU found to be in Significant Noncompliance with Pretreatment Standards or Requirements may be terminated at the discretion of Liberty Operations Manager.

13. AFFIRMATIVE DEFENSES TO DISCHARGE VIOLATIONS

13.1 Upset

A. For the purposes of this Section, upset means an exceptional incident in which there is unintentional and temporary noncompliance with categorical Pretreatment Standards because of factors beyond the reasonable control of the IU. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

B. An upset shall constitute an affirmative defense to an action brought for noncompliance with categorical Pretreatment Standards if the requirements of paragraph C, below, are met.

C. A IU who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. An upset occurred and the IU can identify the cause(s) of the upset;

   b. The facility was at the time being operated in a prudent and workman like manner and in compliance with applicable operation and maintenance procedures; and

   c. The IU has submitted the following information to Liberty Operations Manager within twenty-four (24) hours of becoming aware of the upset [if this information is provided orally, a written submission must be provided within five (5) days].

      i. A description of the indirect discharge and cause of noncompliance;
      ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and

      iii. Steps being taken and/or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

D. In any enforcement proceeding, the IU seeking to establish the occurrence of an upset shall have the burden of proof.

E. IUs shall have the opportunity for a judicial determination on any claim of upset only in an

enforcement action brought for noncompliance with categorical Pretreatment Standards.

F. IUs shall control production of all discharges to the extent necessary to maintain compliance with categorical Pretreatment Standards upon reduction, loss, or failure of its treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

13.2 Prohibited Discharge Standards

A. IU shall have an affirmative defense to an enforcement action brought against it for noncompliance with the general prohibitions in Section 2.1(A) of this SOP or the specific prohibitions applicable of this SOP if it can prove that it did not know, or have reason to know, that its discharge, alone or in conjunction with discharges from other sources, would cause Pass Through or Interference and that either:

B. A Local Limit exists for each pollutant discharged and the IU was in compliance with each limit directly prior to, and during, the Pass Through or Interference; or

C. No Local Limit exists, but the discharge did not change substantially in nature or constituents from the IU's prior discharge when Liberty was regularly in compliance with its APP and in the case of Interference, was in compliance with applicable sludge use or disposal requirements.

13.3 Bypass

A. For the purposes of this Section,

   a. Bypass means the intentional diversion of waste streams from any portion of an IU's treatment facility.

   b. Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

B. An IU may allow any bypass to occur which does not cause Pretreatment Standards or Requirements to be violated, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of paragraphs (C) and (D) of this Section.

C. Bypass Notifications

   a. If an IU knows in advance of the need for a bypass, it shall submit prior notice to Liberty

Operations Manager, at least ten (10) days before the date of the bypass, if possible.

b. An IU shall submit oral notice to Liberty Operations Manager of an unanticipated bypass that exceeds applicable Pretreatment Standards within twenty-four (24) hours from the time it becomes aware of the bypass. A written submission shall also be provided within five (5) days of the time the IU becomes aware of the bypass. The written submission shall contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times, and, if the bypass has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass. Liberty Operations Manager may waive the written report on a case by case basis if the oral report has been received within twenty-four (24) hours.

D. Bypass

a. Bypass is prohibited, and Liberty Operations Manager may take an enforcement action against an IU for a bypass, unless:

i. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
ii. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
iii. The IU submitted notices as required under paragraph C of this section.

b. Liberty Operations Manager may approve an anticipated bypass, after considering its adverse effects, if Liberty Operations Manager determines that it will meet the three conditions listed in paragraph (D)(1) of this Section.

Company: Liberty Utilities (Entrada Del Oro Sewer) Corp. Decision No.: _____

Phone: _____ Effective Date: _____

PRE-TREATMENT TARIFF

PURPOSE

The purpose of this tariff is to enable Liberty Utilities (Entrada Del Oro Sewer) Corporation ("Liberty" or "Company") to set forth certain waste limitations and pretreatment standards that apply based on the class of commercial/industrial customer served by the Liberty's wastewater collection system. Customer classes include dental offices, dry cleaners, food service establishments, photo imaging operations, RV Parks and pretreatment for industrial wastes. This tariff will govern the type and quality of waste discharged into the Company's wastewater collection system and treated at its wastewater treatment facilities.

This tariff incorporates pretreatment standards which meet applicable Federal and State standards. In addition, the Liberty has a Code of Practice guideline attached to this tariff.

REQUIREMENTS

The requirements to be in compliance with the rules of the Arizona Corporation Commission ("Commission"), specifically A.A.C. R14-2-603, 605, 607, and 609, the above pretreatment standards and guidelines that govern this tariff are as follows:

1. Any customer disposing of industrial waste considered as hazardous under this tariff shall notify Company in writing of any discharge into the Company's collection system. The specific information for the reporting and time-frame requirement to be submitted to Liberty is 180 days per 40 CFR §403.12 (p)

2. The Company may require monitoring equipment facilities, at the customer's expense, to allow inspection, sampling, and flow measurement of any discharges as necessary to determine compliance with this tariff.

3. Subject to the provisions of A.A.C. R14-2-603, 607 and 609, the Company may terminate service or may deny service to a customer who fails to meet the pretreatment standards or to permit the inspecting and sampling of any discharge as required by this tariff.

4. Liberty may suspend wastewater treatment service, in accordance with A.A.C. R14-2-609.B (without notice), when such suspension is necessary, in the opinion of the Company, in order to stop an actual or threatened discharge which presents or may present an imminent or substantial endangerment to the health or welfare of persons, to the environment, or causes the Company to violate any condition of its aquifer protection permit.

Company: Liberty Utilities (Entrada Del Oro Sewer) Corp. Decision No.: _____

Phone: _____ Effective Date: _____

5. Liberty shall give any new customer who is required to meet the pretreatment standards written notice of said requirement and shall be given a complete copy of this tariff and all attachments.

6. Any existing customer found to be in violation of this tariff shall be given written notice of such violation and a complete copy of this tariff with all attachments. If A.A.C. R14-2-609.B.1. is **not** applicable the customer shall be given thirty (30) days from the time such written notice is received to comply with this notice. If the customer can show good cause as to why the pretreatment standards cannot be met within thirty (30) days, the Company may allow, at its sole discretion the customer an additional thirty (30) days to have the pretreatment standards met.

7. Consistent with the provisions of A.C.C. R14-2-607.B.1 and 2, each customer shall be responsible for maintaining and safeguarding all Liberty property installed on the customer's premises for the purpose of supplying utility service to that customer.

Attachment – Liberty's Code of Practice Guideline

Websites:

Arizona Administrative Code (A.A.C.) Title 18, Article 9

www.azsos.gov/public_services/table_of_contents.htm

Code of Federal Register:

www.epa.gov/lawsregs/search/40cfr.html

RATIONAL AND JUSTIFICATION FOR LOCAL LIMITS

CONVENTIONAL CONTAMINANTS

These limits are consistent with influent loading design parameters for the facility and with other similar sewerage systems in the area. They represent the maximum limits that can be accepted at the headworks and the values are similar to maximum values found in domestic wastewater.

TRACE INORGANIC CONTAMINANTS

These limits were developed to maintain compliance with the AZPDES permit limits at Liberty Utilities (Entrada Del Oro Sewer) Corp. In considering the waste load allocation for industries, background concentrations in domestic wastewater and the target permit limits at the water reclamation facility were considered. The maximum allowable concentrations that can be allocated to industries were identified while considering the dilution factors that occur in the sewerage system with background wastewater flows.

LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP.

City Use Only
___Permit Not Required
___SIU
___Zero Discharger
___High Strength
___Pollution Prevention
___Other
This Permit is for:
___ New Permit
___ Existing Permit

Industrial Wastewater Discharge Permit Application

In accordance with Title 40 of the Code of Federal Regulations Part 403 Section 403.14 and Liberty Code Liberty-CP-01, information and data provided in this permit application which identifies the nature and frequency of discharge shall be available to the public without restriction. Requests for confidential treatment of other information shall be governed by procedures specified in Liberty 's Code Liberty-CP-01 and 40 CFR Part 2.

The completed application and all attachments should be mailed within 30 days of receipt to: 14920 W Camelback Rd., Litchfield Park, AZ, 85340
623-536-4480

Section A - General Information			
Business Name			
Facility Address		Mailing Address (*if different from previous*)	
A map of the facility is attached to this application		☐ Yes ☐ No	
Signing Official Name		Primary Contact Name	
Title		Title	
Telephone No.		Telephone No.	
Facsimile No.		Facsimile No.	
		E-mail Address	

Section B – Water Usage			
Is water used in manufacturing process (Y/N)?			
Describe processes that consume water?			
Water Supply	Public	Private Well	Others
Is water supply metered (Y/N)?			
Describe treatment process to treat facility incoming water.			
Describe water consumption in the facility	Non contact cooling water (gallons per day)		
	Boiler feed (gallons per day)		
	Manufacturing processes (gallons per day)		
	Personnel sanitary use (gallons per day)		
	Contained in product (gallons per day)		
	Landscaping/Other (gallons per day)		
	Total (gallons per day)		
Provide a water balance diagram for the facility.			

Section C – Discharged Wastewater

Type of discharges and volumes	Discharge to (volume in gallons /day)	Batch	Continuous
	City sanitary sewer		
	City storm water		
	Natural outlet		
	Waste hauler		
	Total		

Does the facility have flow metering of its discharges (Y/N)? If yes, describe the type of equipment and its locations.	
If applicable, describe future plans for facility expansion that may impact facility discharge(s) characteristics and/or volumes.	
Describe the location of discharge connection to the City's sewer.	

Provide discharge information for each manufacturing process.	Process	Average flow (gallons/day)	Maximum flow (gallons/day)	Batch or Continuous

Provide a schematic of all wastewater discharges for the entire manufacturing train(s) and for each manufacturing process. Show sampling locations. Show locations for all treatment devices such as interceptors, grease/oil/sand traps, ion exchange, filtration, neutralization systems, and any other treatment systems. Show connection to the sanitary sewer on a facility schematic. Indicate floor drains and chemical storage areas on site schematic. Are there any chemical spill/containment devices/storage? If yes, show on facility site schematic. Based on the provided information, additional information may be requested.

Provide information on storm sewers and well located inside the facility. If yes, provide location of these on facility site plan schematic.		
	Storm sewers (Y/N)	
	Private wells (Y/N)	
	Dry wells (Y/N)	
	Abandoned wells (Y/N)	

Section D – Wastewater Pretreatment

Describe all wastewater streams which are treated before their discharge.	

From the following list, provide pretreatment methods employed at the facility. For each discharge stream, list the discharge streams and their locations and provide a schematic of the installed pretreatment process(es).

Grease or oil separation:

- ☐ Grease trap
- ☐ Grease interceptor (in-ground)
- ☐ Dissolved air flotation
- ☐ Oil/water separator (specify type: _____)
- ☐ Sand filter
- ☐ Other (specify: _____)

Metals treatment:

- ☐ Chemical precipitation
- ☐ Filtration (specify type: _____)
- ☐ Ion exchange
- ☐ Silver Recovery Unit (specify type: _____)
- ☐ Other (specify: _____)

Organics treatment:

- ☐ Activated carbon
- ☐ Solvent separation (specify type: _____)
- ☐ Other (specify: _____)

Solids separation:

- ☐ Centrifuge/cyclone
- ☐ Filtration (specify type: _____)
- ☐ Grit removal (specify type: _____)
- ☐ Screens (specify type: _____)
- ☐ Sedimentation/settling tank
- ☐ Sump
- ☐ Other (specify: _____)

Other:

- ☐ Flow equalization
- ☐ Neutralization, pH correction
- ☐ Ozonation
- ☐ Water/wastewater reclamation (attach description)
- ☐ Biological treatment (specify type: _____)
- ☐ Other chemical treatment (specify type: _____)
- ☐ Other physical treatment (specify type: _____)
- ☐ Other (specify: _____)

Is any form of pretreatment planned for the facility within the next three (3) years? ☐ Yes ☐ No

Please furnish a process flow diagram for each existing or planned pretreatment system. Include process equipment, by-products, by-product disposal method, concentrations, waste and by-product volumes, and design and operating conditions.

Section E - Discharge(s) Characteristics

For each of the priority pollutants listed below, provide the information.

Item No.	Chemical Compound	Amount of chemical stored onsite (pounds or gallons)	Amount of total chemical discharged (pounds or gallons/day	Amount of chemical discharged to sanitary sewer (pounds or gallons/day)	Amount of chemical sent to waste hauler (pounds or gallons/day)	Amount of chemicals sent to other(s), describe (pounds or gallons/day)
1.	asbestos (fibrous)					
2.	cyanide (total)					
3.	antimony (total)					
4.	arsenic (total)					
5.	beryllium (total)					
6.	cadmium (total)					
7.	chromium (total)					
8.	copper (total)					
9.	lead (total)					
10.	mercury (total)					
11.	nickel (total)					
12.	selenium (total)					
13.	silver (total)					
14.	thallium (total)					
15.	zinc (total)					
16.	acenaphthene					
17.	acenaphthylene					
18.	acrolein					
19.	acrylonitrile					
20.	aldrin					
21.	anthracene					
22.	benzene					
23.	benzidine					
24.	benzo (a) anthracene					
25.	benzo (a) pyrene					
26.	3,4-benzofluoranthene					
27.	benzo (g, h, i) perylene					
28.	benzo (k) fluoranthene					
29.	α-BHC (alpha)					
30.	β-BHC (beta)					
31.	δ-BHC (delta)					
32.	γ-BHC (gamma)					

33.	bis (2-chloroethyl) ether					
34.	bis (2-chloroethoxyl) methane					
35.	bis (2-chloroisopropyl) ether					
36.	bis (2-ethylhexyl) phthalate					
37.	bromodichloromethane					
38.	bromoform					
39.	bromomethane					
40.	4-bromophenyl phenyl ether					
41.	butyl benzyl phthalate					
42.	carbon tetrachloride					
43.	chlordane					
44.	4-chloro-3-methylphenol					
45.	chlorobenzene					
46.	chloroethane					
47.	2-chloroethyl vinyl ether					
48.	chloroform					
49.	chloromethane					
50.	2-chloronaphthalene					
51.	2-chlorophenol					
52.	4-chlorophenyl phenyl ether					
53.	chrysene					
54.	4,4’-DDD					
55.	4,4’-DDE					
56.	4,4’-DDT					
57.	dibenzo (a, h) anthracene					
58.	dibromochloromethane					
59.	1,2-dichlorobenzene					
60.	1,3-dichlorobenzene					
61.	1,4-dichlorobenzene					
62.	3,3’-dichlorobenzidene					
63.	1,1-dichloroethane					

64.	1,2-dichloroethane					
65.	1,1-dichloroethene					
66.	1,2-trans-dichloroethylene					
67.	2,4-dichlorophenol					
68.	1,2-dichloropropane					
69.	(cis & trans) 1,3-dichloropropene					
70.	dieldrin					
71.	diethyl phthalate					
72.	2,4-dimethylphenol					
73.	dimethyl phthalate					
74.	di-n-butyl phthalate					
75.	di-n-octyl phthalate					
76.	4,6-dinitro-o-cresol					
77.	2,4-dinitrophenol					
78.	2,4-dinitrotoluene					
79.	2,6-dinitrotoluene					
80.	1,2-diphenylhydrazine					
81.	α-endosulfan (alpha)					
82.	β-endosulfan (beta)					
83.	endosulfan sulfate					
84.	endrin					
85.	endrin aldehyde					
86.	ethylbenzene					
87.	fluoroanthene					
88.	fluorene					
89.	heptachlor					
90.	heptachlor epoxide					
91.	hexachlorobenzene					
92.	hexachlorobutadiene					
93.	hexachlorocyclopentadiene					
94.	hexachloroethane					
95.	indeno (1,2,3-cd) pyrene					
96.	isophorone					
97.	methylene chloride					
98.	naphthalene					
99.	nitrobenzene					
100.	2-nitrophenol					
101.	4-nitrophenol					
102.	N-nitrosodimethylamine					

103.	N-nitrosodi-n-propylamine					
104.	N-nitrosodiphenylamine					
105.	PCB-1016					
106.	PCB-1221					
107.	PCB-1232					
108.	PCB-1242					
109.	PCB-1248					
110.	PCB-1254					
111.	PCB-1260					
112.	pentachlorophenol					
113.	phenathrene					
114.	phenol					
115.	pyrene					
116.	2,3,7,8-tetrachlorodibenzo-p-dioxin					
117.	1,1,2,2-tetrachloroethane					
118.	tetrachloroethylene					
119.	toluene					
120.	toxaphene					
121.	1,2,4-trichlorobenzene					
122.	1,1,1-trichloroethane					
123.	1,1,2-trichloroethane					
124.	trichloroethylene					
125.	2,4,6-trichlorophenol					
126.	vinyl chloride					

Is the sampling data representative of facility's discharges to sanitary sewer (Y/N)? If no, describe why.

Parameter	Average Concentration (mg/L)	Maximum Concentration (mg/L)
BOD_5 COD Total Suspended solids TKN (Nitrogen) Oil & Grease Total Phosphorus		

List pH and temperature for each discharge location.

Discharge Location	pH			Temperature		
	Minimum	Average	Maximum	Minimum	Average	Maximum

Information on discharge(s) not disposed of into sanitary sewer.

Wastes	Estimated quantity/year (pounds or gallons)	Disposal method (i.e., landfill, recycle, sale, evaporation, incineration, etc.)

Waste solvent		
Oil & Grease		
Process wastes		
Pretreatment sludges		
Inks/dyes		
Thinner		
Paints		
Acids and Alkalis		
Left over or extra product		
Pesticides		
Others (specify)		

Provide information for an outside firm (name, address, permit number, etc.) if this firm removes any of the above listed wastes.

1.	2.	3.

Do any of your substances require an EPA Hazardous Waste Generator permit (Y/N)?	
If "Yes," please provide your ID number and type of permit (large quantity generator, small quantity generator, or conditionally exempt small quantity generator).	

Section F -Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature and Title of Industry Signing Official (Seal if applicable) Date

ARTICLE 5
PRETREATMENT/INDUSTRIAL WASTE CONTROL

5.1 General.

5.1.1 Authority:

This Article 5 is adopted by Liberty Utilities (Entrada Del Oro Sewer) Corp (Liberty) in accordance with the authority conferred in the Clean Water Act, and any regulations implementing the Clean Water Act, including, but not limited to, 40 CFR 403.8, applicable Arizona Revised Statute, including but not limited to 49 A.R.S. 2, applicable Arizona Administrative Code, including but not limited to 18 A.A.C. 9 and 18. A.A.C. 11, and with all the powers thereof which are specifically granted to Liberty, or are necessary or incidental to or implied from power specifically granted therein for carrying out the objectives and purposes of Liberty and this Article 5. The provisions in this Article 5 shall be called the Pretreatment/Industrial Waste Control Program of Liberty.

5.1.2 Compliance:

The Pretreatment/Industrial Waste Control Program of Liberty is designed to enable Liberty to comply with all conditions of its Arizona Pollutant Discharge Elimination System (AZPDES) Permit, Federal Pretreatment Regulations, Arizona Pretreatment Regulations, and any applicable sludge disposal regulations, and to meet the following objectives:

(a) To prevent the introduction of pollutants into Liberty Facilities which will interfere with the operation of the Wastewater Systems or contaminate the sludge.

(b) To prevent the introduction of pollutants into the Wastewater System which will pass through the Wastewater System, inadequately treated, into the receiving waters or the atmosphere.

(c) To prevent the introduction of pollutants into the Wastewater System which might constitute a hazard to humans or to animals.

(d) To assure Liberty ability to recycle and reclaim Wastewater and sludge.

(e) To protect human health and welfare, the environment, property and Liberty Wastewater System.

PART A
RULES AND REGULATIONS FOR INDUSTRIAL/PRETREATMENT USERS

5.2 Applicability.

(a) A User is any non-domestic discharger who contributes, causes, or permits the contribution of wastewater into Liberty wastewater collection and Water Reclamation Facility.

(b) Any User, the sewage from which directly or indirectly enters the Wastewater System of Liberty from an area within or without the boundaries (through a Service Provider) of Liberty, shall be subject to the requirements of this Part and shall be bound by these Rules and Regulations as they now exist or may hereafter be amended. Such Rules and Regulations may be enforced against any User.

5.3 General Discharge Prohibitions.

No User shall contribute or cause to be contributed, directly or indirectly, any pollutant or wastewater which will interfere with the operation or performance of Liberty Wastewater System. These general prohibitions apply to all such Users of Liberty Wastewater System whether or not the User is subject to national categorical pretreatment standards or any other national, State, Liberty, or local pretreatment standards or requirements: A User may not discharge any of the sewage, water, substances, materials, or wastes listed in Articles 5.4, 5.27, 5.28, 4.29 of these Rules and Regulations.

5.4 Specific Discharge Limitations – Users.

5.4.1 Liberty Limitations:

No User shall discharge into Liberty Wastewater System or into any connected sewer system at any time or over any period of time, Wastewater containing any of the following materials and substances in excess of the limitations provided herein. These limitations may also be imposed directly on process wastewaters prior to dilution by domestic and other Wastewaters discharged by the User:

ORGANIC CONTAMINANTS (µg/L)

Benzene	35
Chloroform	2,000
4,4’ - DOE	Not allowed
4,4’ – DDT	Not allowed
Aldrin	Not allowed
BHC-Alpha	Not allowed
BHC-Gamma (Lindane)	Not allowed
Heptachlor	Not allowed
Heptachlor Epoxide	Not allowed
Polychlorinated byphenyl compounds (PCBs)	Not allowed

PARAMETER	Daily Average Effluent Limitation (mg/L)
Arsenic (As)	0.13
Cadmium (Cd)	0.047
Copper (Cu)	1.5
Cyanide (CN)	2.0
Lead (Pb)	0.41
Mercury (Hg)	0.0023
Selenium (Se)	0.10
Silver (Ag)	1.2
Zinc	3.5

*Notwithstanding these numeric limitations, the discharge of dry-cleaning process wastes, including new and used tetrachloroethene (perchloroethylene), still bottom oil, and

separator water, is prohibited entirely. Where necessary Liberty may require that these wastes be physically prevented from discharging into Liberty Wastewater System.

5.4.2 General Requirements Regarding Deleterious Wastes.

None of the following described sewage, water, substances, materials or waste shall be discharged into Liberty Wastewater System; and each governing body of each Service Provider shall prohibit and shall prevent any discharges from any outlet into its sewer system, if such discharges cause or significantly contribute to a violation of any of the requirements contained herein:

(a) Sewage of such a nature and delivered at such a rate as to impair the hydraulic capacity of Liberty Wastewater System, normal and reasonable wear and usage excepted.

(b) Sewage of such a quantity, quality, or other nature as to impair the strength or the durability of the sewer structures, equipment or treatment works, either by chemical or by mechanical action.

(c) Sewage having a flash point lower than 187°F, as determined by the test methods specified in 40 CFR §261.21.

(d) Any radioactive substance, the discharge of which, does not comply with Article 4, Appendix B of the AAC, Title 12, Chapter 1.

(e) Any garbage other than that received directly into the Service Provider's sewer system from domestic and commercial garbage grinders in dwellings, restaurants, hotels, stores, and institutions, by which such garbage has been shredded to such a degree that all particles will be carried freely under flow conditions normally prevailing in public sewers with no particle greater than one-half (1/2) inch in any dimension.

(f) Any night soil or septic tank pumpage, except by permit in writing from Liberty at such points and under such conditions as Liberty may stipulate in each permit.

(g) Sludge or other material from sewage or industrial waste treatment plants or from water treatment plants, except such sludge or other material, the discharge of which to Liberty Wastewater System shall be governed by the provisions of these Rules and Regulations or any Connector Agreement or as otherwise authorized by Liberty.

(h) Water which has been used for cooling or heat transfer purposes without recirculation, discharged from any system of condensation, air conditioning, refrigeration, or similar use.

(i) Water accumulated in excavations or accumulated as the result of grading, water taken from the ground by well points, or any other drainage associated with construction.

(j) Any water or wastes containing grease or oil and other substances that will solidify or become discernibly viscous at temperatures between 32°F and 150°F except by permit in writing from Liberty at such points and under such conditions as Liberty may stipulate in

each permit.

(k) Any wastes that contain a corrosive, noxious, or malodorous material or substance which, either singly or by reaction with other wastes, is capable of causing damage to Liberty's Wastewater System or to any part thereof, of creating a public nuisance or hazard, or of preventing entry into the sewers for maintenance and repair.

(l) Any wastes that contain concentrated dye wastes or other wastes that are either highly colored or could become highly colored by reacting with any other wastes, except by permission of Liberty. Any wastes which are unusual in composition; i.e., contain an extremely large amount of suspended solids or BOD; are high in dissolved solids such as sodium chloride, calcium chloride, or sodium sulfate; contain substances conducive to creating tastes or odors in drinking water supplies; otherwise make such waters unpalatable even after conventional water purification treatment; or are in any other way extremely unusual unless Liberty determines that such wastes may be admitted to Liberty Wastewater System or shall be modified or treated before being so admitted.

(m) Any substance which may cause Liberty's effluent or any other product of Liberty such as residues, sludges or scums, to be unsuitable for reclamation and reuse or to interfere with the reclamation process. In no case, shall a substance discharged to the Wastewater System cause Liberty to be in non-compliance with sludge use or disposal criteria, guidelines or regulations developed under Article 405 of the Clean Water Act; any criteria, guidelines, or regulations affecting sludge use or disposal developed pursuant to the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substances Control Act, or State criteria applicable to the sludge management method being used.

(n) Any substance which may cause Liberty to violate its Arizona Pollutant Discharge Elimination System (AZPDES) Permit or the receiving water quality standards.

(o) Except for existing combined sewer facilities, any stormwater, directly or indirectly, from surface drains, ditches, or streams, storm or combined sewers, roof, areaway, sumps and sump pumps, or foundation drains, or from any other means, including subsurface drainage or groundwater.

(p) 5.4.3 Prohibited Discharges.

None of the following described sewage, water, substances, materials, or wastes shall be discharged into Liberty's Wastewater System or into the sewer system of a Service

Provider, by any User and each governing body of each Service Provider shall prohibit

and shall prevent such discharges by any User, either directly or indirectly, into its sewer system:

(a) Any liquids, solids or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with other substances to cause fire or explosion or be injurious in any other way to Liberty's Wastewater System, the sewer system of a Service Provider or any of its connectors, or to the operation of Liberty. At no time shall any reading on an explosion hazard meter, at the point of discharge into Liberty's Wastewater System or the sewer system of a Service Provider or any of its Customers (or at any point in the Wastewater Systems), or at any monitoring location designated by Liberty in a wastewater contribution permit, be more than ten percent (10%) of the Lower Explosive Limit (LEL) of the meter. Prohibited materials include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides, and sulfides.

(b) Any solid or viscous material which could cause an obstruction to flow in the sewers or in any way could interfere with the treatment process, including as examples of such materials but without limiting the generality of the foregoing, significant proportions of ashes, wax, paraffin, cinders, sand, mud, straw, shavings, metal, glass, rags, lint, feathers, tars, plastics, wood and sawdust, paunch manure, hair and fleshings, entrails, lime slurries, beer and distillery slops, grain processing wastes, grinding compounds, acetylene generation sludge, chemical residues, acid residues, food processing bulk solids, snow, ice, and all other solid objects, material, refuse, and debris not normally contained in sanitary sewage.

(c) Any Wastewater having a pH less than 5.5 and more than 10.5 for discharges from Industrial Users into Liberty's Wastewater System or the sewer system of a Service Provider or that of any of its Customers, or less than 5.5 or greater than 10.5 for other discharges into Liberty Wastewater System, or wastewater having any other corrosive property capable of causing damage or hazard to any part of Liberty Wastewater System or the sewer system of a Service Provider or any of its Customers, or to personnel.

(d) Any wastewater having a temperature which will inhibit biological activity at Liberty treatment plant, but in no case wastewater containing heat in such amounts that the temperature at the introduction into Liberty, Wastewater Treatment Works exceeds 40°C (104°F).

(e) Any pollutants, including oxygen demanding pollutants (BOD, etc.) released at a flow rate and/or pollutant concentration which cause Upset. In no case shall a slug load have a flow rate or contain concentrations or qualities of pollutants that exceed for any time period

longer than fifteen (15) minutes more than five (5) times the average twenty-four (24) hour concentration, quantities, or flow during normal operation.

(f) Any water or wastes containing a toxic substance in sufficient quantity, either singly or by interaction with other substances, to injure or interfere with any sewage treatment process, to constitute a hazard to humans or to animals, or to create any hazard or toxic effect in the waters which receive the treated or untreated sewage.

(g) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin, each in amounts that will cause interference or Upset.

(h) Pollutants which result in the presence of toxic gases, vapors, or fumes within the system in a quantity that may cause acute worker health and safety problems.

(i) Any trucked or hauled pollutants except at discharge points designated by Liberty.

(j) Any water or wastes containing pollutant quantities or concentrations exceeding the limitations in Article 5 of these Rules and Regulations, or the limitations in any applicable Categorical Standards.

(k) Any wastewater discharges to Liberty's Wastewater System, except at locations approved by Liberty.

5.4.4 National Categorical Pretreatment Standards:

Once promulgated, Categorical Standards for a particular industrial subcategory, if more stringent, shall supersede all conflicting discharge limitations contained in this Article 5, Part B, as they apply to that industrial subcategory.

5.4.5 State Requirements:

State requirements and limitations on discharges shall apply in any case where they are more stringent than federal requirements and limitations or those contained elsewhere in this Article 5, Part B.

5.4.6 Dilution Prohibited:

Except where permitted by Categorical Standards, no User may increase the use of process water or, in any way, attempt to dilute a discharge as a partial or complete substitute for adequate treatment to attain compliance with the limitations contained in National Categorical Pretreatment Standards or any other specific discharge limitations contained in this Article 5. Liberty may set or require a Service Provider to set mass limitations or alternate concentration-based limitations for those Users which are using improper dilution to meet these limitations.

5.5 Insignificant Discharges.

Notwithstanding the prohibitions and limitations contained in Article 5.3 of these Rules

and Regulations, Liberty may allow a proposed discharge to the system if Liberty determines that the quantity and quality of the discharge, both alone and in conjunction with similar discharges which might be affected by this determination, will have no material effect on Liberty's operations, including the quality of its effluent or sludges. Approval of Liberty must be received in writing before the discharge may commence, and the discharge must adhere to any terms and conditions of Liberty's approval.

Approval of such a discharge is entirely at the discretion of Liberty and shall not constitute approval of any additional or similar discharges. Disapproval of a proposed discharge by Liberty shall not be subject to the appeal and hearing procedure set forth in these Rules and Regulations.

5.6 Accidental Or Unusual Discharges.

An accidental or unusual discharge is a discharge which may disrupt Wastewater System treatment processes or operations, damage Wastewater System facilities, cause an AZPDES Permit violation at Liberty's treatment plant or degrade sludge quality excessively, or which differs significantly in quantity or quality from discharges under normal operations.

5.6.1 Accidental Discharge Protection:

Each User shall provide protection from accidental or unusual discharges of prohibited materials or other substances regulated by these Rules and Regulations. Infrastructure necessary to prevent accidental discharge of prohibited materials shall be provided and maintained at the Customer or User's own cost and expense.

5.6.2 Notification Requirements:

(a) Telephone Notification: In the case of any accidental or unusual discharge, it is the responsibility of the User to immediately telephone and notify Liberty and the Service Provider providing sewage services of the incident. The notification shall include the location of discharge, type of waste, concentration and volume, and corrective actions

(b) Written Notice: Within five (5) days following an accidental or unusual discharge, the User shall submit to Liberty a detailed written report describing the cause of the discharge and the measures to be taken by the User to prevent similar future occurrences. Such notification shall not relieve the User of any expense, loss, damage, or other liability which may be incurred as a result of damage to Liberty Wastewater system, fish kills, or any other damage to person or property; nor shall such notification relieve the User of any fines, civil penalties, or other liability which may be imposed by these Rules and Regulations or other applicable law.

Notice to Employees. A notice shall be permanently posted on the User's bulletin board or other prominent place advising employees whom to call in the event of an accidental discharge. Employers shall ensure that all employees who may cause or suffer such an accidental discharge to occur are advised of the emergency notification procedure.

5.6.3 Slug Discharge Plan Requirements:

At least every two (2) years, or as required by 40 CFR §403.8(f)(2)(v), Liberty shall evaluate whether each Significant Industrial User needs a plan to control slug discharges. If a slug discharge plan is needed, it shall be submitted to Liberty for review and approval as directed by Liberty, and shall contain, at a minimum, the following elements:

(a) A description of discharge practices, including non-routine batch discharges.
(b) A description of stored chemicals.
(c) Procedures for immediately notifying Liberty and the Service Provider providing sewage services of slug discharges, including any discharge that would violate any prohibition or limitation under Articles 5.17 or 5.18 of these Rules and Regulations, with procedures for follow-up written notification within five (5) days.
(d) If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant-site runoff, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment for emergency response.

5.7 Hazardous Waste Discharge Notification.

Industrial Users shall notify Liberty, the EPA Regional Waste Management Division Director, and the state hazardous waste authorities in writing of any discharge into Liberty Wastewater System of any substance which, if otherwise disposed of, would be considered a hazardous waste under 40 CFR Part 261. This notification requirement does not apply to pollutants already being reported under the reporting requirements contained in these Rules and Regulations. The specific information required to be reported and the time frames in which it is to be reported are found at 40 CFR §403.12(p).

5.8 Wastewater Contribution Permits.

5.8.1 Applicability:

All Significant Industrial Users and other users as required by Liberty, contributing to or proposing to connect to or to contribute to Liberty's Wastewater System, shall obtain a Wastewater Contribution Permit. Such permit shall either be issued by Liberty or co-

issued by the Service Provider providing sewage services and Liberty or in a form acceptable to Liberty.

Requirements pertaining to permits co-issued with municipalities or issued solely by Liberty are contained in Liberty's Rules and Regulations. Permits co-issued with Service Providers may also contain requirements contained in the various municipal codes, ordinances, resolutions, and rules and regulations.

5.8.2 Permit Application:

Users required to obtain a Wastewater Contribution Permit shall complete and file with Liberty an application accompanied by a fee as determined pursuant to Article 5.12 of these Rules and Regulations.

Applications Are Due: For new dischargers, at least 90 days prior to beginning discharge to Liberty's Wastewater System.

For existing dischargers who become subject to a newly promulgated Categorical Standard, at least 90 days prior to the effective date of such standard.

For existing dischargers who, because of process changes or additions, will become subject to an existing Categorical Standard, at least 90 days prior to beginning discharge from the categorical process.

For existing dischargers subject to Categorical Standards as of the effective date of this regulation, who have not previously obtained a Wastewater Contribution Permit, within 30 days of the effective date of this regulation.

For all other dischargers, in a time frame as specified in notice from Liberty.

In support of the application, the User shall submit, in units and terms appropriate for evaluation, the following information:

(a) Name, mailing address, and facility location.
(b) SIC number(s) according to the Standard Industrial Classification (SIC) Manual, Office of Management and Budget, 1987, as amended or the 1997 North American Industrial Classification System (NAICS), as amended.
(c) Time and duration of wastewater discharges.
(d) Average daily and thirty (30) minute peak wastewater flow rates, including daily, monthly, and seasonal variations, if any.
(e) Site plan, floor plans, mechanical and plumbing plans, and details to show all sewers, sewer connections, and appurtenances by the size, location, and elevation.
(f) Description of activities, facilities, and plant processes on the premises including all materials which are or could be discharged.

(g) Wastewater constituents and characteristics including, but not limited to, those limited by Article 5 of these Rules and Regulations, as determined by a reliable analytical laboratory. Sampling and analysis shall be performed in accordance with procedures established by the EPA pursuant to Article 304(g) of the act and contained in 40 CFR, Part 136, as amended.

(h) A statement regarding whether or not the discharge standards and pollutant limitations contained in Article 5 of these Rules and Regulations, including any applicable State or national pretreatment standards, are being met on a consistent basis and if not, whether additional O&M and/or additional pretreatment is required for the User to meet the applicable standards.

(i) If additional pretreatment and/or O&M will be required to meet the discharge standards and pollutant limitations, the shortest schedule by which the User will provide such additional treatment. For state or national pretreatment standards, the completion date in this schedule shall not be later than the compliance date established for the applicable pretreatment standard.

The schedule shall contain increments of progress in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the User to meet the applicable discharge standards and pollutant limitations (e.g., Hiring an engineer, completing preliminary plans, completing final plans, executing contract for major components, commencing construction, completing construction, etc.). In no case shall an increment of progress exceed nine (9) months.

(a) Each product produced by type, amount, process or processes, and rate of production.

(b) The type and amount of raw materials processed (average and maximum per day).

(c) The number and type of employees, and hours of operation of the plant, and proposed or actual hours of operation of the Pretreatment System.

(d) Any other information as may be deemed by Liberty to be necessary to evaluate the permit application.

5.8.3 Permit Issuance:

Liberty shall issue a Wastewater Contribution Permit to the applicant if Liberty finds that all of the following conditions are met:

(a) The proposed discharge of the applicant is in compliance with the prohibitions and limitations of Articles 5.17 and 5.18 of these Rules and Regulations;

(b) The proposed discharge of the applicant would permit the normal and efficient operation of the wastewater treatment system; and

(c) The proposed discharge of the applicant would not result in a violation by Liberty of the terms and conditions of its AZPDES Permit.

If Liberty finds that the condition set out in Paragraph 1 of this Subsection is not met, Liberty may issue a Wastewater Contribution Permit to the applicant if the conditions set out in Paragraphs 2 and 3 of this Subsection are met and if the applicant submits, and Liberty approves, a schedule setting out the measures to be taken by the applicant and the dates that such measures will be implemented to ensure compliance with the provisions of these Rules and Regulations.

5.8.4 Permit Denial;

Appeal and Hearing. In the event an application for a Wastewater Contribution Permit is denied, Liberty shall notify the applicant in writing of such denial. Such notification shall state the grounds for denial with that degree of specificity which will inform the applicant of the measures or actions which must be taken by the applicant prior to issuance of a permit.

An applicant denied a Wastewater Contribution Permit may request that Liberty Operations Manager review the denial and issue a permit. If Liberty Operations Manager reaffirms the denial, the applicant may appeal this decision pursuant to the terms and conditions of Liberty appeal and hearing procedure as set forth in these Rules and Regulations.

5.8.5 Permit Conditions:

Wastewater Contribution Permits shall be expressly subject to all provisions of these Rules and Regulations. Permits will contain, at a minimum, the following:

(a) A statement of duration (in no case more than five (5) years).
(b) A statement of non-transferability without, at a minimum, prior notification to Liberty and provision of a copy of the existing permit to the new Customer or operator.
(c) Effluent limits based on applicable Pretreatment Standards, Categorical Pretreatment Standards, specific discharge limitations, as cited in these Rules and Regulations, site-specific discharge limitations, and other federal, state and local law and regulations.
(d) Self-monitoring, sampling, reporting, notification, and record keeping requirements, including an identification of the pollutants to be monitored, sampling locations, sampling frequencies, and sample types. These requirements shall be based on applicable general pretreatment standards and requirements at 40 CFR §403; categorical pretreatment standards; specific discharge limitations; State and local law and regulations; and Liberty determinations as to the type, quantity, quality, and frequency of information needed to adequately determine compliance with conditions of the permit.

(e) A statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements, and any applicable compliance schedules. Such schedules may not extend compliance dates beyond federal deadlines.

(f) Permits may also contain the following:

1. A Schedule of User Charges and Fees pursuant to Article 5.12 of these Rules and Regulations.
2. Limits on average and maximum rate and time of discharge or requirements for flow regulation and equalization.
3. Requirements for installation and maintenance of inspection and sampling facilities.
4. Requirements for notification to Liberty of any new introduction of wastewater constituents or any substantial change in operations or in the volume or character of the wastewater constituents being introduced into Liberty's Wastewater System.
5. Requirements for notification of slug discharges.
6. Other conditions as deemed appropriate by Liberty to ensure compliance with these Rules and Regulations.

5.8.6 Permit Modifications:

(a) The terms and conditions of a Wastewater Contribution Permit may be modified by Liberty during the term of the permit as limitations or requirements as identified in these Rules and Regulations are modified or other just cause exists. The User shall be informed of any proposed changes in his permit at least thirty (30) days prior to the effective date of change. Any changes or new conditions in the permit shall include a reasonable time schedule for compliance.

(b) Within nine (9) months of the promulgation of a national categorical pretreatment standard, the Wastewater Contribution Permit of Users subject to such standard shall be revised to require compliance with such standard within the time frame prescribed by such standard.

5.8.7 Permit Duration;

Reapplication: Permits shall be issued for a specified time period, not to exceed five (5) years. The User shall apply for permit reissuance a minimum of ninety (90) days prior to the expiration of the User's existing Permit.

5.9 Reporting Requirements for Significant Industrial Users.

5.9.1 Initial Compliance Report for Users Subject To National Categorical Pretreatment Standards:

Within ninety (90) days following the date for final compliance with applicable Pretreatment Standards or, in the case of a new source, following commencement of the introduction of wastewater into Liberty's Wastewater System, or as specified in the wastewater discharge permit, any User subject to Pretreatment Standards and requirements shall submit to Liberty a report indicating the nature and concentration of all pollutants in the discharge from the regulated processes which are limited by the Pretreatment Standards and requirements and the average and maximum daily flow for those process units in the User's facility which are limited by such Pretreatment Standards or requirements.

Where applicable Pretreatment Standards contain limitations on the mass of pollutants discharged per unit of production, the report shall also contain the pollutant mass and production information necessary to determine compliance with such Pretreatment Standards.

The report shall state whether the applicable Pretreatment Standards and Requirements are being met on a consistent basis and, if not, what additional O&M and/or pretreatment is necessary to bring the User into compliance with the applicable Pretreatment Standards or Requirements. This statement shall be signed by an authorized representative of the Industrial User and certified to by a qualified professional.

5.9.2 Periodic Compliance Reports:

(a) Any User subject to a National Categorical Pretreatment Standard, after the compliance date of such Pretreatment Standard, or, in the case of a new source, after commencement of the discharge into Liberty's Wastewater System, shall submit to Liberty during the months of July and January, unless required more frequently in the pretreatment standard or by Liberty, a report covering the preceding six (6) months and indicating the nature and concentration of pollutants in the effluent which are limited by such pretreatment standards. In addition, this report shall include a record of average and maximum daily flows for the reporting period for all regulated processes.

(b) Where applicable Pretreatment Standards contain limitations on the mass of pollutants discharged per unit of production, the report shall also contain the pollutant mass and production information necessary to determine compliance with such pretreatment standards. At the discretion of Liberty and in consideration of such factors as local high or low flow rates, holidays, and budget cycles, Liberty may agree to alter the months during which the above reports are to be submitted.

(c) Significant Industrial Users not subject to National Categorical Pretreatment Standards shall submit to Liberty at least once every six (6) months (on dates specified by Liberty), unless required more frequently by Liberty, a description of the nature, pollutant concentrations, flows, and, where requested, pollutant masses, of the discharges required to be reported by Liberty.

(d) All reports submitted pursuant to this section shall be based on analyses performed in accordance with procedures established by the EPA Administrator pursuant to Article 304(g) of the act and contained in 40 CFR, Part 136 and amendments thereto or with any other test procedures approved by the EPA Administrator. Sampling shall be performed in accordance with the techniques approved by the administrator.

5.10 Monitoring Liberty Facilities.

Liberty may require to be provided and operated at the User's own expense, monitoring facilities to allow inspection, sampling, and flow measurement of any discharges as necessary to determine compliance with the provisions of these Rules and Regulations.

There shall be ample room in or near such sampling manhole or facility to allow accurate sampling and preparation of samples for analysis. The facility, sampling, and measuring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the User.

The sampling and monitoring facilities shall be provided in accordance with Liberty requirements and all applicable local construction standards and specifications. Construction shall be completed within such a time frame as Liberty shall specify by written notification.

5.11 Information Submittal, Inspection and Sampling.

Liberty may require any User to submit information as necessary to determine compliance with the requirements of these Rules and Regulations.

Liberty may inspect the facilities of any User to ascertain whether the requirements of these Rules and Regulations are being complied with. Persons or occupants of premises where wastewater is created or discharged shall allow Liberty or its representatives ready access at all reasonable times to all parts of the premises for the purposes of inspection, sampling, records examination and copying, or in the performance of any of their duties.

Liberty, Maricopa County, the Arizona Department of Environmental Quality, and EPA shall have the right to set up on the User's property such devices as are necessary to conduct sampling, inspection, compliance monitoring and/or metering operations. Where a User has security measures in force which would require proper identification and clearance before entry into the User's premises, the User shall make necessary arrangements with security guards so that upon presentation of suitable identification, personnel from Liberty, the Arizona Department of Environmental Quality, and EPA will be permitted to enter, without delay, for the purposes of performing their specific responsibilities.

All records relating to compliance with pretreatment standards and requirements shall be made available to officials of Liberty, the Arizona Department of Environmental Quality, and EPA upon request.

5.12 Wastewater Treatment.

Users shall provide wastewater treatment as required to comply with the requirements of these Rules and Regulations and shall achieve compliance with all national categorical pretreatment standards within the time limitations as specified by the federal pretreatment regulations. Any facilities required to pretreat wastewater to a level acceptable to Liberty shall be provided, operated, and maintained at the User's expense.

5.13 Confidential Information.

Information and data on a User obtained from reports, questionnaires, permit applications, permits, monitoring programs, and inspections shall be available to the public or other governmental agency without restriction unless the User specifically designates and is able to demonstrate to the satisfaction of Liberty that the release of such information would divulge sales or marketing data, processes, or methods of

production entitled to protection as “Confidential Business Information” of the User. Wastewater constituents and characteristics will not be recognized as confidential information. It shall be the User’s obligation to stamp each page, which has been demonstrated to Liberty satisfaction to contain trade secrets, with the words “Confidential Business Information,” “Confidential Information,” or
“Confidential.” A failure by the User to designate and identify any document in this manner may result in the document losing its protection from disclosure as confidential business information.

Confidential business information shall not be made available for inspection by the public but shall be made available upon request to governmental entities or agencies for uses related to these Rules and Regulations, Arizona Discharge Pollutant Discharge Elimination System (AZPDES) Permit and/or the pretreatment program in accordance with 40 CFR Part 2 and Title 18, Article 9 of the AAC. Confidential business information shall not be transmitted to any governmental agency or entity for other uses by Liberty except upon written request and after a ten (10) day notification and right to object is given to the User. Such notification shall not be required in certain circumstances provided for in 40 CFR Part 2. If after a request for public inspection, a person or entity challenges the determination of any record to protection as confidential business information, the User shall cooperate, to the fullest extent possible and at User’s own expense, with Liberty in the defense of the determination. At the request of Liberty, the user shall, at the User’s expense, provide a defense to such challenge.

5.14 Remedies for Noncompliance; Enforcement.

5.14.1 Notice of Violation:

Whenever Liberty determines that any User has violated or is violating any provision of these Rules and Regulations or a Wastewater Contribution Permit issued or approved hereunder, Liberty may serve upon such User a written notice stating the nature of the violation(s). Where directed to do so by the notice, a plan for the satisfactory correction of the violation(s) shall be submitted to Liberty by the User, within a time frame as specified in the notice.

5.14.2 Administrative Orders:

Whenever Liberty determines that any User has violated or is violating any provision of these Rules and Regulations, or any directives, orders, or permits issued or approved hereunder, Liberty may serve upon such User a written order stating the nature of the violations(s), and requiring that the User correct the violation(s) within a specified period of time; perform such tasks as Liberty determines are necessary for the User to correct the violations; or perform such tasks and submit such information as is necessary for Liberty to evaluate the extent of noncompliance or to determine appropriate enforcement actions to be taken.

5.14.3 Compliance Orders / Compliance Schedules:

Whenever Liberty determines that any User has violated or is violating any provision of these Rules and Regulations, or any directives, orders or permits issued or approved hereunder, Liberty may serve upon the User a written order requiring that the User submit, within a time frame as specified in the notification, a plan (compliance schedule) for the satisfactory correction of such violation(s).

The compliance schedule must represent the shortest schedule by which the User will provide additional treatment or perform such other tasks as will enable the User to consistently comply with applicable requirements. The schedule shall contain increments of progress in the form of dates for the commencement and completion of major events leading to compliance (e.g., Hiring an engineer, completing preliminary plans for pretreatment systems, completing final plans, executing contracts for major components, commencing construction, completing construction). In no case shall an increment of progress exceed nine (9) months.

Upon approval by Liberty, the compliance schedule will be issued to the User as an administrative order which contains the approved schedule milestones and any applicable reporting requirements. Issuance of a compliance schedule by Liberty does not release the User of liability for any violations.

Not later than fourteen (14) days following each date in the schedule and the final date for compliance, the User shall submit a progress report to Liberty including, at a minimum, information on whether or not the User complied with the increment of progress to be met on such date and, if not, the date on which it expects to comply with this increment of progress, the reason(s) for delay, and the steps being taken by the User to return to the schedule established.

5.14.4 Suspension of Service:

Liberty may suspend the wastewater treatment service and/or a Wastewater Contribution Permit when such suspension is necessary, in the opinion of Liberty, in order to stop an actual or threatened discharge which presents or may present an imminent or substantial endangerment to the health or welfare of persons, to the environment, causes pass through or interference or causes Liberty to violate any condition of its AZPDES permit.

Any User notified of a suspension of the wastewater treatment service and/or the Wastewater Contribution Permit shall immediately stop or eliminate the discharge. In the event of a failure of the User to comply voluntarily with the suspension order, Liberty shall take such steps as deemed necessary, including immediate severance of the sewer connection, to prevent or minimize damage to Liberty’s Wastewater System or endangerment to any individuals or the environment. Liberty shall reinstate the Wastewater Contribution Permit and/or the wastewater treatment service upon proof of the elimination of the non-complying discharge. A detailed written statement submitted by the User describing the causes of the harmful contribution and the measures taken to prevent any future occurrence shall be submitted to Liberty within fifteen (15) days of

the date of occurrence.

5.14.5 Permit Revocation:

Any User who has violated or is violating any provision of these Rules and Regulations, or any orders or permits issued or approved hereunder, is subject to having his permit revoked. Grounds for permit revocation include, but are not limited to:

(a) Failure of a User to factually report the wastewater constituents and characteristics of his discharge.
(b) Failure of the User to report significant changes in operations, or wastewater constituents and characteristics.
(c) Refusal of reasonable access to the User's premises for the purpose of inspection or monitoring.
(d) Violation of conditions of the permit.

5.14.6 Penalties:

Any User who is found to have violated any provision of these Rules and Regulations, or any orders or permits issued or approved hereunder, shall be subject to a penalty not to exceed, except as noted below, twenty-five thousand dollars ($25,000) per violation. Each day on which a violation occurs or continues shall be deemed a separate and distinct violation. In the case of violations of monthly or other long-term average discharge limitations, penalties may be assessed for each day in the period covered by the violations.

In addition to the penalties provided herein, Liberty may recover reasonable attorney's fees, court costs, court reporter's fees, and other expenses of litigation by appropriate suit at law against the User found to have violated these Rules and Regulations, or the order or permits issued hereunder. Such penalties shall be in addition to any actual damages Liberty may incur because of such violations.

Where a violation is found to have caused Interference or Upset, the maximum penalty of $25,000 per violation per day as described above may be increased as necessary to allow Liberty to recover any fines or penalties paid by Liberty for AZPDES Permit violations due to the Interference or Upset.

5.14.7 Legal Action:

If any person discharges sewage, industrial wastes or other wastes into Liberty's wastewater disposal system contrary to the provisions of these Rules and Regulations, or any orders or permits issued hereunder, Liberty's attorney may commence an action for appropriate legal and/or equitable relief in the Superior Court of Maricopa County.

5.14.8 Appeal Procedure:

Any User who is aggrieved by any enforcement action taken by Liberty pursuant to this Article 5.12 may within thirty (30) days of the receipt of notice of the determination, order, or finding being appealed request in writing that Liberty review the enforcement action. The request (Letter of Appeal) shall state all points of disagreement and objection to the determination, order, or finding. If Liberty reaffirms the action, the User may appeal this decision to the ACC.

(a) Hearing Request, Deadlines, Procedure and Related Matters **[Reserved].**

5.15 Charges and Fees.

Charges and fees to be assessed against Users will be determined by Liberty and, where instituted, will be set at a level to allow Liberty to recover its costs for administering elements of the Pretreatment/Industrial Waste Control Program. Program elements for which charges and fees may be assessed include, but are not limited to, permit applications; monitoring, inspection, and surveillance activities; and general program administration.

PART B

RULES AND REGULATIONS FOR SERVICE PROVIDER USE
OF LIBERTY WASTEWATER SYSTEM

5.16 Applicability.

Any Service Provider, the sewage from which directly or indirectly enters the Wastewater System of Liberty from areas within or without the boundaries or Service Area of Liberty, shall be subject to the requirements of this Part and shall be bound by these Rules and Regulations as they now exist or may hereafter be amended.

All Service Providers are required to design and administer Pretreatment Industrial Waste Control Programs which are in accordance with this Article 5, and which will enable Liberty to comply with all pretreatment and effluent limitation conditions of its Aquifer Protection Permit (APP) or National Pollutant Discharge Elimination System (AZPDES) Permit, Federal Pretreatment Regulations, and applicable sludge disposal regulations.

5.17 Compliance with Requirements.

Each Service Provider will cause all sewage at any time discharged directly or indirectly into its sewer system, or into Liberty Wastewater System by it or on its behalf, to comply with any requirements of Liberty. In all cases where the application or the enforcement of said requirements involve technical or scientific analyses or determinations, Liberty shall have final authority as to methods, standards, criteria, significance, evaluation, and interpretation of such analyses and determinations. Each Service Provider will permit no new connections and will discontinue existing public connections and will require the discontinuance of existing private connections to its sewer system which allow entrance therein of such sewage as will cause the discharge at any time into its sewer system, or into Liberty Wastewater System from such sewer system of sewage that does not comply with said requirements of Liberty.

Liberty may from time to time make a determination of the respects in which sewage discharged or to be discharged into the sewer system of a Service Provider, or into Liberty Wastewater System by any Service Provider, is not in compliance with said requirements and with the amendments thereof, if any, then in effect. A copy of said determination shall be mailed to the Service Provider at its usual place of business and for all purposes of these Rules and Regulations shall be conclusively deemed to have been made in accordance with this section and to be correct at the expiration of thirty (30) days after such mailing unless within said period of thirty (30) days the Service Provider shall have filed with Liberty an objection thereto stating that such determination is incorrect and stating the changes therein which should be made in order to correct such determination.

5.17.1 Penalties:

Any Service Provider who is found to have violated any provision of this Article 5 shall be subject to a penalty not to exceed, except as noted below, five thousand dollars ($5,000) for such violation. Each day on which a violation occurs or continues shall be deemed a separate and distinct violation. Such penalty shall be in addition to any actual damages Liberty may incur because of such violation.

In addition to the penalties provided here, Liberty may recover reasonable attorney's fees, court costs, court reporter's fees, and other expenses of litigation by appropriate suit at law against the Service Provider found to have violated these Rules and Regulations.

Where a violation is found to have caused Interference or Upset, the maximum penalty of $5,000 per violation described above may be increased as necessary to allow Liberty to recover any fines or penalties paid by Liberty for AZPDES permit violations due to the Interference or Upset.

5.18 Legal Authority Requirements.

5.18.1 Ordinance/Resolution:

Except as provided in Subsection 5.4.3, each Service Provider will enact and enforce an ordinance or resolution which conforms to 40 CFR §403.8(f)(1) Pretreatment Program Requirements, as from time to time amended, for legal authority and containing all other legal provisions mandated by these Rules and Regulations. Any proposed amendments to such ordinance or resolution, or any proposed actions which would serve to amend such ordinance or resolution with respect to any pretreatment program requirements, must be submitted to Liberty for review, and must be approved in writing by Liberty, prior to such enactment.

Each Service Provider shall adopt and enforce in its ordinance or resolution provisions which are in conformance to the following provisions:

(a) A provision requiring any Industrial User responsible for a significant accidental or unusual discharge to notify immediately both the Service Provider and Liberty.
(b) A provision precluding, except where authorized by Categorical Standards, the use of dilution to attain conformance to Pretreatment/Industrial Waste Control Standards and authorizing the Service Provider to set mass limitations for any Industrial User using improper dilution.
(c) A provision forbidding and where possible penalizing the knowing transmittal of false information by an Industrial User to the Service Provider or Liberty.

(d) A provision requiring the installation of all necessary monitoring and pretreatment facilities by Industrial Users. This provision shall also authorize the Service Provider to impose compliance schedules on Industrial Users for the installation of such facilities.

(e) A provision applying civil or criminal penalties or, where permitted by 40 CFR §403.8(f)(1), assessing liquidated damages against Industrial Users which violate Pretreatment/Industrial Waste Control Standards and Requirements. Where possible, such penalties and liquidated damages shall be set at a level determined by Liberty to provide a reasonable degree of deterrence to violations.

(f) A provision adopting discharge limitations for Users at least as stringent as the corresponding limitations in Article 5, Part B of these Rules and Regulations.

(g) A provision requiring that Industrial Users agree to act and allow Liberty to act as provided under the provisions of this Article 5.

(h) A provision requiring that any User discharging any toxic Pollutants which cause an increase in the cost of managing the effluent or the sludge of Liberty's Wastewater System shall pay for such increased costs.

5.18.2 Attorney's Statement:

Except as provided in Subsection 5.4.3, each Service Provider must submit to Liberty an Attorney's Statement which conforms to the requirements of 40 CFR §403.9(b)(1), and which certifies that the Service Provider has adequate authority to carry out its responsibilities under Liberty's Pretreatment/Industrial Waste Control Program including the provisions of these Rules and Regulations.

5.18.3 Legal Authority Exemption:

Any Service Provider that does not serve any commercial or Industrial Users may submit a letter to Liberty in lieu of enacting the ordinance or resolution, and submitting the Attorney's Statement, as required by these Rules and Regulations. The letter must state that the Service Provider has no commercial or Industrial Users and must identify any nonresidential Users served. Furthermore, any Service Provider submitting such a letter shall (1) notify Liberty at least fourteen (14) days in advance of the date that any commercial or Industrial User is granted a sewer connection and (2) fully comply with Liberty's Pretreatment/Industrial Waste Control Program, including the requirements of these Rules and Regulations, and the Federal Pretreatment Regulations prior to allowing that User to connect to the Service Provider's sewer system. Liberty, at its own discretion, may require any Service Provider to fully comply with these Rules and Regulations, regardless of whether or not the aforementioned letter has been submitted and/or previously accepted by Liberty.

5.19 Program Procedure Requirements.

5.19.1 General:

Each Service Provider must formulate, fund, and implement procedures which will enable Liberty compliance with the "Procedures" and "Funding" requirements contained in 40 CFR §403.8(f)(2) and (3) of the Federal Pretreatment Regulations, and which will enable Service Provider compliance with the requirements of these Rules and Regulations.

5.19.2 Procedures Manual:

Liberty shall issue to all Service Providers a manual on Procedures for Implementing the Pretreatment/Industrial Waste Control Program of Liberty (Procedures Manual). The Procedures Manual shall set forth Liberty requirements on formulating, funding, and implementing Pretreatment/Industrial Waste Control Program procedures, and shall provide guidance to Service Providers on implementing the procedural requirements.

Where necessary to maintain continued compliance with applicable federal and state regulations, or these Rules and Regulations, or to facilitate the operation of the Pretreatment/Industrial Waste Control Program, Liberty may from time to time amend the Procedures Manual, and shall provide notice of such amendments to all Service Providers.

The following subsections highlight the procedural requirements that will be more fully presented in the Procedures Manual to be adopted by Liberty.

5.19.3 Industrial Waste Survey:

Each Service Provider shall formulate and implement procedures for conducting ongoing, comprehensive industrial waste surveys to locate and identify all Significant Industrial Users discharging to the Service Provider's sewer system.

5.19.4 Notification to Industrial Users:

Each Service Provider is responsible for notifying its Industrial Users of their obligations under the Pretreatment/Industrial Waste Control Program.

5.19.5 Permitting of Significant Industrial Users:

Each Service Provider shall control, through permits, industrial waste discharges from each Significant Industrial User within its service area.

Liberty shall make the final determination as to whether a particular Industrial User is a Significant Industrial User. To this end, Liberty may require that a Service Provider collect and forward to Liberty all information necessary to make this determination.

In the event that a Service Provider fails to issue a suitable permit to a Significant Industrial User upon notification to do so by Liberty, Liberty shall deny service to the Significant Industrial User, and may impose conditions upon the Service Provider to take such steps as are necessary to provide such service.

5.19.6 Monitoring of Industrial Users:

Each Service Provider must sample, monitor, and inspect its Significant Industrial Users, and where appropriate, require industrial self-monitoring, at a frequency adequate to determine if such Users are in compliance with applicable Pretreatment/Industrial Waste Control Program Standards and Requirements.

5.19.7 Slug Discharge Determinations:

Each Service Provider must evaluate, at least every two (2) years, whether each Significant Industrial User needs a plan to control slug discharges. If needed, the Slug Control Plan must contain the minimum elements listed at 40 CFR §403.8(f)(2)(v).

5.19.8 Compliance Activities:

Each Service Provider is required to implement procedures for identifying violators of Pretreatment/Industrial Waste Control Program Standards and Requirements, and to diligently enforce such Standards and Requirements and provide suitable remedies for non-compliance.

5.19.9 Industrial User Reporting/Confidentiality:

Each Service Provider is required to receive and analyze self-monitoring reports and any other notices submitted by Industrial Users pursuant to the requirements of the Pretreatment/ Industrial Waste Control Program. Where an Industrial User claims confidentiality for any information transmitted, the Service Provider must implement procedures to ensure that confidential information is treated in accordance with the procedures in 40 CFR Part 2 and/or 5 CCR 1002-63.

5.19.10 Public Participation:

(a) Each Service Provider must comply with the public participation requirements of 40 CFR Part 25 in the enforcement of National Pretreatment Standards.
(b) Each Service Provider must make all information collected under the Pretreatment/Industrial Waste Control Program, except those documents legitimately classified as “confidential,” available for public review and

copying to the extent required by 40 CFR §403.14 and the ARS, Title 39 (Public Records, Printing, and Notices).

(c) Liberty will publish an annual notice in the newspaper with the largest daily circulation within Liberty, a list of Users that were found to be in significant noncompliance during the previous year with Pretreatment Standards or other Pretreatment Requirements. For the purposes of this provision, "significant noncompliance" is as defined at 40 CFR §403.8(f)(2)(vii).

5.19.11 Information Transmittal:

Each Service Provider shall transmit to Liberty, in a timely manner, all documents as necessary to enable Liberty to effectively administer the Pretreatment/Industrial Waste Control Program. Such documents shall include:

(a) A certified copy of the Industrial Waste Discharge Ordinance or Resolution, and any amendments thereto, together with any Rules and Regulations issued pursuant to such ordinance or resolution.
(b) Copies of all Industrial Waste permits and contracts issued or entered into pursuant to the requirements of the Pretreatment/Industrial Waste Control Program.
(c) Copies of all industrial survey, monitoring, and inspection reports.
(d) Any information needed to enable Liberty to determine whether a particular Industrial User is subject to a particular Categorical Standard.
(e) Notices of all compliance and enforcement activities, and all related correspondence.
(f) An annual staffing, costs, and funding report, if requested by Liberty Operations Manager.

5.19.12 Staffing, Costs, and Funding:

Each Service Provider must provide sufficient resources and qualified personnel to carry out its responsibilities under the Pretreatment/Industrial Waste Control Program. Upon request of Liberty, a Service Provider must submit to Liberty a report describing personnel responsibilities, an itemization of program capital and operating costs, and a demonstration that adequate funds are available to support program activities.

5.20 Extra-Jurisdictional Industrial Users.

Each Service Provider shall have the responsibility for those Industrial Users located outside its corporate limits, who discharge industrial wastewater into the Service Provider's sewer system. Each extra-jurisdictional Industrial User shall be subject to an ordinance, resolution, or equivalent source of legal authority which contains 40 CFR §403.8(f)(1) minimum legal authorities and all other legal provisions mandated by these Rules and Regulations. Each extra-jurisdictional Industrial User shall also be included in a Pretreatment Program which substantially conforms to 40 CFR §403.8(f)(2) and (3)

"Procedures" and "Funding" requirements. To this end, Liberty shall make contractual arrangements with the extra-jurisdictional legal entity exercising powers over the Industrial User providing either for the inclusion of the Industrial User in Liberty's Pretreatment/Industrial Waste Control Program, or for formal review of a Pretreatment Program administered by the extra-jurisdictional legal entity. Where necessary to obtain compliance with Federal Pretreatment Regulations, the Service Provider shall enter into a separate contract with each extra-jurisdictional Industrial User discharging into its sewer system.

The Service Provider shall also secure by contract, as it applies to extra-jurisdictional Industrial Users, for each of the following Liberty rights: (i) the right to inspect, sample, and monitor Industrial Users, (ii) the right to terminate service to an Industrial User on an emergency basis, (iii) the right to determine the applicability of Categorical Standards and to determine Significant Industrial Users, (iv) the right to receive copies of all monitoring reports, (v) the right to enforce all Article 5 discharge limitations and (vi) the right to act in lieu of the Service Provider in executing Pretreatment/Industrial Waste Control Program responsibilities.

Where the Service Provider and extra-jurisdictional legal entity fail to execute their Program responsibilities in obtaining compliance by extra-jurisdictional Industrial Users with all applicable Pretreatment/ Industrial Waste Control Standards and Requirements, Liberty shall have full recourse to the remedy provisions of these Rules and Regulations as they apply to the Service Provider receiving the industrial waste discharge in question.

5.21 Exemptions.

A Service Provider administering a Pretreatment Program, separate from that of Liberty, which has been approved by the Regional Administrator of EPA or the Arizona Department of Environmental Quality in accordance with §403.11 of the Federal Pretreatment Regulations, may be exempted from compliance with certain provisions of this Article 5, as determined by Liberty.

5.21 Program Review.

Liberty shall review Municipal ordinances or other Service Provider resolutions, measures, guidelines, or regulations, and amendments thereof, for conformance to 40 CFR §403.8(f)(1) Pretreatment Requirements for minimum legal authorities and for the inclusion of all other legal provisions mandated by these Rules and Regulations. Liberty shall periodically review the enforcement efforts of Service Providers to ascertain whether Pretreatment/Industrial Waste Control Requirements and Standards are being diligently enforced at the local level.

Insofar as a Service Provider administers the Pretreatment/Industrial Waste Control Program, Liberty shall periodically review the Service Provider's procedures, including, but not limited to, procedures for updating the industrial waste survey, and for

inspecting, sampling, and monitoring industrial waste discharges, to ensure that each such Service Provider is administering the Program in technical conformance to "Procedures" and "Funding" requirements under 40 CFR §403.8(f)(2) and (3) of the Federal Pretreatment Regulations and to the provisions of these Rules and Regulations. Any significant Program changes shall be subject to Liberty approval.

5.22 Remedies.

5.22.1 Emergency Remedies:

Where a discharge to the Wastewater System reasonably appears to present an imminent endangerment to the health or welfare of persons, or presents or may present an endangerment to the environment, or threatens to interfere with the operation of Liberty, Liberty shall immediately initiate investigative procedures to identify the source of the discharge, and take any steps necessary to halt or prevent the discharge. If necessary, Liberty shall seek injunctive relief against the violating Service Provider and any User contributing significantly to the emergency condition.

5.22.2 Routine Remedies:

If Liberty determines that a Pretreatment/Industrial Waste Control Program as administered by a Service Provider is not in compliance with Pretreatment/Industrial Waste Control Requirements, or that the discharge from a Service Provider is not in compliance with Liberty Standards, Liberty shall issue a notice setting forth the Requirements and Standards not being complied with and directing the Service Provider to attain conformance to these Requirements and Standards within a period of ten (10) days.

If after ten (10) days, the Service Provider has failed or refuses to comply with this notice, Liberty may issue an additional notice setting forth remedial actions to be taken by the violating Service Provider and a time schedule for attaining compliance with all Pretreatment/ Industrial Waste Control Requirements and Standards. If after thirty (30) days notice, the violating Service Provider has not taken necessary steps to correct the violation, Liberty may assume in whole or in part Pretreatment/Industrial Waste Control Program responsibilities in lieu of the violating Service Provider. Liberty may continue in this capacity until the violating Service Provider agrees to the original terms of the notice and any additional terms which Liberty feels are necessary to ensure ongoing compliance by the Service Provider with all Pretreatment/ Industrial Waste Control Requirements and Standards. The Service Provider shall be liable for all costs associated with Liberty's assumption of responsibilities on behalf of the Service Provider and Liberty may recover such costs in any manner permitted by law.

5.23 Program Preemption.

Where Liberty preempts a Service Provider in the execution of Pretreatment/Industrial Waste Control Program responsibilities, Liberty shall directly enforce Federal

Pretreatment Standards, including Categorical Standards, and the provisions of Article 5 of these Rules and Regulations against the Industrial Users located within the service area of the Service Provider. Liberty may request that all industrial self-monitoring reports, including those required under 40 CFR §403.12, be conveyed directly to Liberty. Moreover, Liberty shall carry out all inspection and sampling activities necessary to monitor compliance with Pretreatment/Industrial Waste Control Standards and Requirements. Where Program preemption occurs, Liberty shall have the right to seek injunctive relief against the Service Provider and any Industrial User in order to obtain full compliance with Pretreatment/Industrial Waste Control Standards and Requirements. Liberty shall bill and the Service Provider shall be liable for costs incurred by Liberty in conjunction with the administration of the Program in lieu of the Service Provider, and Liberty may recover such costs, including attorney fees and costs, in any manner permitted by law.

Liberty shall have the right to require the cessation of any industrial wastewater discharge in violation of Pretreatment/Industrial Waste Control Standards and Requirements. Where Liberty finds an Industrial User to be in violation of any Pretreatment/Industrial Waste Control Standard or Requirement, Liberty may require the Industrial User to enter into a bilateral contract with Liberty containing any conditions, including conditions relating to the installment of pretreatment or monitoring facilities, necessary to ensure compliance with Pretreatment/Industrial Waste Control Standards and Requirements. At the discretion of Liberty, these conditions may be incorporated into the municipal industrial waste discharge permit or Agreement once Program responsibilities are returned to the Service Provider.

5.24 Program Delegation.

Any Service Provider may enter into an Agreement with Liberty providing Liberty with the legal authority to carry out technical and administrative procedures necessary to implement the Pretreatment/ Industrial Waste Control Program at the local level. These procedures may include, among others, updating the industrial waste survey, providing technical services relating to the issuance and review of industrial waste discharge permits, inspecting and monitoring industrial waste discharges, waste discharge facilities and operations of permittees, and providing technical assistance for local enforcement actions. Where Program delegation occurs, the delegation agreement shall contain provisions for Liberty to recover the costs, including attorney fees and costs, incurred by Liberty in conjunction with the administration of the Program on behalf of the Service Provider.

5.25 Liberty Monitoring.

For the purpose of determining the quantity, quality, and other characteristics of any sewage which shall be or may be delivered and discharged into the Wastewater System by a Service Provider, or into the system of a Service Provider by any User, Liberty shall have the right at all reasonable times to enter upon and to inspect the Service Provider’s system or any industrial or commercial installations connected thereto or any other

connections which contribute sewage or Wastewater to the Service Provider's system and to inspect and copy records, to take samples and to make tests, measurements, and analyses of sewage or other wastes in, entering, or to be discharged into such Service Provider's system.

5.26 Specific Discharge Limitations for Service Providers.

No Service Provider shall discharge to the Wastewater System at any time or over any period of time wastewater containing any of the materials and substances in excess of the limitations provided under section 5.3

LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP

PRETREATMENT STANDARDS TARIFF

EXECUTIVE SUMMARY

Liberty Utilities (Entrada Del Oro Sewer) Corp ("Liberty") hereby declares that the following Code of Practice has been prepared and adopted to provide for pretreatment standards in the maintenance and operation of wastewater treatment at the Entrada Del Oro Wastewater Treatment Facility (EDOWWTF). This Code of Practice shall be filed with the Arizona Corporation Commission and made part of Liberty's Wastewater Service Tariff, Part Four, Section I.B [Waste Limitations].

Liberty hereby expressly reserves the right to make any lawful addition and/or revisions in this Code of Practice when and as they may become advisable to properly manage the EDOWWTF and to promote the peace, health, safety and welfare of the customers that will be served. This Code of Practice is supplementary to, and are not to be construed as, any abridgement of any lawful rights of Liberty as outlined in the Arizona Revised Statutes governing Public Utilities (Title 40) and the Arizona Administrative Corporation Commission Rules on Sewer (Title 14, Article 6), including the right to disconnect or to refuse permission to connect a customer to Liberty's wastewater system for violation of this Code of Practice or any other applicable law of the State of Arizona.

This Code of Practice incorporates pretreatment standards per 40 CFR 403, A.A.C. Title 12, Article 4, and A.A.C. Title 18, Chapter 9, Article 3. This Code of Practice is enforceable per the authority granted to wastewater utilities established under A.A.C. Title 14, Chapter 2, Article 6 of the Arizona Administrative Code.

LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP

CODE OF PRACTICE (Liberty-CP-01-DEF)

SECTION 1 – DEFINITIONS

A. PROHIBITED WASTE

Prohibited waste means:

1. Air Contaminant Waste

Any waste other than sanitary waste which, by itself or in combination with another substance, is capable of creating, causing or introducing an air contaminant outside any sewer or sewage facility or is capable of creating, causing or introducing an air contaminant within any sewer or sewage facility which would prevent safe entry by authorized personnel.

2. Flammable or Explosive Waste

Any pollutants which create a fire or explosion hazard to the sewer or any waste other than sanitary waste which, which by itself or in combination with another substance, is capable of causing or contributing to an explosion or supporting combustion in any sewer or sewage facility including, but not limited to gasoline, naphtha, propane, diesel, fuel oil, kerosene or alcohol.

3. Obstructive Waste

Any waste other than sanitary waste which, by itself or in combination with another substance, is capable of obstructing the flow of, or interfering with, the operation or performance of any sewer or sewage facility including, but not limited to: earth, sand, sweepings, gardening or agricultural waste, ash, chemicals, paint, metal, glass, sharps, rags, cloth, tar, asphalt, cement-based products, plastic, wood, waste portions of animals, fish or fowl and solidified fat.

4. Corrosive Waste

Any waste other than sanitary waste which, with corrosive properties which, by itself or in combination with any other substance, may cause damage to any sewer or sewage facility or which may prevent safe entry by authorized personnel.

5. High Temperature Waste

Any waste other than sanitary waste which, by itself or in combination with another substance, will create heat in amounts which will interfere with the operation and maintenance of a sewer or sewage facility or with the treatment of waste in a sewage facility;

Any waste other than sanitary waste which, will raise the temperature of waste entering any sewage facility to 40 degrees Celsius (104 degrees Fahrenheit) or more; or any non-domestic waste with a temperature of 65 degrees Celsius (150 degrees Fahrenheit) or more.

6. Biomedical Waste

Any of the following categories of biomedical waste: human anatomical waste, animal waste, untreated microbiological waste, waste sharps, medical products, and untreated human blood and body fluids known to contain viruses and agents.

7. Miscellaneous Wastes

Any storm water, surface water, groundwater, roof runoff, or surface drainage is prohibited.

8. Dilution Wastes

Any discharge that has been in any way, been diluted as a substitute for pretreatment, for the purposes of obtaining compliance with any categorical standard or pretreatment requirement or any other requirement imposed by this article except where dilution is expressly authorized by a categorical standard.

9 Other Discharge Limitations.

Any discharge that is transported from the point of generation to the sewer by any hauler, unless the hauler has first:

a. Obtained authorization to discharge from Liberty.

b. Disclosed the nature, origin, and volume of the discharge.

Any waste, other than sanitary waste, which by itself or in combination with another substance:

a. constitutes or may constitute a significant health or safety hazard to any person;
b. Any waste other than sanitary waste which may interfere with any sewer or sewage treatment process;
c. may cause a discharge from a sewage facility to contravene any requirements by or under any ADEQ, AZPDES discharge permit or any other act, approved Waste Minimization Plan (WMP), or any other law or regulation governing the quality of the discharge, or may cause the discharge to result in a hazard to people, animals, property or vegetation;
d. may cause bio-solid to fail criteria for beneficial land application.

B. RESTRICTED WASTE (Liberty -CP-01-001)

Restricted waste means:

1. Specified Waste

Any waste other than sanitary waste which, at the point of discharge into a sewer, contains any contaminant at a concentration in excess of the limits set out below. All concentrations are expressed as total concentrations which includes all forms of the contaminant, whether dissolved or un-dissolved. The concentration limits apply to both grab and composite samples. Contaminant definitions and methods of analysis are outlined in standard methods.

ORGANIC CONTAMINANTS (µg/L)	
Benzene	35
Chloroform	2,000
4,4’ - DOE	Not allowed
4,4’ – DDT	Not allowed
Aldrin	Not allowed
BHC-Alpha	Not allowed

BHC-Gamma (Lindane)	Not allowed
Heptachlor	Not allowed
Heptachlor Epoxide	Not allowed
Polychlorinated byphenyl compounds (PCBs)	Not allowed
TRACE METALS	
PARAMETER	DAILY AVERAGE (mg/L)
Arsenic	0.13
Cadmium (Cd)	0.047
Copper (Cu)	1.5
Cyanide (CN)	2.0
Lead (Pb)	0.41
Mercury (Hg)	0.0023
Selenium (Se)	0.10
Silver (Ag)	1.2
Zinc (Zn)	3.5

2. Food Waste

Any solid or viscous pollutants, animal fats, oil, and grease (FOG) in amounts that may cause obstruction to the flow in sewers or pass through or other interference or damage to the sewer collection system. Any pollutant, including oxygen demanding pollutants (BOD, COD, TOC, etc.) released in a discharge flow at a rate and/or pollutant concentration which may cause interference with the sewer collection system or wastewater treatment process. This also includes petroleum oil, non-biodegradable cutting oil, or other products of mineral oil origin in amounts that may cause interference or pass through at the wastewater treatment facility.

3. Brewery Waste

Any discharge containing solid or other substances in which sufficient quantity to cause or have the potential to cause obstruction to the flow in sewers or pass through or other interference or damage to the sewer collection system. Any pollutant, including oxygen demanding pollutants (BOD, COD, TOC, etc.) and/or suspended solids released in a discharge flow at a rate and/or pollutant concentration which may cause interference with the sewer collection system or wastewater treatment process.

4. Radioactive Waste

Any discharge containing a toxic, radioactive, poisonous or other substances in which sufficient quantity to cause or have the potential to cause injury or damage to a person or property or interference with any sewage treatment process, cause corrosive structural damage, constitute a hazard to humans or create any hazard to the sewer system or the effluent of the sewer system. All such wastes shall be subject to compliance with Nuclear Regulatory Commission standards for sewer disposal including the Unity Equation.

5. pH Waste

Any discharge with a pH less than 5.5 standard units (SU) or greater than 10.5 SU as determined by either a grab or a composite sample.

6. Dyes and Coloring Material

Dyes or coloring materials which may pass through a sewage facility and discolor the effluent from a sewage facility except where the dye is used by the Liberty, or one or more of its agents, as a tracer.

7. Miscellaneous Restricted Wastes

Any of the following wastes:

a. 4,4' – DDE
b. 4,4' – DDT
c. Aldrin
d. BHC—Alpha
e. BHC—Beta
f. BHC—Gamma (Lindane)
g. Heptachlor.
h. Heptachlor epoxide.
i. Polychlorinated biphenyl compounds (PCB's)

7. Temperature

Any waste other than sanitary waste which, will raise the temperature of waste entering any sewage facility to 40 degrees Celsius (104 degrees Fahrenheit) or more; or any non-domestic waste with a temperature of 65 degrees Celsius (150 degrees Fahrenheit) or more.

LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP

CODE OF PRACTICE (Liberty -CP-01-002)

SECTION 2 - DENTAL OPERATIONS

I. APPLICATION

This code of practice for dental operations defines mandatory requirements for managing non-domestic waste discharged directly or indirectly into a sewer connected to a sewage facility.

This code of practice applies to dental operations.

II. DISCHARGE REGULATIONS

An operator of a dental operation must not discharge waste which, at the point of discharge into a sewer, contains:

a. prohibited waste, special waste, or storm water; or
b. restricted waste with the exception of mercury measured at the point of discharge from a certified amalgam separator.

An operator of a dental operation that produces liquid waste from photographic imaging containing silver shall comply with the requirements of Liberty-CP-01-001.

An operator of a dental operation that produces wastewater containing dental amalgam must either:

a. collect and transport the wastewater from the dental operation for off-site waste management; or
b. treat the wastewater at the dental operation site prior to discharge to the sewer using a certified amalgam separator.

An operator of a dental operation must install and maintain the amalgam separator according to the manufacturer's or supplier's recommendations in order that the amalgam separator functions correctly. Such separator must be certified for use by the manufacturer.

An operator of a dental operation who installs an amalgam separator must ensure that:

a. all dental operation wastewater that contains dental amalgam is treated using the amalgam separator;
b. a monitoring point is installed at the outlet of the amalgam separator or downstream of the amalgam separator at a location upstream of any discharge of other waste;
c. the monitoring point must be installed in such a manner that the total flow from the amalgam separator may be intercepted and sampled; and
d. the monitoring point shall be readily and easily accessible at all times for inspection.

If the amalgam separator is located downstream of a wet vacuum system, an operator of a dental operation must ensure that:

a. the wet vacuum system is fitted with an internal flow control fitting; or
b. a flow control fitting is installed on the water supply line to the wet vacuum system.

The flow control fitting must be sized to limit the flow to a rate that is no more than the maximum inlet flow rate of the amalgam separator as stated by the manufacturer of the amalgam separator.

An operator of a dental operation must locate an amalgam separator in such a manner that an accidental spill, leak or collecting container failure will not result in waste containing amalgam entering any sewer. If a location is not available, an operator of a dental operation must do one of the following:

(a) install spill containment to contain spills or leaks from the amalgam separator; or
(b) cap all floor drains into which liquid spilled from the amalgam separator would normally flow.

An operator of a dental operation must replace the amalgam separator's collecting container when any one of the following occurs:

(a) the manufacturer's or supplier's recommended expiry date, as shown on the amalgam separator, has been reached; or
(b) the warning level specified by the manufacturer has been reached; or
(c) analytical data obtained using a method of analysis outlined in standard methods, or an alternative method of analysis approved by the manager, having a method detection limit of 0.0000005 mg/L or lower, indicates that the total concentration of mercury in the discharge from the amalgam separator is greater than, or equal to 0.005 mg/l.

An operator of a dental operation shall not dispose of dental amalgam collected in an amalgam separator, a collecting container, or any other device, to a sewer.

III. RECORD KEEPING AND RETENTION

An operator of a dental operation that uses an amalgam separator must keep, at the site of installation of the amalgam separator, an operation and maintenance manual containing instructions for installation, use, maintenance and service of the amalgam separator installed.

An operator of a dental operation that uses an amalgam separator must post, at the site of installation of the amalgam separator, a copy of the manufactures standard test report pertaining to the amalgam separator installed.

An operator of a dental operation that uses an amalgam separator must keep a record book at the dental operation site that includes the following information pertaining to the amalgam separator installed:

a. date of installation of the amalgam separator and name of the installation service provider;
b. serial number and expiry date of the amalgam separator and/or its components;
c. maximum recommended flow rate through the amalgam separator, where applicable;
d. dates of inspection, maintenance, cleaning and replacement of any amalgam separation equipment or components;
e. dates and descriptions of all operational problems, spills, leaks or collecting container failures associated with the amalgam separator and remedial actions taken;
f. name, address and telephone number of any person or company who performs any maintenance or disposal services related to the operation of the amalgam separator; and
g. dates of pick-up of the collecting container for off-site disposal, volume of waste disposed and the location of disposal.

The records must be retained for a period of two years and must be available on request by a company representative.

LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP

CODE OF PRACTICE (Liberty-CP-01-003)

SECTION 3 - DRY CLEANING OPERATIONS

I. APPLICATION

This code of practice for Dry Cleaning operations defines the requirements for managing waste discharged directly or indirectly into a sewer connected to a sewage facility from dry cleaning businesses, or other facilities employing solvent or chemical cleaning routines.

Definitions are included in Liberty-CP-01-DEF.

II. DISCHARGE REGULATIONS

An operator of a dry-cleaning operation must not discharge waste, which at the point of discharge into a sewer contains:

(a) Petroleum solvent in a concentration that is in excess of 15 milligrams per liter as analyzed in a grab sample; and
(b) Prohibited waste, restricted waste, special waste, storm water, or uncontaminated water.

Solvent Water Separators and Holding Tanks

Solvent/water separator and holding tank installations must conform to the requirements of this code of practice.

An operator of a dry-cleaning operation shall not directly discharge wastewater from the solvent/water separator to a sewage facility

All dry-cleaning operations in business that generate wastewater containing tetrachloroethylene, perchlomethyene, or petroleum solvent, but do not have a solvent/water separator and holding tank shall install and maintain a solvent/water separator and holding tank when any of the following occur:

(a) The dry-cleaning operation is renovated, to modify the plumbing or dry-cleaning equipment;
(b) New equipment, designed specifically for dry cleaning, is added to the dry-cleaning operation; or
(c) The discharge from the dry-cleaning operation exceeds the discharge limits specified above or any of the restricted waste criteria specified in Liberty-CP-01-DEF.

An operator of a dry-cleaning operation must:

(a) Collect the wastewater discharged from a solvent/water separator into a transparent, solvent-compatible, holding tank with a containment capacity 25% larger than the total volume of the solvent/water separator; and
(b) Allow the wastewater to stand undisturbed for a period of not less than 12 hours following each operating date.

If the holding tank contains any visible tetrachloroethylene or petroleum solvent after the specified period of time, then the tetrachloroethylene or petroleum solvent must be separated and returned to the solvent recovery system. After the removal of all visible solvent, the wastewater may be discharged to the sanitary sewer.

Visual Inspections

An operator of a dry-cleaning operation must:

(a) Visually inspect the solvent/water separator on a daily basis and
(b) Clean the solvent/water separator at least once every seven (7) days to manufacturer's standards.

Spills and Leaks

An operator of a dry-cleaning operation must install spill containment facilities in all chemical storage areas and around all dry cleaning machines.

An operator of a dry-cleaning operation must block off all sewer drains within the containment area for chemical storage and dry cleaning equipment to prevent any accidental discharge of solvent to a sewer.

An operator of a dry-cleaning operation must inspect all dry cleaning equipment for liquid leaks at least once per day.

An operator of a dry-cleaning operation must keep all equipment clean to ensure that leaks are visible. The following areas and items are to be checked for leaks:

(i) hose connections, unions, couplings and valves
(ii) machine door gasket and seating
(iii) filter head gasket and seating
(iv) pumps
(v) base tanks and storage
(vi) solvent/water separators
(vii) filter sludge recovery
(viii) distillation unit
(ix) diverter valves
(x) saturated lint in lint baskets
(xi) holding tanks
(xii) cartridge filters

An operator of a dry-cleaning operation who detects any liquid leak from dry cleaning equipment or chemical storage must repair the leak within 72 hours and must immediately prevent any discharge of contaminants to a sewer.

III. RECORD KEEPING AND RETENTION

Every dry-cleaning operation must keep a record book on site for inspection with records from the previous two years.

The following information shall be recorded in the record book:

(i) record of all inspections done by the operator, employees or other hired personnel;
(ii) record of any liquid leaks detected and remedial action taken;
(iii) record of solvent/water separator cleaning;
(iv) record of holding tank cleaning and solvent transfer; and
(v) record of all other equipment maintenance and repair.

LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP

CODE OF PRACTICE (Liberty-CP-01-004)

SECTION 4 - FOOD SERVICE OPERATIONS

I. APPLICATION

This code of practice for Food Service operations defines the requirements for managing waste discharged directly or indirectly into a sewer connected to a sewage facility from restaurants, or other facilities employing food service (such as food preparation services) as a primary or secondary business operation. Traps, interceptors and separators shall be provided to prevent the discharge of oil, grease, sand and other substances harmful or hazardous to the building drainage system, the collection system the private sewage disposal system or the sewage treatment plant or processes.

Traps, interceptors and separators shall be installed:

(a) operators of a food services operation that adds kitchen equipment that discharges oil and grease;
(b) operators of a food services operation that discharges non-domestic waste to sewer that exceeds any of the restricted waste criteria specified in Liberty-CP-01-DEF; or
(c) any food service operation, as determined by Liberty's wastewater operations group.
(d) at new facilities
(e) at existing food service facilities, not equipped with a trap, interceptor or separator, when additions, alterations or remodel are done which increase servicing volume, seating capacity, , etc.
(f) at existing food service facilities, equipped with a trap, interceptor or separator, when additions, alterations or remodel are done which increase servicing volume, seating capacity, changes to the menu, etc.
(g) at any non-food facilities when additions, alterations, or remodeling is proposed for the purpose of food preparation and service.
(h) at existing facilities not equipped with a trap, interceptor or separator, which is proposed for the purpose of food preparation and service.

Definitions are included in Liberty-01-DEF.

II. DISCHARGE REGULATIONS

An operator of a Food Service Operation must not discharge waste, which at the point of discharge into a sewer, contains:

1. Prohibited waste, restricted waste, special waste, storm water, or uncontaminated water.

III. GREASE INTERCEPTORS

Grease interceptors are required to be installed and maintained by the Owner of food service operations within the collection system of Liberty facilities. Grease interceptor installations shall conform to the requirements of this code of practice.

Interceptors, such as grease, oil, or sand shall be provided by laundries, restaurants, service stations, auto repair shops, carwashes and other industrial users when, in the opinion of Liberty, interceptors are necessary for the proper handling of wastewater containing oil and grease or sand or any flammable wastes. Such interceptors shall not be required for domestic users.

Construction:

All traps, interceptors and separators shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. New or upgraded grease device shall have a three-lid manhole, properly

sized per Table 1. Traps, interceptors and separators shall be watertight, and equipped with easily removable covers. Covers shall be gastight and watertight.

Cleaning and Maintenance:

Cleaning and maintenance must be performed when total volume of captured oil, grease and solids material displaces more than twenty-five (25) percent of the total volume of the trap, interceptor or separator or when the pH of a sample taken from the effluent side of the interceptor drops below 5.0 or when odor generation becomes a health issue or when the Liberty inspection determines a cleaning is necessary.

Maintenance Records:

All traps, interceptors and separators shall be maintained by the user in efficient operating condition at all times. Written records and documentation of all cleaning, repair, calibration, and maintenance shall be maintained at the facility for a minimum of three (3) years and be made available upon request.

Maintenance Inspection:

All traps, interceptors and separators shall be inspected by Liberty representative during normal working hours. Inspection results shall be made available to person, firm or corporation in reasonable charge of the traps, interceptors and separators. Liberty representative shall require correction in order to enforce Liberty pretreatment code of practices.

Skimming:

Skimming, decanting or discharging of removed waste or wastewater back into any traps, interceptors and separators or any appurtenance of the wastewater collection system is strictly prohibited.

Pumping:

All oil, sand and grease interceptors shall be pumped out or cleaned out completely not less than once every ninety (90) calendar days. Grease traps must be cleaned out completely not less than once every thirty (30) calendar days. Traps and interceptors shall be cleaned more frequently when necessary or required.

Bacteria as a Substitute*:*

The use of bacteria additives as a supplement to maintenance may be authorized by Liberty when a written request is made to the Liberty, which includes material safety data sheets. The addition of emulsifiers, de-emulsifiers, surface active agents, enzymes, or degreasers directly or into any drain leading to any grease removal device is strictly prohibited unless approved by Liberty.

Use*:*

Traps, interceptors and separators shall be single user only. When an interceptor can be safely used by multiple users (e.g., food courts), multiple users may be allowed when approved by Liberty. Multiple facilities operated by the same person, firm or corporation may be allowed to connect to a single interceptor with approval from Liberty. The person, firm or corporation in reasonable charge of the trap, interceptor or separator shall take any and all steps necessary to assure adequacy which includes repair, modification or replacement.

Alternate Devices and Technology:

Alternative devices and technologies shall be submitted to Liberty for approval before any such device is installed. The service facility will be required to furnish analytical data demonstrating the effluent discharge concentration to Liberty's wastewater collection system will not exceed those listed in Liberty-CP-01-001.

Sizing*:*

All traps, interceptors and separators shall be properly sized per Table 1. When an interceptor is sized less than five hundred (500) gallons or more than two thousand five hundred (2,500) gallons, the person, firm or corporation making the permit application shall first meet with Liberty to verify the reduced or increased size has been correctly calculated and that no other options are available.

Size Modification*:*

Modifying the size of any trap or interceptor shall only be done when sizing per Table 1 allows the modification. Modifying the size of any trap or interceptor shall not be done without the approval of Liberty.

Domestic Wastewater:

Domestic wastewater shall not be discharged to the interceptor.

Minimization Plan*:*

All facilities required to install and operate a trap, interceptor or separator shall develop and implement a Waste Minimization Plan pertaining to the disposal of grease, oils, and food bearing wastes.

Best Management*:*

All establishments requiring a trap, interceptor or separator shall adopt BMP's (Best Management Practices) for handling sources of floatable oils, fat or grease originating within their facility. Proof of employee training in BMP's shall be shown to Liberty upon request.

Other Fixtures*:*

Toilets, urinals, and other similar fixtures shall not discharge through a grease interceptor.

Minimization Program*:*

The applicant shall establish and submit a written waste minimization plan (maintenance program) outlying specific methods (Best Management Practices) that the facility will use on a daily basis to reduce the discharge of oil and grease as well as solids from entering the interception device and ultimately, the Liberty Sewer system. This plan shall be acceptable to and approved by Liberty. The approved document shall accompany the permit application.

Discharge Permit:

This document will be used in lieu of a discharge permit to assist with enforcing all Liberty's codes of practices.

Grease interceptors and automatic grease removal devices required:

A grease interceptor or automatic grease removal device shall be required to receive the drainage from fixtures and equipment with grease-laden waste located in food preparation areas, such as in restaurants, hotel kitchens, hospitals, school kitchens, bars, factory cafeterias, caterers, nursing homes, day care center, churches and clubs. Fixtures and equipment shall include pot sinks, pre-rinse sinks; soup kettles or similar devices; work stations; floor drains or sinks into which kettles are drained; automatic hood wash units and dishwashers without pre-rinse sinks. Grease interceptors and automatic grease removal devices shall receive waste only from fixtures and equipment that allow fats, oils or grease to be discharged. Interceptors, such as grease, oil or sand shall be provided at laundries, restaurants, service stations, auto repair shops, carwashes and other industrial users when the proper handling of wastewater containing oil and grease or sand or any flammable wastes is necessary.

Location:

All Interceptors shall be approved and shall be located to be readily and easily accessible for cleaning and inspection.

Food waste grinder:.

Where food waste grinders connect to grease interceptors, a solids interceptor shall separate the discharge before connecting to the grease interceptor. Solids interceptors and grease interceptors shall be sized and rated for the discharge of the food waste grinder. Emulsifiers, chemicals, enzymes and bacteria shall not discharge into the food waste grinder. Liberty shall require any user to cease operation of a garbage grinder and permanently remove such equipment when it is determined that the grinder is imposing any adverse effect on interceptor function.

Grease interceptor capacity:

Grease interceptors shall have the grease retention capacity indicated in Table 1 for the flow-through rates indicated. Liberty shall make determinations of interceptor adequacy and need, based on review of all relevant information regarding interceptor performance, facility site and building plan review and to require repairs to, modifications, or replacement of such traps.

TABLE 1 - CAPACITY OF GREASE INTERCEPTORS - EPA-2 Model

A. Determine maximum drainage flow from fixtures:					
Type of Fixture	Total Fixtures		Flow Rate		Amount
Restaurant kitchen sink	_____	X	15 gpm	=	_____
Single compartment sink	_____	X	20 gpm	=	_____
Double compartment sink	_____	X	25 gpm	=	_____
2, single compartment sinks	_____	X	25 gpm	=	_____
2, double compartment sinks	_____	X	35 gpm	=	_____
Triple sink 1.5 inch drain	_____	X	35 gpm	=	_____
Triple sink 2 inch drain	_____	X	50 gpm	=	_____
30 gallon dishwasher	_____	X	15 gpm	=	_____
50 gallon dishwasher	_____	X	25 gpm	=	_____
50--100 gallon dishwasher	_____	X	40 gpm	=	_____
B. Total	Number of fixtures			=	gpm

C. Loading Factors			
Restaurant type	Fast food-paper delivery	=	.50
	Low volume	=	.50
	Medium volume	=	.75
	High Volume	=	1.0

D. B x C = D, subtotal
E. D x 60 = Subtotal x 60 minutes = E, maximum flow for one (1) hour, in gallons
F. E x 2 = maximum flow for one hour times two (2) hours retention time (based on restaurant volume) = F, volume of trap in gallons = _____

Access and maintenance of traps, interceptors, and separators:

Complete access shall be provided to each interceptor and separator for service, maintenance and inspection of the inner chamber(s) and viewing and sampling of effluent wastewater discharged to the sewer. Interceptors and separators shall be maintained by periodic removal of accumulated grease, scum, oil, or other floating substances and solids deposited in the interceptor or separator.

Periodic Inspection*:*

All traps, inceptors and separators shall be subject to periodic inspections by Liberty during normal operating hours. These inspections can be based on an annual inspection or when a complaint is registered with Liberty regarding a grease-removal device. Should the inspection of any trap, interceptor or separator indicate a violation of any item in (1) thru (3) below, the person, firm or corporation in reasonable charge shall bring the device into compliance within the timeframe noted on the notice of violation, but not longer than fourteen (14) calendar days.
(1) If twenty-five (25) percent of the interceptor is full; both surface (oil and grease) and bottom (solids).
(2) When OSHA (Occupational, Safety and Health Administration) atmospheric levels of Hydrogen Sulfide

limits have been exceeded - "Short Term Exposure Limit" (STEL) of fifteen (15) ppm over a fifteen-minute time-weighted average. When the "Immediately Dangerous to Life and Health" (IDLH) level is 100 ppm or above, immediate action shall be performed to return the level of Hydrogen Sulfide to safe and acceptable limits. If the violation cannot be immediately resolved, all use of the Trap, Interceptor or Separator shall cease until compliance is obtained.
(3) When pH in the effluent chamber falls below 5.0 - which is an unhealthy anaerobic interceptor condition.

Maintenance:

Any trap, interceptor or separator not adequately maintained to prevent floatable oils, fat or grease from entering the sewerage system or produce excessive odors shall be in violation of Liberty codes of practice.

Clearing Obstructions:

Liberty shall take appropriate action to clear any obstruction of the Liberty Sewer that causes a sewer overflow. When the obstruction is found to be caused by an over-burdened or non-maintained trap, interceptor or separator, the person, firm or corporation in reasonable charge of the trap, interceptor or separator reimbursement of Liberty costs associated with clean-up efforts including any fines leveled against Liberty. Any establishments that continuously violates Liberty codes of practice shall be subject to having sewer service discontinued.

Contain and/or Clean Up:

Should Liberty find it necessary to contain and/or clean up a private sanitary sewer overflow caused by blockage of private or public sewer lateral or system, all associated cost shall be the responsibility of the person, firm or corporation in reasonable charge of the property.

Repairs or Replacements:

When repairs or replacements are necessary to a trap, interceptor or separator, all repairs or replacements shall be completed within the time frame stated on the notice to comply. Liberty may authorize an time extension, not to exceed thirty (30) days, for justifiable cause.

Grease Removal:

The person, firm or corporation in reasonable charge shall remove and dispose of grease at a facility permitted to receive and process such waste. Cleaning frequencies shall be dependent on the amount of oil, grease or solids generated at each operation, the size of the grease trap or interceptor, and the approved written waste minimization program, but not to exceed thirty-day intervals for traps and ninety-day intervals for interceptors. Traps and interceptors shall be cleaned by a licensed contractor.

Interference, Operation and Odors:

Any facility whose effluent discharge into the sewerage system causes interference in the conveyance system, operation of the sewerage system, or emits excessive odors shall be required to sample the discharge from the trap, interceptor or separator and have it analyzed for oil and grease and sulfides, total and dissolved. Results of the analysis shall be immediately reported. Liberty may sample the grease interception device at any time, utilizing Liberty representatives. The person, firm or corporation in reasonable charge shall be responsible for any and all associated cost of such testing or sampling.

IV. RECORD KEEPING AND RETENTION

An operator of a food services operation must keep a record at the food services operation of all grease interceptor inspection and maintenance activities including:

(a) the date of inspection or maintenance;
(b) the maintenance conducted;
(c) the type and quantity of material removed from the grease interceptor; and
(d) the location of disposal of the material removed from the grease interceptor.

The records shall be retained for a period of three years, and shall be available on request by an company representative.

LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP

CODE OF PRACTICE (Liberty -CP-01-005)

SECTION 5 - PHOTOGRAPHIC IMAGING OPERATIONS

I. APPLICATION

This code of practice for photographic imaging operations defines mandatory requirements for managing non-domestic waste discharged directly or indirectly into a sewer connected to a sewage facility.

This code of practice applies to photographic imaging operations. Definitions are included in Liberty-CP-01-DEF.

II. DISCHARGE REGULATIONS

An operator of a photographic imaging operation must not discharge waste which, at the point of discharge into a sewer, contains:

(a) silver in a concentration that is in excess of prescribed local limit analyzed in a grab sample; or,
(b) prohibited waste, restricted waste, special waste, storm water, or uncontaminated water as defined in Liberty-CP-01-DEF.

An operator of a photographic imaging operation that produces liquid waste containing silver must either:

(a) collect and transport the waste from the photographic imaging operation for off-site waste management; or
(b) treat the waste at the photographic imaging operation site prior to discharge to the sewer using one of the following silver recovery technologies:
    (i) two chemical recovery cartridges connected in a series;
    (ii) an electrolytic recovery unit followed by two chemical recovery cartridges connected in series; or
    (iii) any other silver recovery technology, or combination of technologies, capable of reducing the concentration of silver in the waste to 1.2 mg/L or less where valid analytical test data has been submitted to and accepted by the Liberty wastewater group.

An operator of a photographic imaging operation must install and maintain silver recovery technology according to the manufacturer's or supplier's recommendations.

An operator of a photographic imaging operation must collect all liquid waste containing silver in a holding tank and must deliver this waste to the chemical recovery cartridges using a metering pump.

An operator of a photographic imaging operation must calibrate the metering pump at least once per year.

Spill/Leak Prevention

An operator of a photographic imaging operation must locate the silver recovery system in such a manner that an accidental spill, leak or container failure will not result in liquid waste containing silver in concentrations greater than 1.2 mg/L entering any sewer.

If a location referred to above is not available, an operator of a photographic imaging operation must do one of the following:

(a) install spill containment to contain spills or leaks from the silver recovery system; or

(b) cap all floor drains into which liquid spilled from the silver recovery system would normally flow.

Testing

When using two separate chemical recovery cartridges, an operator of a photographic imaging operation must test the discharge from the first cartridge for silver content at least once per month using either silver test paper or a portable silver test kit.

When the discharge from the first chemical recovery cartridge referred to above cannot be sampled, an operator of a photographic imaging operation must:

(a) install a cumulative flow meter on the silver recovery system; and
(b) test the discharge from the second chemical recovery cartridge once per week using silver test paper or a silver test kit.

Cartridge Replacement

An operator of a photographic imaging operation must replace the chemical recovery cartridges when any one of the following occurs:

(a) the manufacturer's or supplier's recommended expiry date, as shown on each cartridge, has been reached;
(b) eighty percent (80%) of the manufacturer's or supplier's maximum recommended capacity, or total cumulative flow, for each cartridge has been reached;
(c) test data, using silver test paper or a silver test kit, indicates that the discharge from the first cartridge is greater than 1000 mg/L; or
(d) analytical data using a method of analysis outlined in standard methods, or an alternative method of analysis approved by the manager, having a method detection limit of 0.5 mg/L silver or lower, indicates that the concentration of silver in the discharge from the silver recovery system is greater than, or equal to, 1.2 mg/L.

III. RECORD KEEPING AND RETENTION

An operator of a photographic imaging operation that uses a silver recovery system must keep, at the photographic imaging operation site, an operation and maintenance manual pertaining to all equipment used in the silver recovery system.

An operator of a photographic imaging operation that uses two chemical recovery cartridges connected in series must keep a record book at the photographic imaging operation site which includes the following information recorded for the previous two years:

(a) serial number of each chemical recovery cartridge used;
(b) installation date of each chemical recovery cartridge used;
(c) expiry date of each chemical recovery cartridge used (where provided by manufacturers or suppliers);
(d) maximum recommended capacity, or total cumulative flow, of each chemical recovery cartridge used;
(e) dates of all metering pump calibrations;
(f) monthly silver test results on the discharge from the first chemical recovery cartridge; or where the discharge from the first cartridge cannot be sampled, weekly silver test results on the discharge from the second chemical recovery cartridge and weekly cumulative flows through the silver recovery system; and
(g) dates and descriptions of all operational problems associated with the chemical recovery cartridges and remedial actions taken.

[1] If treatment of liquid waste with two chemical recovery cartridges connected in series is the only silver recovery technology being used, then the owner of the photographic imaging operation must replace both chemical recovery cartridges when one of the events referred to occurs.

If treatment of liquid waste with two chemical recovery cartridges connected in series is used following treatment by an electrolytic recovery unit, the second cartridge may replace the used first cartridge and a new second cartridge may be installed when one of the events referred to occurs.

Both chemical recovery cartridges used following an electrolytic recovery unit must be replaced by the operator of the photographic imaging operation when one of the events referred to above occurs if this is recommended by the manufacturer or supplier of the cartridges.

An operator of a photographic imaging operation that uses an electrolytic recovery unit in addition to two chemical recovery cartridges connected in series must keep a record book at the photographic imaging operation site which includes the following information recorded for the previous two years:

(a) all information specified above;
(b) date of each removal of silver from the electrolytic recovery unit;
(c) date of each maintenance check on the electrolytic recovery unit;
(d) dates and descriptions of all operational problems associated with the electrolytic recovery unit anti remedial actions taken.

LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP

CODE OF PRACTICE (Liberty-CP-01-006)

SECTION 6 - RV PARK OPERATIONS

I. APPLICATION

This code of practice for RV park operations defines the requirements for managing waste discharged directly or indirectly into a sewer connected to a sewage facility from RVs, mobile homes, trailers, watercraft and other sources which employ storage, chemical disinfection/stabilization and discharge as a waste disposal mechanism.

This code of practice applies to all RV park operations. Definitions are included in Liberty-CP-01-DEF.

II. DISCHARGE REGULATIONS

An operator of an RV park operation must not discharge waste, which at the point of discharge into a sewer, contains:

(a) prohibited waste, restricted waste, special waste, storm water, or uncontaminated water.

If the RV park operation accepts RV customers with the intention of providing sewerage hook-ups, that practice is only acceptable if one of the following conditions is met:

1. If the RV park operation has a dedicated pre-treatment facility, that facility must be used for the disposal of the first discharge of wastewater from any entering RVs. The facility must be maintained as per manufacturer's or engineer's operating instructions. Discharge from that facility which is directed to a sewer connected to a sewerage facility shall be metered such that large slugs of waste are not introduced to the sewer instantaneously. Discharges from such facilities to sewers are limited to 10% of the average daily sewerage flow (in USGPM) experienced in the sewer.
2. In the absence of a dedicated pre-treatment facility, the RV park operation shall require incoming RVs to certify that, prior to connection to a sewer, that the holding tanks of the RV have been discharged at an approved facility.

III. RECORD KEEPING AND RETENTION

An operator of an RV park operation must keep a record at the RV park operation of:

1. All disposals of RV waste into a dedicated pre-treatment facility;
2. Pre-treatment facility inspection and maintenance activities including:
   a. the date of inspection or maintenance;
   b. the maintenance conducted; and
   c. the type and quantity of material removed from the facility;
3. Certifications of waste disposal prior to hook up of RVs to sewer services.

The records shall be retained for a period of up to three years, and shall be available on request by a Liberty representative.

LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP

CODE OF PRACTICE (Liberty-CP-01-007)

SECTION 7 – PRETREATMENT/INDUSTRIAL WASTE CONTROL

I APPLICATION

This Section is adopted by Liberty Entrada Del Oro in accordance with the authority conferred in the Clean Water Act, and any regulations implementing the Clean Water Act, including, but not limited to, 40 CFR 403.8, applicable Arizona Revised Statutes, including but not limited to 49 A.R.S. 2, applicable Arizona Administrative Code, including but not limited to 18 A.A.C. 9 and 18. A.A.C. 11, and with all the powers thereof which are specifically granted to Liberty, or are necessary or incidental to or implied from power specifically granted therein for carrying out the objectives and purposes of Liberty and this Section.

II. COMPLIANCE

The Pretreatment/Industrial Waste Control Program is designed to enable Liberty to comply with all conditions of any applicable AZPDES discharge permit, Federal Pretreatment Regulations, Arizona Pretreatment Regulations, and any applicable sludge disposal regulations, and to meet the following objectives:

1. To prevent the introduction of pollutants into the Company's Facilities which will interfere with the operation of the wastewater systems or contaminate the sludge.
2. To prevent the introduction of pollutants into the wastewater system which will pass through the wastewater system, inadequately treated, into the receiving waters or the atmosphere.
3. To prevent the introduction of pollutants into the wastewater system which might constitute a hazard to humans or to animals.
4. To assure the Company's ability to recycle and reclaim wastewater and sludge.
5. To protect human health and welfare, the environment, property and the Company's wastewater system.

II. DISCHARGE REGULATIONS

A. General Discharge Limitations

No customer shall contribute or cause to be contributed, directly or indirectly, any pollutant or wastewater which will interfere with the operation or performance of Liberty's wastewater system. These general prohibitions apply to all customers of Liberty whether or not the customer is subject to National Categorical Pretreatment Standards or any other national, State, Liberty, or local pretreatment standards or requirements.

B. Specific Discharge Limitations

No User shall discharge into the Liberty wastewater system or into any connected sewer system at any time or over any period of time, wastewater containing any of the materials and substances in excess of the limitations provided under Section B "Restricted Waste". The specified limitations may also be imposed directly on process wastewaters prior to dilution by domestic and other wastewaters discharged by a customer.

Once promulgated, National Categorical Pretreatment Standards for a particular industrial subcategory, if more stringent, shall supersede all conflicting discharge limitations contained in this Section 7, as they apply to that industrial subcategory.

State requirements and limitations on discharges shall apply in any case where they are more stringent than federal requirements and limitations or those contained elsewhere in this Code.

C. Prohibited Discharges

None of the following described sewage, water, substances, materials, or wastes shall be discharged into the Liberty wastewater system or into the sewer system by any customer, and each governing body of any applicable Service Provider shall prohibit and shall prevent such discharges by any Liberty customer, either directly or indirectly, into its sewer system:

(a) Any liquids, solids or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with other substances to cause fire or explosion or be injurious in any other way to the Liberty wastewater system, the sewer system of a Service Provider or any of its connectors, or to the operation of Liberty. At no time shall any reading on an explosion hazard meter, at the point of discharge into the Liberty wastewater system or the sewer system of a Service Provider or any of its customers (or at any point in the wastewater systems), or at any monitoring location designated by Liberty in a wastewater contribution permit, be more than ten percent (10%) of the Lower Explosive Limit (LEL) of the meter. Prohibited materials include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, tetrachloroethylene, perchloroethylene, bromates, carbides, hydrides, and sulfides.

(b) Any solid or viscous material which could cause an obstruction to flow in the sewers or in any way could interfere with the treatment process, including as examples of such materials but without limiting the generality of the foregoing, significant proportions of ashes, wax, paraffin, cinders, sand, mud, straw, shavings, metal, glass, rags, lint, feathers, tars, plastics, wood and sawdust, paunch manure, hair and fleshings, entrails, lime slurries, beer and distillery slops, grain processing wastes, grinding compounds, acetylene generation sludge, chemical residues, acid residues, food processing bulk solids, snow, ice, and all other solid objects, material, refuse, and debris not normally contained in sanitary sewage.

(c) Any wastewater having a pH less than 5.5 for discharges from Industrial Customers into the Liberty wastewater system or the sewer system of a Service Provider or that of any of its Customers, or less than 5.5 or greater than 10.5 for other discharges into the Liberty wastewater system, or wastewater having any other corrosive property capable of causing damage or hazard to any part of the Liberty wastewater system or the sewer system of a Service Provider or any of its Customers, or to personnel.

(d) Any wastewater having a temperature which will inhibit biological activity at the Liberty treatment plant, but in no case wastewater containing heat in such amounts that the temperature at the introduction into the Liberty wastewater treatment exceeds 40°C (104°F).

(e) Any pollutants, including oxygen demanding pollutants (BOD, COD, etc.) released at a flow rate and/or pollutant concentration which cause Upset. In no case shall a slug load have a flow rate or contain concentrations or qualities of pollutants that exceed for any time period longer than fifteen (15) minutes more than five (5) times the average twenty-four (24) hour concentration, quantities, or flow during normal operation.

(f) Any water or wastes containing a toxic substance (such as Chlorine from large swimming pools over 25,000 gallons, etc.) in sufficient quantity, either singly or by interaction with other substances, to injure or interfere with any sewage treatment process, to constitute a hazard to humans or to animals, or to create any hazard or toxic effect in the waters which receive the treated or untreated sewage.

(g) Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin, each in amounts that will cause interference.

(h) Pollutants which result in the presence of toxic gases, vapors, or fumes within the system in a quantity that may cause acute worker health and safety problems.

(i) Any trucked or hauled pollutants except at discharge points designated by Liberty.

(j) Any water or wastes containing pollutant quantities or concentrations exceeding the limitations in Section 7 of this Code of Practice, or the limitations in any applicable Categorical

Standards.

III. HAZARDOUS WASTE DISCHARGE NOTICE

Any customer disposing of industrial waste shall notify Liberty, the EPA Regional Waste Management Division Director, and the state hazardous waste authorities in writing of any discharge into the Liberty wastewater system of any substance which, if otherwise disposed of, would be considered a hazardous waste under 40 CFR Part 261. The specific information required to be reported and the time frames in which it is to be reported are found at 40 CFR §403.12(p).

IV. REPORTING REQUIREMENTS FOR SIGNIFICANT INDUSTRIAL USERS

[RESERVED]

V. MONITORING LIBERTY FACILITIES

Liberty may require to be provided and operated, at the customer's own expense, monitoring facilities to allow inspection, sampling, and flow measurement of any discharges as necessary to determine compliance with the provisions of this Code.

There shall be ample room in or near such sampling manhole or facility to allow accurate sampling and preparation of samples for analysis. The facility, sampling, and measuring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the customer.

The sampling and monitoring facilities shall be provided in accordance with Liberty's requirements and all applicable local construction standards and specifications. Construction shall be completed within such a time frame as Liberty shall specify by written notification.

LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP

CODE OF PRACTICE (Liberty-CP-01-008)

SECTION 8 – NONCOMPLIANCE / ENFORCEMENT

I. NOTICE OF VIOLATIONS

Whenever Liberty determines that any customer has violated or is violating any provision of this Code, or any directives, orders, or permits issued or approved to which Liberty is bound, Liberty may serve upon such customer a written notice ("Notice") stating the nature of the violations(s) in accordance with A.A.C. R14-2-609.C, and requiring that the customer correct the violation(s) within a specified period of time; perform such tasks as Liberty determines are necessary for the customer to correct the violations; or perform such tasks and submit such information as is necessary for Liberty to evaluate the extent of noncompliance or to determine appropriate enforcement actions to be taken in conjunction with the applicable regulatory agencies. A copy of the Notice shall also be provided to the Director of the Utilities Division of the Arizona Corporation Commission.

II. SUSPENSION OF SERVICE

If the customer does not cure the violation, or present a satisfactory plan of remediation to Liberty within the time specified in the Notice, then Liberty may suspend or disconnect wastewater treatment service in accordance with A.A.C. R14-2-609.C.

In addition, Liberty may suspend wastewater treatment service, in accordance with A.A.C. R14-2-609.B (without notice), when such suspension is necessary, in the opinion of Liberty, in order to stop an actual or threatened discharge which presents or may present an imminent or substantial endangerment to the health or welfare of persons, to the environment, or causes to violate any condition of its AZPDES discharge permit, or any applicable sludge disposal regulations.

Any customer notified of an immediate suspension of the wastewater treatment service shall immediately stop or eliminate the discharge. In the event of a failure of the customer to comply voluntarily with the cease and desist request, the Liberty shall take such steps as deemed necessary, including immediate severance of the sewer connection and/or immediate disconnection of the water service, to prevent or minimize damage to the company's wastewater system or endangerment to any individuals or the environment. Any action that results in the immediate suspension of service, or disconnection, of a customer shall be reported to the Director of the Utilities Division of the Arizona Corporation Commission and Maricopa County Environmental Services Department (MCESD) within twenty-four (24) hours of the suspension or disconnection. Any reconnection of the affected customer shall be in accordance with the Liberty Tariff for which the customer must pay the cost of disconnection and reconnection, plus the cost of parts and installation of an Elder valve (or similar equipment) to allow for easier disconnection in the event of a repeated discharge offense by customer.

14920 Camelback Rd., Litchfield Park, AZ 85340 623-536-4480 FAX #

DATE

NAME AND ADDRESS
OF PERMITTEE

RE: Issuance of Permit for Coverage under the Title 40 of the Code of Federal Regulations Part 403 Section 403.14 and Liberty-CP-01 Permission to Discharge to Liberty Utilities (Entrada Del Oro Sewer) Corp. Sanitary Sewer, Permit No. XXXX-XX

Dear Mr./Ms.:

In accordance with Title 40 of the Code of Federal Regulations Part 403 Section 403.14 and Liberty Utilities (Entrada Del Oro Sewer) Corp. (Liberty) Code Liberty-CP-01, has made a final determination to issue coverage under its Industrial Wastewater Discharge Permit Program, effective from DATE through END DATE (usually 5 years or end of AZPDES Permit Term). This letter serves as official notification of issuance of the Industrial Wastewater Discharge Permit.

Liberty final decision to issue permit coverage is based on the Industrial Wastewater Discharge Permit Application submitted on DATE and additional requested information. As you know, it is the responsibility of the industry/facility owner and/or operator to comply with the requirements of the Title 40 of the Code of Federal Regulations Part 403 Section 403.14 and Liberty Code Liberty-CP-01. This issuance of coverage does not preclude the industry/facility from following up with an inspection or audit to verify compliance with the Industrial Wastewater Discharge Permit and Liberty Code Liberty-CP-01. Also, be aware that as a condition of recordkeeping, Liberty Code Liberty-CP-01 requires that the permittee retain the required information and all records pertinent to the Permit for at least three (3) years beyond the term of the Permit.

In addition, any previous Permit issued under the Liberty Code Liberty-CP-01 is terminated on the coverage date as specified above. An industry/facility covered under the new Industrial Wastewater Discharge Permit is required to report on activities that were required or committed to under the previous Permit.

Finally, Liberty thanks you for your cooperation in the permitting process. Please retain this letter as documentation of your Industrial Wastewater Discharge Permit. Please contact me at PHONE NUMBER or by email at _____ with any questions.

Sincerely,

NAME
Liberty Operations Manager or Program Administrator

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Attorneys for Liberty Utilities (Entrada Del Oro Sewer) Corp.

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANTS AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON.	DOCKET NO: SW-04316A-21-

DIRECT TESTIMONY

OF

JILL SCHWARTZ

September 30, 2021

TABLE OF CONTENTS

I. INTRODUCTION.

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Jill Schwartz. My business address is 602 South Joplin Avenue, Joplin, Missouri, 64802.

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

A. I am testifying on behalf of Liberty Utilities (Entrada Del Oro Sewer) Corp. ("Liberty EDO") and Liberty Utilities (Gold Canyon Sewer) Corp. ("Liberty Gold Canyon") (collectively referred to sometimes herein as "Applicants").

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Liberty Utilities Service Corp. ("LUSC") as the Director of Regulatory Shared Services. LUSC is a direct subsidiary of Liberty Utilities Co. ("LUCo") and is a subsidiary of Liberty Utilities (Canada) Corp. ("Liberty Canada" or "LUCC"), which is a wholly owned indirect subsidiary of Algonquin Power & Utilities Corp. ("APUC"). As Director of Regulatory Shared Services, I am responsible for development of the regulatory strategy and evidentiary support for the corporate shared services costs charged to the operating utilities (like Applicants) in accordance with the APUC Cost Allocation Manual ("CAM"). In addition, the Regulatory Shared Services team provides support for local and regional regulatory teams for rate cases and other regulatory matters.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. In 2001, I completed my Bachelor of Science in Accounting from the John E. Simon School of Business at Maryville University in St. Louis, Missouri. From May 2001 to February 2015, I was employed by The Boeing Company in a variety of accounting capacities, ensuring compliance with the Federal Acquisition Regulation Mandatory Disclosure rule and developing and delivering labor compliance training

for all Boeing employees. I joined Liberty Utilities in February 2015 as the Manager of Rates and Regulatory Affairs for Liberty Utilities (Midstates Natural Gas) Corp. In February 2017, I was promoted to Senior Manager of Rates and Regulatory Affairs for Liberty Utilities Central Region, where I was responsible for the regulatory matters involving the electric, natural gas and water utilities in Missouri, Arkansas, Illinois, Iowa, Kansas and Oklahoma. In August 2019, I transitioned to the Corporate Regulatory department, where I provided support for the cost allocation manual and corporate costs to other Liberty Utilities operating utilities across the U.S. and Canada. In December 2020, I was promoted to my current position.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION OR ANY OTHER REGULATORY AGENCY?

A. Yes. I provided pre-filed and oral testimony before the Arizona Corporation Commission ("Commission") in the recent Liberty Utilities (Black Mountain Sewer) Corp. ("Liberty Black Mountain") rate case (Docket No. SW-02361A-19-0139) on issues related to shared services costs. I have also testified before public utility commissions in Illinois, Iowa, and Missouri, as well as the New Brunswick Energy and Utilities Board in Canada.

II. <u>A BRIEF OVERVIEW OF APPLICANTS' RATE FILINGS AND MY ROLE</u>.

Q. WHY ARE THE APPLICANTS CURRENTLY FILING RATE CASES?

A. Per Decision No. 77404 as amended,[1] Liberty Gold Canyon is required to file a rate case by September 30, 2021 based on a test year ending December 31, 2020. As company President Matthew Garlick explains in his direct testimony, it was always Liberty Utilities' plan to merge Liberty EDO into Liberty Gold Canyon the next time

[1] A 90-day extension to file the rate case no later than September 30, 2021 with the same 2020 test year was granted per Decision No. 77920 (April 1, 2021).

Liberty Gold Canyon filed a rate case.[2] So once the Commission ordered Liberty Gold Canyon to file a rate case, we automatically planned to file a rate case for Liberty EDO too. The goal is to have one utility which we refer to throughout the rate filing and direct testimony as "Liberty Gold Canyon (Consolidated)."

Q. WHAT ROLE DID YOU PLAY IN THE PREPARATION OF THE APPLICANTS' RATE CASES?

A. I have been responsible for overseeing the preparation of the Applicants' rate cases. In addition to my testimony on the specific topics I cover below, I will remain in my role as Liberty's "rate case manager" for these two rates cases until they are decided.

Q. MS. SCHWARTZ, NO OFFENSE MEANT BUT WHY ISN'T SOMEONE FROM ARIZONA IN THE ROLE YOU HAVE UNDERTAKEN?

A. That is a good question and no offense taken. For one thing, personnel changes have happened and Arizona did not have someone with my level of expertise and experience available when it was time to start preparing these rate filings. However, the Applicants and I also benefit from and rely on the local knowledge of Ms. Barbee for Liberty Gold Canyon and Mr. Cifuentes for Liberty EDO, as well as the expertise of Mr. Bourassa who has been involved in every prior Liberty Utilities rate case in Arizona. For these reasons, we do not see my geographic location status as an issue.

I also welcomed this opportunity to further address the APUC/Liberty shared services model before the Commission. I was disappointed by the amount of confusion surrounding shared services costs in the rate proceeding I participated in for Liberty Black Mountain. While I understand some of that was part of the adversarial process of rate cases, from my position, I can see that our affiliates in Arizona spend a lot of time and effort defending shared services costs. These rates

[2] Direct Testimony of Matthew Garlick (Liberty EDO) at 5-6.

cases are an opportunity to show the Commission that our shared services model is not unduly complicated; it is rational and comprehendible, and it results in a fair and verifiable amount of shared services costs being allocated to the Applicants.

Q. THANK YOU. ARE YOU ADDRESSING ANY OTHER TOPICS BESIDES SHARED SERVICES IN YOUR DIRECT TESTIMONY?

A. Yes. I will be the witness to provide the overview of the Applicants' separate and joint requests for new rates based on findings of fair value rate base. I will also testify regarding rate case expense.

Q. PLEASE INTRODUCE THE OTHER WITNESSES FOR THE APPLICANTS AND PROVIDE A BRIEF SUMMARY OF THEIR TESTIMONIES.

A. The following witnesses are submitting testimony in the rate cases filed for Liberty Gold Canyon and Liberty EDO:

- **Matthew Garlick**, President of Liberty's regulated utilities in Arizona and Texas, provides testimony on the proposed consolidation of Liberty Gold Canyon and Liberty EDO, and the proposed change to Liberty Gold Canyon's effluent rates.
- **David Heighway**, Director of Engineering, provides testimony for Liberty Gold Canyon regarding wastewater treatment capacity at the Gold Canyon Water Reclamation Facility (WRF) and the 400,000 gallons of capacity that the Commission ordered held for future use in the last Liberty Gold Canyon rate case in 2006. Mr. Heighway also introduces and supports pretreatment tariffs for Liberty Gold Canyon and Liberty EDO, as well as proposing an Off-Site Facilities Hook-Up Fee ("HUF") tariff for Liberty EDO and changes to the HUF tariff for Liberty Gold Canyon. In the event Liberty EDO is consolidated into Liberty Gold Canyon, we are proposing to use the Liberty Gold Canyon HUF tariff and pretreatment tariffs proposed in Mr. Heighway's testimony for Liberty

Gold Canyon (Consolidated).

- **Cherishe Barbee**, Senior Analyst of Rates and Regulatory Affairs, provides testimony on the Liberty Gold Canyon revenue requirement, including its rate base, expenses and revenues. She also addresses proposed changes to the Liberty Gold Canyon tariff.
- **Manuel Cifuentes**, Senior Analyst of Rates and Regulatory Affairs, provides testimony on the Liberty EDO revenue requirement, including its rate base, expenses and revenues. Mr. Cifuentes also testifies to the proposed changes to Liberty EDO's tariff.
- **Eric Burkett**, Senior Operations Manager, provides separate direct testimonies that include a general overview of each of the Applicants' operations and capital investments since the last rate case for each company.
- **Thomas Bourassa**, Regulatory and Accounting Consultant, will provide testimony on the Lead/Lag Study used to determine a working capital allowance, his Cost of Service Study, rate design and cost of capital. Mr. Bourassa also prepared the calculation of Accumulated Deferred Income Taxes and Excess Accumulated Deferred Income Taxes, and he will present the requested adjuster mechanisms. Mr. Bourassa's direct testimony differs in each case where appropriate, such as in the section on rate design. Additionally, Mr. Bourassa's direct testimony filed with the Liberty Gold Canyon application contains all the details on the rates and rate design for Liberty Gold Canyon (Consolidated).

All of the revenue requirement components and rates I discuss in this direct testimony for Liberty EDO, Liberty Gold Canyon and Liberty Gold Canyon come from the schedules prepared by these witnesses.

Q. WOULD YOU PLEASE DESCRIBE THE APPLICANTS' INDIVIDUAL, STAND-ALONE REQUESTS FOR NEW RATES?

A. As reflected on Schedule A-1 of the Liberty EDO revenue requirement, Liberty EDO is seeking an increase in annual revenues of approximately $20,105, or 4.22 percent. As discussed in more detail by Mr. Cifuentes and Mr. Bourassa, the Liberty EDO schedules support a fair value rate base of $1,716,795 and a required operating income of $119,200 premised on a 6.94 percent rate of return on rate base.

Separately, as reflected on Schedule A-1 of the Liberty Gold Canyon revenue requirement, Liberty Gold Canyon is seeking an increase in annual revenues of approximately $44,519, or 1.01 percent. Ms. Barbee and Mr. Bourassa address in more detail the Liberty Gold Canyon schedules, support a fair value rate base of $11,646,139 and a required net operating income of $808,615 based upon a 6.94 percent rate of return on rate base.

For each of the Applicants, the overall rate of return is based upon a capital structure consisting of 54 percent equity and 46 percent debt, with a return on equity of 10.20 percent and weighted cost of debt of 3.12 percent.

Q. HAVE THE APPLICANTS CALCULATED THE AVERAGE BILL IMPACTS ON RESIDENTIAL CUSTOMERS UNDER THE PROPOSED NEW STAND-ALONE RATES FOR EACH COMPANY?

A. Yes, the bill impacts presented in the "H" Schedules sponsored by Mr. Thomas Bourassa are summarized here.

Based on the requested revenue increase, Liberty Gold Canyon proposes a monthly charge of $50.00 for residential customers, which will result in an increase of 12 cents per month for residential sewer service. Separately, based on the requested revenue increase for Liberty EDO, it proposes an increase of $4.64 in the monthly residential sewer service rate, resulting in a proposed monthly residential

bill of $112.64.

Q. WHAT IS THE PROPOSED REVENUE INCREASE FOR LIBERTY GOLD CANYON (CONSOLIDATED)?

A. On a combined basis, Liberty Gold Canyon (Consolidated) is seeking a revenue increase of approximately $70,576, or 1.44 percent. The Liberty Gold Canyon (Consolidated) schedules support a fair value rate base of $13,362,944 and a required net operating income of $927,816 based upon a 6.94 percent overall rate of return on rate base.

Q. HOW HAS THE PROPOSED CONSOLIDATION OF LIBERTY GOLD CANYON AND LIBERTY EDO BEEN PRESENTED FOR RATEMAKING PURPOSES?

A. We have prepared a third set of the primary ratemaking schedules included with the Liberty Gold Canyon application which I will be sponsoring. This third set contains A, B, C, D, E, F and H schedules for Liberty Gold Canyon (Consolidated). This approach presents both Applicants' rate bases, revenues, expenses, costs of capital and rates on a stand-alone basis and on a consolidated basis. This presentation allows for a direct comparison of the rates and rate impacts of the proposed consolidation. In addition, Liberty EDO will be filing a separate application pursuant to A.R.S. § 40-285 for Commission approval to transfer its used and useful assets and its CC&N to Liberty Gold Canyon. Following sufficiency, Applicants will file motions seeking to consolidate the two rate applications and the application for approval to transfer into a consolidated docket. Applicants will also be filing financing applications during the sufficiency review period and we will also seek to consolidate those applications into the same single consolidated docket. In summary, we intend to make five separate filings regarding Liberty Gold Canyon and Liberty EDO and have them all heard and decided together.

Q. THANK YOU. HAVE THE APPLICANTS ALSO PREPARED A CONSOLIDATED TARIFF?

A. Yes. In total, three sets of tariffs have been filed: 1) a Liberty EDO stand-alone tariff, 2) a Liberty Gold Canyon stand-alone tariff, and 3) a Liberty Gold Canyon (Consolidated) tariff. The proposed stand-alone tariff for Liberty EDO is discussed in the direct testimonies of Manuel Cifuentes and David Heighway filed with the Liberty EDO application. The proposed stand-alone tariff for Liberty Gold Canyon is discussed in the direct testimonies of Cherishe Barbee and David Heighway filed with that application. On a combined basis, the Liberty Gold Canyon (Consolidated) tariff reflects the same updates made in the stand-alone Liberty Gold Canyon and Liberty EDO tariffs, to standardize the tariff in accordance with the Commission's rules and regulations, sections and organization. The Liberty Gold Canyon (Consolidated) tariff also includes a Customer Assistance tariff ("CAT") and a HUF tariff. The details for the HUF tariff also are discussed in more detail in the direct testimonies of Mr. Heighway. In addition, Mr. Heighway also discusses a new pretreatment tariff and information regarding customer discharges to the system.

Q. ARE THERE ANY DIFFERENCES IN THE CONSOLIDATED TARIFF RELATIVE TO THE STAND-ALONE TARIFFS?

A. The only difference in the Liberty Gold Canyon (Consolidated) CAT from the Liberty Gold Canyon and Liberty EDO stand-alone tariffs is the CAT customer limits. For all three programs (Low Income, Deployed Services Member, and Disabled Military Veteran) included in the CAT, the customer limit would be the combination of 35 customers proposed for Liberty EDO and 800 customers proposed for Liberty Gold Canyon, which results in a total limit of 835 customers for Liberty Gold Canyon (Consolidated). Details regarding the CATs are addressed in the direct testimonies of Mr. Cifuentes (Liberty EDO) and Ms. Barbee (Liberty Gold Canyon).

Q. HAVE THE APPLICANTS CALCULATED THE AVERAGE BILL IMPACTS ON RESIDENTIAL CUSTOMERS BASED ON THE PROPOSED CONSOLIDATED RATES?

A. Yes. As discussed by Mr. Bourassa, on a combined basis, Liberty Gold Canyon (Consolidated) proposes a monthly residential sewer service rate of $53.00, which results in an increase of $3.12 per month for a typical Liberty Gold Canyon residential customer. Alternatively, based on the same proposed $53.00 per month residential sewer service rate, a typical Liberty EDO residential customer's bill will be decreased by $55.00 each month.

Q. WILL LIBERTY GOLD CANYON CUSTOMERS PAY MORE TO ABSORB THE LIBERTY EDO CUSTOMERS?

A. Ultimately, the average residential customer in Liberty Gold Canyon would pay an additional $3.00 per month if the proposed consolidation is granted. However, on the other side, the average Liberty EDO customer will see a monthly reduction of $55.00 in their bill. Mr. Garlick and our regulatory consultant, Mr. Bourassa, provide further testimony on consolidation of Liberty EDO into Liberty Gold Canyon in their direct testimony.

Q. THANK YOU, MS. SCHWARTZ. DO THE NUMBERS YOU HAVE PRESENTED ABOVE INCLUDE RATE CASE EXPENSE FOR THE APPLICANTS IN THIS CASE?

A. No, those numbers do not include rate case expense because the Applicants are requesting rate case expense surcharges. For Liberty Gold Canyon, the monthly surcharge is an estimated $2.92 to be collected from customers for a period of two years. For Liberty EDO, the rate case expense surcharge is estimated at $4.80 per month, to be collected from customers over two years. However, if consolidation is approved, the monthly rate case expense surcharge for Liberty Gold Canyon

(Consolidated) would be an estimated $3.03 per month for two years. I will discuss the estimated rate case expense and proposed surcharges in more detail in a later subsection of this direct testimony.[3]

III. THE APUC/LIBERTY SHARED SERVICES AND COST ALLOCATION MODEL.

A. Corporate Structure.

Q. WHO IS THE CORPORATE PARENT OF THE APPLICANTS?

A. The immediate parent company for both Liberty Gold Canyon and Liberty EDO is Liberty Utilities (Sub) Corp. ("Liberty Sub Corp"). Liberty Sub Corp is the successor to an entity that was known as Algonquin Water Services, Inc., which was one of the early "Algonquin/Liberty" holding company structures acquiring utilities in Arizona. Today, Liberty Sub Corp is the direct shareholder of eight regulated water and/or sewer utilities in Arizona, including the two Applicants.[4] Liberty Sub Corp is also the owner of three regulated water and wastewater utilities and one unregulated water utility in Texas[5], a regulated water and wastewater utility in Missouri and an unregulated water and wastewater utility in Illinois.[6]

Q. WHERE DOES LIBERTY SUB CORP FIT INTO THE OVERALL APUC/LIBERTY CORPORATE STRUCTURE?

A. Liberty Sub Corp is a direct subsidiary of LUCo and is essentially the intermediary parent company between LUCo and the twelve individual operating utilities in

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[3] *See infra* Section IV.

[4] The other Arizona utilities are Liberty Black Mountain, Liberty Utilities (Litchfield Park Water & Sewer) Corp., Liberty Utilities (Bella Vista Water) Corp., Liberty Utilities (Rio Rico Water & Sewer) Corp., Liberty Utilities (Cordes Lakes Water) Corp. and Liberty Utilities (Beardsley Water) Corp.

[5] The three regulated Texas utilities are Liberty Utilities (Silverleaf Water) LLC, Liberty Utilities (Tall Timbers Sewer) Corp. and Liberty Utilities (Woodmark Sewer) Corp. The unregulated Texas utility is Liberty Utilities (Seaside Water) LLC.

[6] Liberty Utilities (Missouri Water) LLC and Liberty Utilities (Fox River Water) LLC are operated and managed as part of Liberty Utilities' Central Region.

Arizona and Texas. As such, Liberty Sub Corp also functions as a local shared services company with shared assets and costs recorded on its books.

Q. THANK YOU. WOULD YOU PLEASE DESCRIBE APUC AND ITS MAJOR SUBSIDIARIES?

A. Sure. APUC is a publicly traded utility holding company that serves as the overall corporate parent of a widely diversified portfolio of utility assets. APUC is traded on the New York ("NYSE") and Toronto ("TSX") stock exchanges. APUC has two major operating units in North America – its regulated utilities (a.k.a. "Liberty Utilities") and its renewable power generation facilities (a.k.a "Liberty Power"). Liberty Utilities owns and operates regulated water, wastewater, natural gas and electric utilities in thirteen states and one Canadian province. Liberty Utilities is divided into three operating regions (East, Central and West). Liberty Power is an unregulated entity that owns and/or provides renewable power generation from numerous facilities located throughout the United States and Canada. In addition to APUC's two major operating units in North America, APUC also owns a water and wastewater utility in Chile and an electric utility in Bermuda.

Q. HAVE YOU HEARD THE APUC/LIBERTY CORPORATE STRUCTURE DESCRIBED AS UNNECESSARILY COMPLICATED, MS. SCHWARTZ?

A. Yes, I have, but I do not agree with that sentiment. The fact that APUC owns and operates so many individually regulated utilities across the U.S. and Canada, and now also Chile and Bermuda, as well as its power generation facilities across North America, is naturally going to lead to a certain level of organizational complexity. Ultimately, only a few corporate entities are involved in providing shared services and it is my goal in this rate case to show that our cost allocation process is understandable, rational, consistent and readily subject to verification during reasonable regulatory inspections and audits. Therefore, a sophisticated corporate

structure should not interfere with the setting of rates that provide for recovery of Liberty Gold Canyon's and Liberty EDO's unique and necessary costs of service.

Q. HOW ARE ALL OF THESE REGULATED AND UNREGULATED ENTITIES UNDER THE APUC UMBRELLA ACTUALLY MANAGED AND OPERATED?

A. APUC's operating units are managed and operated with shared corporate and business support services, combined with decentralized local management and operational control of day-to-day utility operations (or power generation facilities). The result is that each regulated utility (run by local management and operators) benefits from access to a wide variety of corporate and business support services and essentially unlimited access to capital for infrastructure investment, all at a reasonable cost. This business model provides substantial benefits to our regulated utilities and their customers through shared corporate services while leaving local management with control over operations. Our approach to conducting business has direct influence on all business activities and serves to guide the actions of the organization in carrying out a customer-centric approach. But this local approach could not work without our shared corporate services.

B. <u>Introduction to Shared Services</u>.

Q. WHAT ARE "SHARED SERVICES," MS. SCHWARTZ?

A. In the broadest terms, shared services are corporate administrative, financial and accounting, human resources and other business support services provided to and paid for by more than one entity or division within an entity.

Q. ARE SHARED SERVICES MODELS LIKE THIS COMMON IN THE UTILITY INDUSTRY?

A. Yes, based on my knowledge and experience, I believe it is correct to say that use of service companies and shared services models is common in the utility industry, as

well as in business generally. For example, when I worked in Boeing's Accounting department, I provided shared services for all of its military defense business units across the country. Specifically, I was responsible for ensuring that all of the business units regulated by the Defense Contract Management Agency and the Defense Contract Audit Agency were compliant with the Mandatory Disclosure Rule. I was also responsible for preparing journal entries to remove any time inappropriately recorded to government contracts and working with the legal department to ensure that appropriate disclosures were made. There was a separate corporate Accounting team that provided shared services and support for both Boeing's military and commercial businesses. Likewise, under APUC/Liberty's shared services approach, a broad array of corporate and business support services are seamlessly provided to multiple entities across the entire organization. I think such a structure is not only to be expected in any large commercial organization like ours, but absolutely necessary.

Q. WHY IS THAT?

A. Because economies of scale can be achieved through shared service models and good businesses seek to achieve economies of scale in order to lower the cost and improve the quality of their products or services. For Liberty Utilities, shared services allow the regulated utilities access to a greater range of business support at a lower cost than most utilities could obtain in providing similar services and incurring those costs separately. For example, treasury, information technology, insurance, and risk management are provided centrally, which provides the benefits that naturally flow from the reliance on service groups with broad experience and facilitates the standardization of these activities. In other words, the APUC/Liberty service providers were designed and exist to provide support to the operating entities.

Q. DOES THAT MEAN THAT ALL SHARED SERVICES ARE PROVIDED BY AFFILIATED ENTITIES WITHIN THE APUC CORPORATE ORGANIZATION?

A. Yes, exactly. As I discussed above, APUC-affiliated companies own and operate a diverse portfolio of regulated and unregulated utility assets. Finding an unaffiliated group or groups capable of replicating the depth, experience and scope of the corporate support and services provided within the APUC/Liberty family of companies would be a daunting task, one which would then have to be repeated for each region, state or general location where there are operations. That is why enterprises like APUC build their own corporate support centers that are tailor-made to meet their unique and ever-changing needs regardless of size or geography. The benefits of this type of shared services model to the customers are through economies of scale and empowerment of local operations with access to experts of every flavor. Where there is an opportunity to realize economies of scale or other efficiencies through shared corporate support services, without impairing the quality of those services or relationships with customers, APUC/Liberty will leverage its shared services model. For example, treasury, information technology, insurance, and risk management services are provided centrally. When structured and carried out correctly, providing these selected services centrally enhances the local presence our customers prefer. This is why I can confidently testify that we would not be able to have the superior locally focused operations at economically viable rates without the APUC/Liberty shared services model.

Q. CAN YOU EXPAND ON YOUR DISCUSSION OF THE SUPPORT SERVICES PROVIDED BY THESE AFFILIATED ENTITIES?

A. Yes, I will start with APUC. APUC provides overall strategic management, corporate governance, financial management, and administrative and support

services to all of its subsidiaries. In addition, as a publicly traded holding company, APUC also maintains access to the capital markets through the issuance of long-term debt and equity, as well as access to short-term credit facilities. Such access to capital is of substantial benefit to regulated utilities and power generation facilities that often need large sums for infrastructure investment.

Below APUC, LUCC is generally the legal entity employing personnel physically located in Canada and providing various corporate and business support services including executive, regulatory strategy, energy procurement, operations, utility planning, administration, and customer experience. Other administrative and support services are provided by LUCC employees through the Liberty Algonquin Business Services ("LABS") business unit to Liberty Power and Liberty Utilities. LABS includes the following departments: information technology, human resources, training, environment, health, safety and security, procurement, executive and strategic management, technical services, risk management, financial reporting, planning and administration, treasury, internal audit, external communications, legal, and compliance.

Finally, LUSC is the legal entity employing most of Liberty's U.S.-based employees who provide support to the regulated utilities. LUSC employees generally can be placed into four categories: (1) utility dedicated employees, (2) employees who provide shared services to Liberty Power and Liberty Utilities, (3) employees who provide corporate support to all Liberty Utilities' operating utilities, and (4) regional employees who provide shared services to support the utilities within one of the operating regions (East, Central or West). Under LUSC, administration of payroll costs are streamlined and shared across APUC's U.S.-based utility companies.

Q. ARE THERE ADDITIONAL SERVICES PROVIDED ON A REGIONAL BASIS?

A. Yes, as I testified above, the various operating utilities are organized under a regional structure. This regional organization provides a more effective management and reporting hierarchy by allowing groups of state utilities to report to regional managers for specific functions. These state utility employees also have a dotted line reporting relationship to the state president. This regional structure offers several additional benefits. First, it allows the state presidents to focus on overall utility operations, state utility commission processes, customer satisfaction and community relations rather than managing individuals with a wide range of functional responsibilities. This organizational structure also allows for a sharing of expertise among the company's utilities across several states and provides for some common support functions that would be too cumbersome to provide at a national corporate level and too costly to support at an individual state/utility level. The regional structure also provides for a manageable span of control for the number of individuals reporting to a single manager.

Q. DOES LIBERTY SUB CORP ALSO PROVIDE SHARED SERVICES?

A. No personnel are employed by Liberty Sub Corp. But there are employees of LUSC that are dedicated to provide services for the regulated water and wastewater utilities in Arizona and Texas that are owned by Liberty Sub Corp. Those particular employees assign and charge time and costs to Liberty Sub Corp departments that are allocated to the regulated utilities in Arizona and Texas. For example, Engineering and Operations department employees are employed by LUSC, but are mapped to Liberty Sub Corp in the human resources information system. Their costs are recorded on Liberty Sub Corp.'s books in their respective departments and may be directly billed to the appropriate utilities (like Liberty EDO or Liberty Gold

Canyon) or allocated based on the local four-factor methodology to all of the Arizona and/or Texas utilities.

Q. HAVE YOU PREPARED AN EXHIBIT DEMONSTRATING THE SERVICES PROVIDED BY THIS SHARED SERVICES MODEL?

A. Yes, attached as Exhibit JS- DT1 is a narrative and pictorial explanation of the shared services provided to Liberty Gold Canyon and Liberty EDO through the APUC/Liberty Utilities shared services model. Exhibit JS-DT1 provides a detailed summary of the various corporate shared services provided by APUC, LUCC and LUSC to Liberty Gold Canyon and Liberty EDO and the other regulated utilities from each department.

Q. HOW ARE THE COSTS OF ALL THESE SHARED SERVICES ALLOCATED BETWEEN ALL THE BENEFITTING ENTITIES?

A. Costs are pooled and allocated in accordance with Cost Allocation Manual ("CAM") which I will explain in greater detail in the next subsection of my testimony.

C. <u>Cost Allocation and the CAM</u>.

Q. PLEASE DESCRIBE THE CAM.

A. The CAM is a written manual intended to govern affiliate transactions and cost allocations within the APUC organization. The CAM describes the services provided by APUC, LUCC, LUCo and LUSC and sets forth the methods used to apportion the costs for those services among the benefitting entities. Costs allocated include both direct charges to specific entities and the allocation of indirect costs for services that benefit more than one entity within the organization. The CAM is based on the National Association of Regulatory Utility Commissions ("NARUC") Guidelines for Cost Allocations and Affiliate Transactions. The NARUC Guidelines are attached as Appendix 1 to the CAM. The CAM is attached to my testimony as Exhibit JS-DT2. The fundamental premise of the CAM is to direct charge costs to

the greatest possible extent and to use rational, consistent and verifiable processes, procedures and methodologies to determine, define, and assign indirect common costs to all benefitting entities. The CAM is also designed to prevent regulated utilities from subsidizing unregulated operations.

Q. HOW IS THE CAM "BASED" ON THE NARUC GUIDELINES?

A. NARUC has recommended specific guidelines regarding transactions between affiliates. The following NARUC principles are embodied in the CAM:

1. To the maximum extent practicable, costs should be directly assigned (NARUC Guidelines at 2, § B.1).

2. The general method for charging indirect costs should be on a fully allocated cost basis (NARUC Guidelines at 2, § B.2).

3. To the extent possible, all direct and allocated costs should be traceable on the books of the applicable regulated utility to the applicable Uniform System of Accounts and documentation should be available to the appropriate regulatory authority upon request (NARUC Guidelines at 2, § B.3).

4. Allocation methodologies should prevent subsidization and ensure equitable cost sharing among regulated and unregulated affiliates (NARUC Guidelines at 2-3, § B.4).

5. All costs should be classified as regulated, non-regulated, or common to both (NARUC Guidelines at 3, § B.5).

6. The primary cost driver of common costs should be identified and used to allocate the cost between regulated and non-regulated affiliates (NARUC Guidelines at 3, § B.6).

7. The indirect costs of each business unit, including the allocated costs of shared services, should be spread using relevant cost allocators (NARUC Guidelines at 3, § B.7).

Q. CAN YOU PLEASE DESCRIBE HOW THE CAM IS USED TO ASSIGN AND ALLOCATE COSTS TO REGULATED UTILITIES LIKE THE APPLICANTS?

A. Yes, under the CAM, a utility incurs costs in two ways: (1) Assigned/Direct costs—costs incurred by one company for the exclusive benefit of one or more other

companies, and which are directly charged to the company or companies that specifically benefited; and (2) Allocated/Indirect costs—costs incurred by one company that benefit multiple companies, but cannot be directly identified and assigned. The CAM sets forth the methodology and logical allocation factors that establish a reasonable link between the cost causer(s) and cost recovery.

Q. CAN YOU PROVIDE EXAMPLES?

A. Yes. First, costs that are incurred by each of the Applicants as part of providing utility services in their service areas in Arizona are direct costs, and thus are neither assigned nor allocated under the CAM. Second, costs that are incurred by APUC, LUCC, LUCo or LUSC for the exclusive benefit of any utility's operations are directly assigned to that utility in accordance with the CAM. Third, costs that are incurred by APUC, LUCC, LUCo or LUSC that benefit multiple companies within the APUC corporate family are allocated using defined allocation methodologies described in the CAM. Fourth, regional costs that benefit the entities within the West Region are either directly assigned to the utility within the region or allocated using the Regional Four-Factor Methodology. Finally, Liberty Sub Corp. incurs costs for the benefit of the Arizona and Texas utilities that are allocated based on a local four-factor methodology.

Q. WHEN WAS THE CAM MOST RECENTLY UPDATED AND WHAT WERE THE SIGNIFICANT CHANGES?

A. The CAM was last updated in January 2017. With this update, the Utility Four-Factor weightings were updated and the regional operating structure and allocation methodology was established.

Q. HAS THE CAM BEEN INDEPENDENTLY REVIEWED?

A. Yes. Most recently, in April 2021, LUCC engaged PricewaterhouseCoopers LLP ("PwC") to assess the processes for capturing, assigning and allocating

holding/service company costs incurred as described in the CAM and to assess the CAM's compliance with guidance provided by NARUC and Federal Energy Regulatory Commission ("FERC"). PwC also assessed whether the allocations described in the CAM are based on cost-causative factors (e.g., direct charging, indirect attribution) or a multi-factor general allocator that are designed to prevent cross-subsidization (e.g., regulated versus unregulated affiliates, regulated electric versus regulated gas versus regulated water or wastewater, United States versus Canada). In addition, PwC reviewed the cost allocation workbooks to determine if the costs were actually allocated in accordance with the process stated in the CAM.

In July 2021, PwC issued their report, which is attached as Exhibit JS-DT3. PwC concluded that the methodologies for capturing and allocating parent and shared services costs to affiliates are reasonable, supportable and consistent with NARUC and FERC guidance, and that the results of the transaction testing found that the mechanics of the allocation process are working as designed.[7]

D. <u>INDOH</u>.

Q. WHAT IS INDOH?

A. Indirect overhead or "INDOH" refers to the portion of administration and general ("A&G") costs that support capital projects and, in turn, are capitalized.

Q. DOES THE CAM ADDRESS INDOH?

A. No. The purpose of the CAM is to describe the shared services provided and charged by APUC, LUCC and LUSC to the affiliates and subsidiaries within the APUC/Liberty family of businesses. Although the CAM defines and describes how the shared services costs (which are recorded as A&G costs) are assigned or allocated to the regulated utilities like Liberty Gold Canyon and Liberty EDO, the CAM does

[7] Exhibit JS-DT3, PwC Assessment of the CAM, page 6.

not define or describe the process for capitalizing a portion of the A&G costs that are indirectly incurred for the benefit of capital or construction projects.

Q. WHY ARE SUCH COSTS NOT CAPITALIZED DIRECTLY WITH ASSOCIATED CAPITAL PROJECTS?

A. Shared services departments perform many tasks that are essential to support capital and construction projects. To the extent that a task can be directly identified to a capital or construction project, it should be directly charged to the capital work order in accordance with the CAM. However, there are many shared services that are indirectly performed in support of capital projects and recorded as A&G costs. NARUC recognizes the importance of including an appropriate portion of the A&G costs as indirect overhead on construction projects in order to recognize the total cost of a construction project.[8]

Q. BUT AREN'T ALL OF THE ALLOCATED CORPORATE COSTS ALREADY INCLUDED IN THE APPLICANTS' REVENUE REQUIREMENTS AS A&G EXPENSES?

A. No.

Q. PLEASE EXPLAIN.

A. Directly assigned and indirectly allocated shared services costs are initially recorded as A&G expenses on Liberty Sub Corp's books. Then the West Region accounting team applies the effective capitalization rate to the A&G costs to determine the INDOH amount. The INDOH is then credited out of the A&G expenses and apportioned, as a debit amount, to the open Arizona and Texas utilities' capital projects.

[8] *See* NARUC Guidelines for Cost Allocations and Affiliate Transactions.

Q. HOW IS INDOH INCORPORATED INTO APPLICANTS' RATES?

A. When the construction projects are completed and placed into service, the INDOH is capitalized as part of the asset on the utility's books and included as part of rate base.[9]

Q. DOES NARUC SUPPORT CAPITALIZATION OF INDOH?

A. Yes. According to NARUC USOA Account Instruction 20(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 allowances 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.

Instruction 20(B) further provides –

> As far as practicable, the determination of payroll charges includible in construction overheads shall be based on time card distribution 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.

Q. HAS LIBERTY UTILITIES FOLLOWED NARUC'S INSTRUCTIONS?

A. In my opinion, yes. As previously discussed in my testimony, whenever possible shared services costs are directly charged to capital projects and capitalized as a direct cost of the project. Because it is not always practical for shared services employees to directly charge to capital projects that their activities support, Liberty Utilities has used special studies to determine an appropriate capitalization rate for

[9] Gross Utility Plant in Service, Schedule B-1.

the shared services performed in support of capital projects. Liberty Utilities periodically reviews and refreshes these studies to ensure the capitalization rate applied to the A&G costs is updated as the capital investment program changes over time. The most recently updated capitalization rate was determined in 2021, resulting in a rate very close to the capitalization rate supported by the 2018 study.

Q. WHAT CAPITALIZATION RATE IS USED AND HOW WAS THE RATE DETERMINED?

A. During the test year, a capitalization rate of 32.08 percent was used for the derivation of INDOH applied to Liberty Gold Canyon and Liberty EDO capital projects. The capitalization rate was determined from a study conducted by PA Consulting in 2018 and 2019. In November 2020, LUCC engaged PwC to develop and conduct a new time study to determine the percentage of time spent by shared services employees in support of capital projects.

Q. WHAT WAS THE RESULT OF THE PWC STUDY?

A. In July 2021, PwC completed its time study of the West Region shared services employees and determined that a capitalization rate of 32.43 percent is reasonable and supportable. A copy of their report is attached as Exhibit JS-DT4.

E. <u>Prior Regulatory Treatment of Shared Services Costs and CAM</u>.

Q. DO YOU AGREE THAT LIBERTY'S AFFILIATED TRANSACTIONS ACTUALLY HAVE A LONG HISTORY BEFORE THE COMMISSION IN ARIZONA?

A. Yes. Although I have only participated in one prior rate case in Arizona on behalf of Liberty Utilities (the recent Liberty Black Mountain rate case I discussed earlier), by my count, there have already been 13 rate cases in Arizona involving allocated costs from affiliated transactions. I have attached a list of these cases to my direct testimony as Exhibit JS-DT5.

Q. DID YOU RELY ON ANY OF THESE PRIOR COMMISSION DECISIONS IN PREPARING YOUR DIRECT TESTIMONY IN THIS RATE CASE, MS. SCHWARTZ?

A. Specifically, no. The first few cases, those decided before there was a CAM, do not bear any similarity to how corporate support services are shared and allocated today. These cases are noted as "Pre-CAM" in Exhibit JS-DT5. However, after the first CAM was introduced in Arizona, it appears that every rate case involving a Liberty Utilities' company has been settled in some manner. These rate cases are noted as "Settled" in my exhibit.

Nevertheless, I chose not to rely on these cases in my direct testimony on shared services because I wanted to avoid the potential legal disputes about whether settlements are precedential and have meaning in future rate cases and/or the potential concerns over rate cases in which I was not a witness. That stuff is for lawyers. Instead, I focused on the fact that the Applicants have the burden to show in this rate case that all of the shared services costs in rate base and operating expenses are reasonable and necessary costs of services.

Q. DO THESE "SETTLED CASES" INVOLVE A SIMILAR CAM AND SHARED SERVICES COSTS AS THE APPLICANTS NOW SEEK TO RECOVER IN THIS RATE CASE?

A. Generally, yes. While the CAM has been updated a few times and we are continuing to make refinements and improvements in the allocation process and methodologies, the general CAM approach started in Arizona in these "Settled" cases has been the basic model for Liberty Utilities' regulated operations in the U.S. ever since. I think the "settlements" in the later "Settled" cases listed in my Exhibit JS-DT5 also show the increasing understanding and acceptance of these shared costs amongst Staff and the Commission, and RUCO to a less consistent extent, that has taken place in

Arizona since the CAM was first introduced.[10]

Q. THANK YOU. YOU ALSO MENTIONED KNOWLEDGE OF DECISIONS ISSUED IN RECENT RATE CASES IN LIBERTY UTILITIES' CENTRAL REGION. CAN YOU DISCUSS THE RECOVERY OF COST ALLOCATIONS IN THOSE PROCEEDINGS?

A. Yes, in The Empire District Electric Company's ("Empire") most recent rate case in Missouri, the Missouri commission issued an Amended Report and Order dated July 23, 2020, in Docket No. ER-2019-0374 with detailed findings of fact relating to the benefits of the APUC/Liberty shared service model. In that decision, the Missouri commission found as follows:

> Empire is part of a multi-layered corporate structure. It is directly owned by LUCo, which in turn is owned by a string of affiliated companies, and ultimately by APUC. Empire receives a variety of corporate, administrative and support services from a number of upstream affiliated entities, as well as support services from Liberty Utilities Service Corp (LUSC).[11]

The Commission then made the following specific findings in that decision:

> 333. Liberty Utilities, through LUSC and Liberty Utilities (Canada) Corp., provides some services on a shared basis to Empire where there is an opportunity to realize economies of scale or other efficiencies. These services are provided and charged based on a direct charge or a defined cost allocation methodology as set forth in APUC's Cost Allocation Manual (CAM).
>
> 334. APUC's CAM is based on the National Association of Regulatory Utility Commissions (NARUC) Guidelines for

[10] *See, e.g.*, *Liberty Utilities (Rio Rico Water & Sewer) Corp.*, Decision No. 73396 (July 30, 2013) at 14:15-22; *Liberty Utilities (Litchfield Park Water & Sewer) Corp.*, Decision No. 74437 (April 18, 2014), Exhibit A (Proposed Settlement Agreement) at 2 ¶ 1.5; *Liberty Utilities (Bella Vista Water) Corp. and Liberty Utilities (Rio Rico Water & Sewer) Corp.*, Decision No. 75809 (November 21, 2016), Exhibit A (Comprehensive Settlement Agreement) at 11 ¶ 3.3.4; *Liberty EDO*, Decision No. 76019 (March 22, 2017), Exhibit A (Comprehensive Settlement Agreement) at 6 ¶ 2.3.3; *Liberty Utilities (Litchfield Park Water & Sewer) Corp.*, Decision No. 76799 (August 15, 2018); *Liberty Black Mountain*, Decision No. 78017 (May 18, 2021) at 44:16-22, 46:21-24.

[11] Amended Report and Order, p. 129 ¶ 332.

Cost Allocations and Affiliate Transactions. The fundamental premise of those guidelines and the CAM is to directly charge costs as much as possible and to use reasonable allocation factors where allocation of indirect costs is necessary and direct charging is not possible.

335. All costs incurred that are directly related to a specific affiliate company or business unit are directly charged to that company or business unit. Costs that are not directly related to a specific utility are indirectly allocated between the regulated and unregulated business units using two Corporate Allocation Methods for business services and corporate services as described in the CAM.

338. APUC provides benefits to its subsidiaries by providing financing, financial control, legal, executive and strategic management and related services. The services provided by APUC are necessary for all affiliates to have access to capital markets for funding of capital projects and operations.

345. Providing corporate services to a number of affiliates on a centralized basis, as is done for Empire by the APUC upstream affiliates, is expected to be inherently more cost-effective than having each affiliate, including regulated utilities, provide the services for themselves.

346. For affiliate transactions between regulated and service companies, APUC upstream affiliate charges are calculated at cost, with no profit margin included in the charges to affiliates.

347. Staff supports the concept of centralized provision of services to utilities in the situation where multiple affiliated entities exist under the corporate umbrella, as is the case with Empire.

358. The regulatory concerns when reviewing affiliate transactions include whether the allocated costs reasonably relate to the regulated operations of the utility and are incurred to benefit the utility and its customers, and are not excessive given their intended benefit.

360. The inherent cost efficiencies embedded within the shared services model employed for Empire, and also commonly found with other utilities, is that transfer of services at cost is generally a reasonable alternative to employment of competitive bidding or other market pricing methodology for services received by regulated utilities from service company affiliates. [12]

[12] Amended Report and Order, pp. 129-135 ¶¶ 333-360.

Q. WHAT DO YOU BELIEVE THESE FINDINGS ILLUSTRATE?

A. While I understand that decisions rendered in other jurisdictions are informative only and are not precedential in other jurisdictions, I believe that the Missouri commission's decision in that case demonstrates that the shared corporate services and costs allocated through the CAM are reasonable, prudent and comply with NARUC guidelines.

F. <u>Applicants' Shared Services Costs</u>.

Q. WHAT AMOUNT OF CORPORATE SHARED SERVICES COSTS WERE ALLOCATED TO THE APPLICANTS DURING THE TEST YEAR?

A. During the test year, Liberty Sub Corp received approximately $5,200,000 of indirect allocations from APUC, LUCC and LUSC shared services allocated and billed during 2020 in accordance with the methodologies defined in the CAM. After costs were allocated to Liberty Sub Corp, those costs were further allocated to the operating utilities in Arizona and Texas. Of the $5,200,000 allocated from APUC, LUCC and LUSC, Liberty Gold Canyon received approximately $372,000 and Liberty EDO received approximately $36,000.

Q. ARE SHARED SERVICES PROVIDED TO APPLICANTS AT THE FULLY DISTRIBUTED COST OF PROVIDING THOSE SERVICES?

A. Yes. Costs are assigned either through a direct or allocated approach. Costs that cannot be directly assigned or indirectly allocated (e.g., general and administrative) must be included in the fully distributed cost calculation through a general allocation. Therefore, we go through this analysis of the shared services costs on a regular basis.

Q. DO ANY OF THE AFFILIATES PROFIT FROM THE SERVICES PROVIDED TO APPLICANTS?

A. No. All charges reflect the actual cost of providing that service or product. Affiliates are not charging or seeking a profit margin or other form of affiliated profit.

Q. IS IT POSSIBLE THAT APPLICANTS COULD POTENTIALLY BE SUBSIDIZING NON-REGULATED AFFILIATES?

A. No. The CAM is designed to limit cross subsidizations in this manner. Additionally, as previously mentioned, our corporate services are provided at cost, which is determined by prevailing wages/benefits and actual incurred expenses.

Q. THANK YOU, MS. SCHWARTZ. ONE FINAL QUESTION ON SHARED SERVICES – WOULD ANY OF YOUR TESTIMONY APPLY DIFFERENTLY TO LIBERTY GOLD CANYON (CONSOLIDATED)?

A. No, there will just be one entity with roughly the same pro rata share currently applicable to two entities.

IV. <u>RATE CASE EXPENSE</u>.

Q. YOU MENTIONED IN YOUR OVERVIEW SECTION THAT APPLICANTS SEEK TO RECOVER RATE CASE EXPENSES THROUGH A SURCHARGE.

A. Yes, that is correct. Liberty understands that rate case expense surcharges are becoming more frequent in Arizona as a means of ensuring that utilities recover their authorized rate case expense, no more and no less. As long as utilities are allowed an actual chance to recover the full amount of authorized rate case expense, this process should ultimately be fair to the Applicants and customers.

Q. DID YOU START WITH A TOTAL ESTIMATED RATE CASE EXPENSE?

A. Yes. After consultation with legal counsel and Mr. Bourassa, and consideration of other recent Liberty Utilities' rate cases in Arizona, it was estimated that Applicants would likely incur an estimated actual rate case expense of no less than $450,000. Based on that current estimated level of rate case expense, we have included $450,000 in our rate case expense surcharge calculations.

Q. WHY DID YOU CHARACTERIZE THIS AMOUNT AS THE "CURRENT ESTIMATED LEVEL," MS. SCHWARTZ?

A. Because at this stage of the proceeding, we can only estimate rate case expense. The number of parties, the scope of discovery, whether there are multiple procedural matters, the number of issues in dispute, the number of hearing days and need for closing briefs are all factors we must consider and can only project potential costs for at this stage.

Q. DOES THAT MEAN THE TOTAL AUTHORIZED RATE CASE EXPENSE REQUESTED MAY BE ADJUSTED LATER IN THE PROCEEDINGS?

A. Yes, up or down, as necessary to more closely approximate the actual amount of rate case expense incurred by the Applicants to obtain a determination of fair value rate base and the setting of new rates.

Q. BASED ON THE CURRENT ESTIMATED LEVEL OF RATE CASE EXPENSE, WHAT ARE THE ESTIMATED RATE CASE EXPENSE SURCHARGES?

A. If the Commission approves the proposed consolidation, Liberty Gold Canyon (Consolidated) would implement a monthly rate case expense surcharge estimated at $3.03 for two years. On a stand-alone basis, we have calculated a Liberty Gold Canyon monthly surcharge of $2.92 and a monthly surcharge of $4.80 for Liberty EDO, each to be collected from customers for a period of two years. These stand-alone surcharges were based on an assumed allocation of 90.65 percent (Liberty Gold Canyon) and 9.35 percent (Liberty EDO) of the rate case expense, respectively.

Q. WHY ARE YOU RECOMMENDING A TWO YEAR RECOVERY PERIOD?

A. It is reasonably expected that the next rate case(s) for Liberty Gold Canyon and Liberty EDO or Liberty Gold Canyon (Consolidated) will be filed within two years of the completion of these rate cases. In addition, assuming the Commission agrees

to the proposed consolidation, we have assumed it would want to revisit the rates again sooner rather than later.

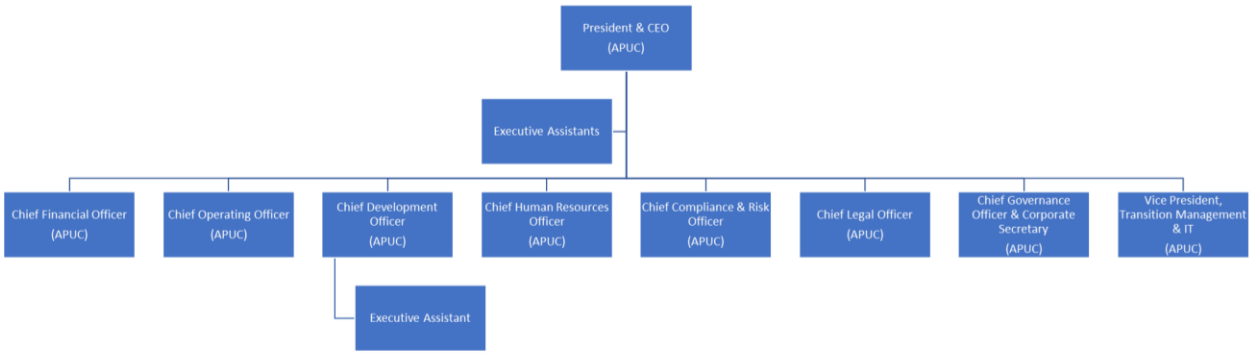
Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY ON BEHALF OF THE APPLICANTS?

A. Yes.

EXHIBIT JS-DT1

ALGONQUIN POWER & UTILITIES CORP.

Outline & Summary of Shared Services Model



Algonquin Power & Utilities Corp. ("APUC") is the ultimate corporate parent, providing financial management, strategic management, corporate governance, administrative and support services to Liberty Utilities, Liberty Power, and its international utilities in Chile and Bermuda. APUC is a publicly traded holding company and provides substantial benefits to its regulated utilities and generation facilities through executive management, access to capital markets and the issuance of long-term debt and equity, and access to short-term credit facilities.

APUC incurs the following types of costs: (i) strategic management costs (board of director, third-party legal services, accounting services, tax planning and filings, insurance, and required auditing); (ii) capital access costs (communications, investor relations, trustee fees, escrow and transfer agent fees); (iii) financial control costs (audit and tax expenses); and (iv) administrative (rent, depreciation, general office costs).

Liberty Utilities (Canada) Corp. ("Liberty Utilities Canada") provides Liberty Utilities (and its regulated utilities) and Liberty Power with the following services: accounting, administration, corporate finance, human resources (including training and development), information technology, rates and regulatory affairs, environment, health and safety, and security, customer service, procurement, risk management, legal, and utility planning. Specific examples of these services include, but are not limited to: (i) budgeting, forecasting, and financial reporting services including preparation of reports and preservation of records, cash management (including electronic fund transfers, cash receipts processing, managing short-term borrowings and investments with third parties); (ii) development of customer service policies and procedures; (iii) development of human resource policies and procedures; (iv) selection of information systems and equipment for accounting, engineering, administration, customer service, emergency restoration and other functions and implementation thereof; (v) development, placement and administration of insurance coverages and employee benefit programs, including group insurance and retirement annuities, property inspections and valuations for insurance; (vi) purchasing services including

preparation and analysis of product specifications, requests for proposals and similar solicitations; and vendor and vendor-product evaluations; and (vii) development of regulatory strategy.

A shared services business unit called Liberty Algonquin Business Services ("LABS") provides shared services to Liberty Utilities and Liberty Power. LABS includes employees based both in Canada ("LABS Canada") and the United States ("LABS US"). LABS provides accounting, administration, corporate finance, human resources, training, information technology, rates and regulatory affairs, environment, health and safety, and security, customer service, procurement, risk management, legal, and utility planning to both Liberty Utiliites (and its regulated utilities) and Liberty Power.

This shared services business model allows the company to charge or allocate costs to entities within and across the entire APUC umbrella of companies. By allocating shared corporate services over the entire organization under our Cost Allocation Manual, regulated utilities such as Liberty Utilities (Gold Canyon Sewer) Corp. ("Liberty Gold Canyon") and Liberty Utilities (Entrada Del Oro Sewer) Corp. ("Liberty EDO") have access to a vast array of services that would be more costly to obtain or would be less robust than if the utilities operated on a stand-alone basis.

In addition to APUC, Liberty Utilities Canada, and LABS, the operating utilities are organized under a regional structure. This regionalization provides a more effective management and reporting hierarchy by allowing groups of state or commodity utilities to report to regional managers for specific functions. These state utility employees also have a dotted line reporting relationship to the state President. This regional structure offers several benefits. First, it allows the state Presidents to focus on overall utility operations, state utility commission processes, customer satisfaction and community relations rather than managing individuals with a wide range of functional responsibilities. Second, this structure also allows for a sharing of expertise among states and provides for some common support functions that would be too cumbersome to provide at a corporate level and too costly to support at an individual state/utility level. Last, the regional structure provides for a manageable span of control for the number of individuals reporting to a single manager. That reporting structure is more efficient and results in better overall operation and management.

The benefits of this shared service model are significant, including:

1. Access to Skilled Strategic Management. This means Liberty Gold Canyon and Liberty EDO and the other regulated utilities in Arizona enjoy access to wide ranging expertise and resources. That is a direct result of the nationwide utility footprint of Liberty Utilities and is a direct result of our shared services model.

2. Controls and Processes. Through this business model, controls and processes are in place to ensure that accounting methodologies are consistent with generally accepted accounting principles. That means that Liberty Gold Canyon and Liberty EDO benefit from sound accounting, financial, capital investment and operational expertise.

3. Economies of Scale. By sharing nationwide and regional resources with other utilities, Liberty Gold Canyon and Liberty EDO enjoy the benefits of lower overall cost structures while at

the same time maintaining a local flavor in its day-to-day operations and customer contact. Further, as the Liberty Utilities portfolio grows, its overall costs will increase proportionally less than they would if Liberty Gold Canyon and Liberty EDO were operating without this support.

4. Access to Capital. APUC is the entity that is traded on the Toronto Stock Exchange and New York Stock Exchange and ensures that its regulated utilities have uninterrupted access to capital. Through this business model, Liberty Utilities and its regulated utilities (including Liberty Gold Canyon and Liberty EDO and the other Arizona regulated utilities) have substantial access to capital (both debt and equity) to fund utility operations, improvements and acquisitions. APUC has access to the equity and debt capital markets as recently demonstrated by its issuance of 23.0 million equity units in June 2021, raising gross proceeds of $1.15 billion, while its US-based subsidiary, Liberty Utilities, has raised $1.9 billion in private debt placements since 2012, the most recent being a $600 million 10-year note issuance in September 2020. This capital markets activity is used to fund capital investment, acquisitions and growth.

As outlined above and in accordance with the CAM, Liberty Gold Canyon and Liberty EDO receive the following allocations of corporate cost pools:

APUC – Liberty Gold Canyon and Liberty EDO receive an allocation of labor and non-labor costs incurred for the APUC executive leadership team that provides financial and strategic management, corporate governance, and oversight of administrative support services to Liberty Utilities, Liberty Power, and their subsidiaries, as well as the international subsidiaries in Chile and Bermuda. Liberty Gold Canyon and Liberty EDO also receive an allocation of costs incurred by APUC for strategic management (board of director, third-party legal services, accounting services, tax planning and filings, insurance and required auditing), capital access costs (communications, investor relations, trustee fees, escrow and transfer agent fees), financial controls costs (audit and tax expenses), and other administrative costs (general office costs, rent, depreciation).

Liberty Utilities Canada – Liberty Gold Canyon and Liberty EDO receive allocations of labor and non-labor costs incurred by Liberty Utilities Canada for regulated company services (executive, regulatory strategy, energy procurement, operations, utility planning, customer experience, and administration) provided to Liberty Utilities and its subsidiaries. These allocations of services are provided by employees physically located in Canada, who are employed by Liberty Utilities (Canada) Corp.

LABS Canada – Liberty Gold Canyon and Liberty EDO also receive an allocation of shared services costs provided under the LABS shared services business unit by Canadian-based employees, employed by Liberty Utilities Canada.

Liberty Utilities Service Corp. ("LUSC") – Liberty Gold Canyon and Liberty EDO receive allocations of labor and non-labor costs incurred for regulated company services (executive, regulatory, energy procurement, operations, utility planning, customer experience, and administration) provided to Liberty Utilities and its subsidiaries. These allocations of services are provided by U.S.-based employees who are employed by LUSC.

Regulated services provided by U.S.-based, LUSC employees can be categorized as those provided: 1) to a specific utility (i.e. Liberty Gold Canyon), 2) to a region (i.e. West Region), or 3) to all of Liberty Utilities and its regulated subsidiaries.

1) Costs incurred by LUSC employees dedicated to a specific utility, like Liberty Gold Canyon or Liberty EDO, are directly charged and incurred by the utility. These costs are not included in the monthly intercompany corporate allocation billings.

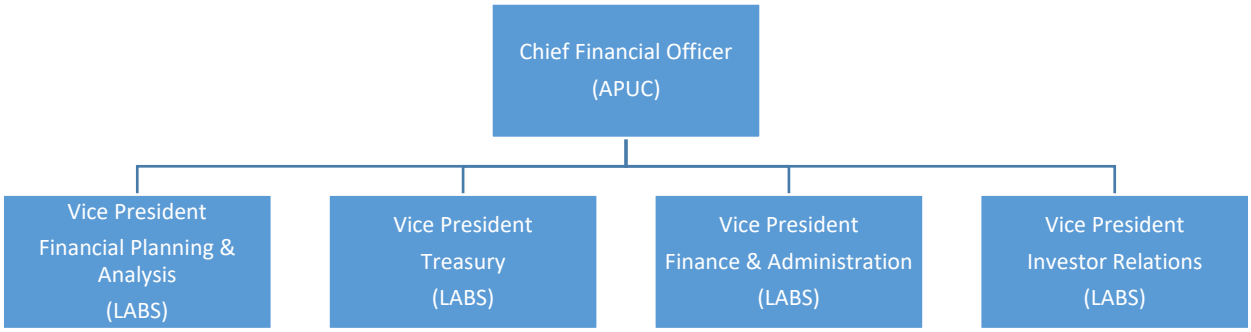
2) Liberty Gold Canyon and Liberty EDO receive an allocation of services provided by LUSC employees for the West Region. LUSC employees providing services to the West Region are reflected on the APUC organizational chart as "LUSC – West Region".

3) Liberty Gold Canyon and Liberty EDO receive an allocation of regulated services provided by U.S.-based employees on behalf of all Liberty Utilities regulated subsidiaries. LUSC employees providing services to Liberty Utilities and all regulated subsidiaries are reflected on the APUC organizational chart as "LUSC – Corp. US".

LABS US – Liberty Gold Canyon and Liberty EDO also receive an allocation of shared services costs provided under the LABS shared services business unit by U.S.-based employees, employed by LUSC.

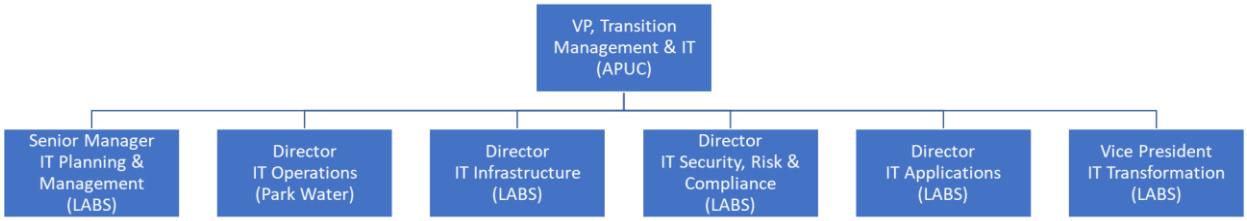
As of January 2021, APUC and its subsidiaries had a total of 2,666 employees. There are 26 employees based in Oakville who provide the regulated company services described above to Liberty Utilities, including Liberty Gold Canyon and Liberty EDO. There were 363 employees who provide shared services to Liberty Power and Liberty Utilities through the LABS business unit, and 379 employees in the West Region. Specifically in Arizona, there were 128 employees dedicated to provide Human Resources, Finance, Regulatory, Operations, Engineering and Customer Service functions to Liberty Utilities (Sub) Corp. There were also 12 employees who provide shared services to all of the utilities with the West Region jurisdictions. The below organization charts reflect the leadership positions of each department, and do not include all of the employees in the APUC organization.

FINANCE / TREASURY



The Finance / Treasury organization ensures that our regulated utilities meet audit standards and regulatory requirements, have strong financial and operational controls, and are recording financial transactions accurately and prudently. Finance/Treasury also manages and coordinates financing for capital projects for the regulated utilities along with capital planning and related services.

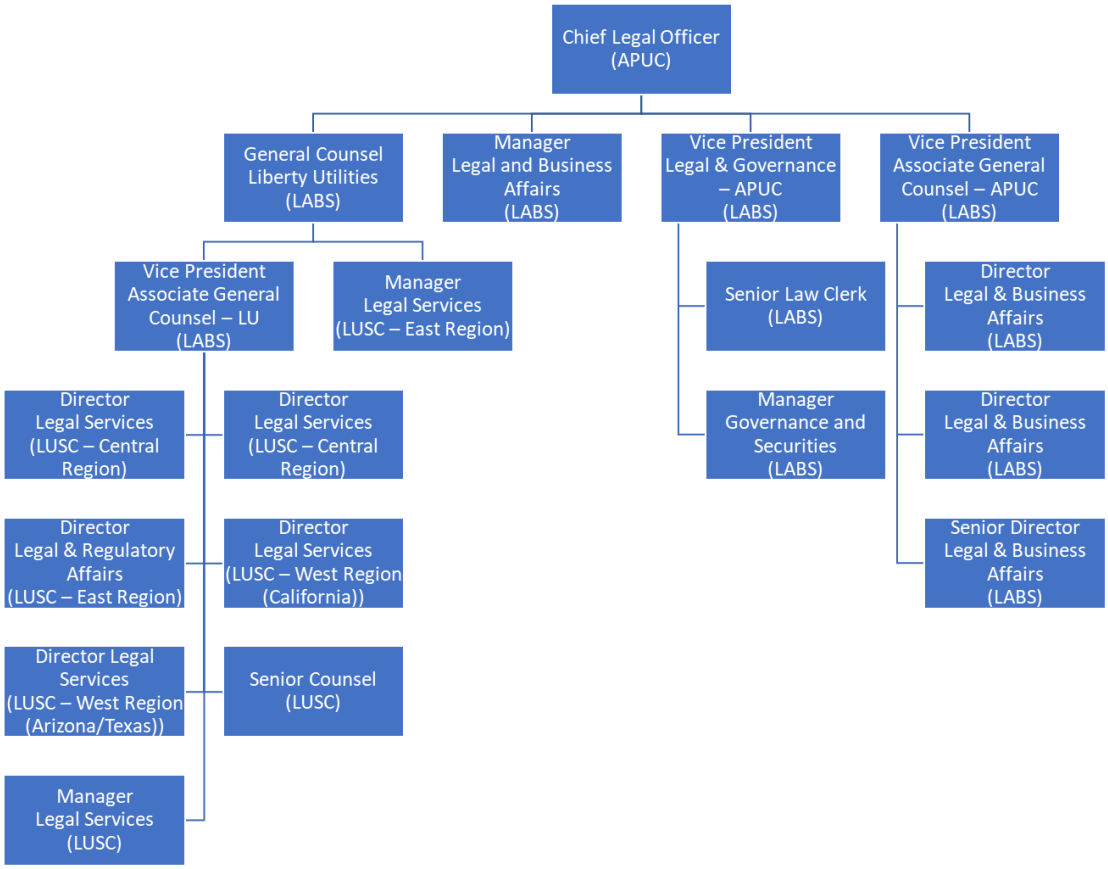
INFORMATION TECHNOLOGY and TRANSFORMATION



The information technology and transformation organizations support services related to IT and Transformation/IT, providing enterprise-wide IT architecture, support and related services

to multiple functions throughout the Company that are essential to the day-to-day provision of utility services.

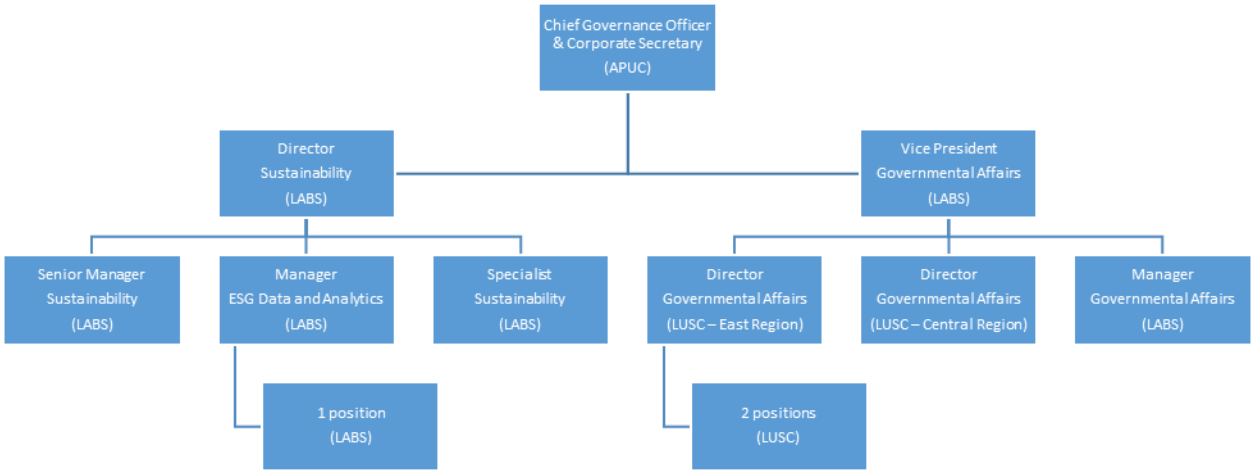
LEGAL



The Chief Legal Officer oversees all general legal matters pertaining to all entities owned by APUC. These legal services involve legal matters not specific to any single entity, including review of audited financial statements, annual information filings, Sedar filings, review of contracts, incorporation, tax issues of a legal nature, market compliance, and other legal issues.

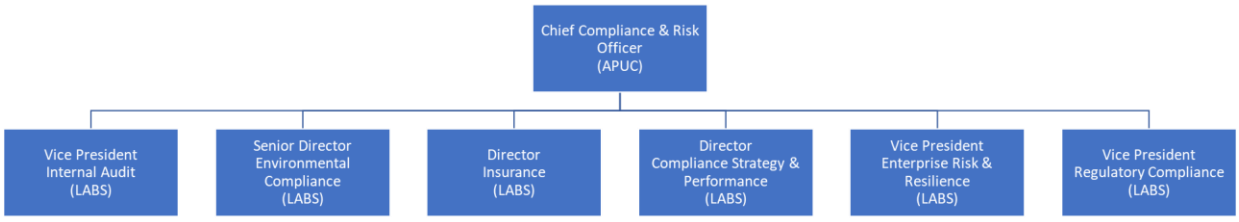
The Legal Department helps to ensure that APUC and its subsidiaries remain compliant in all aspects of operations and regulation, and prevents those entities from being exposed to unnecessary risks. The Legal Department also provides legal services relating to all aspects of utility operations, including financing, regulatory matters, procurement, rate cases, contracts, litigation, and other similar matters.

GOVERNANCE



This shared services model also provides significant corporate governance, which is led by the Chief Governance Officer and Corporate Secretary. The Governmental Affairs Department is led by its Vice President, Governmental Affairs, who is responsible for identifying and monitoring legislative and other measures that may impact Liberty's businesses (including the regulated utilities) and mitigating that risk and/or addressing those measures, in turn promoting effective operations, and building robust relationships with stakeholders on the state, regional and federal level. The Governance Department also manages the corporate affairs of all companies, including the regulated utilities.

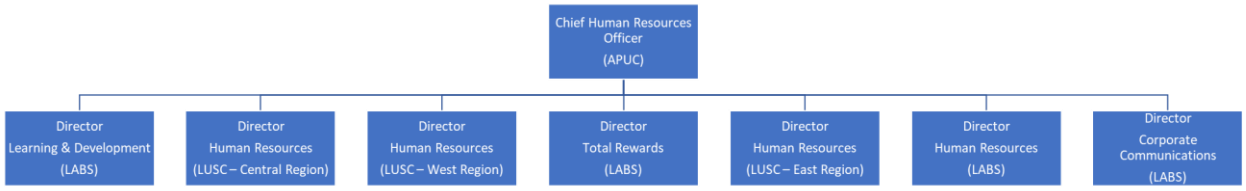
COMPLIANCE



The Company's Compliance functions fall within the Compliance Department, which is led by the Chief Compliance and Risk Officer. The Chief Compliance and Risk Officer is responsible for Internal Audit, Environmental, Insurance, Compliance Strategy and Performance, Enterprise Risk and Resilience, and Regulatory Compliance. Compliance functions include developing corporate compliance policies, the providing ongoing advice relating to compliance with those policies, developing business continuity plans to address risks such as the covid-19 pandemic that we currently face, complying with FERC and NERC requirements for jurisdictional assets and transactions, mitigating risks associated with compliance with various regulatory requirements, and providing physical security for APUC's facilities.

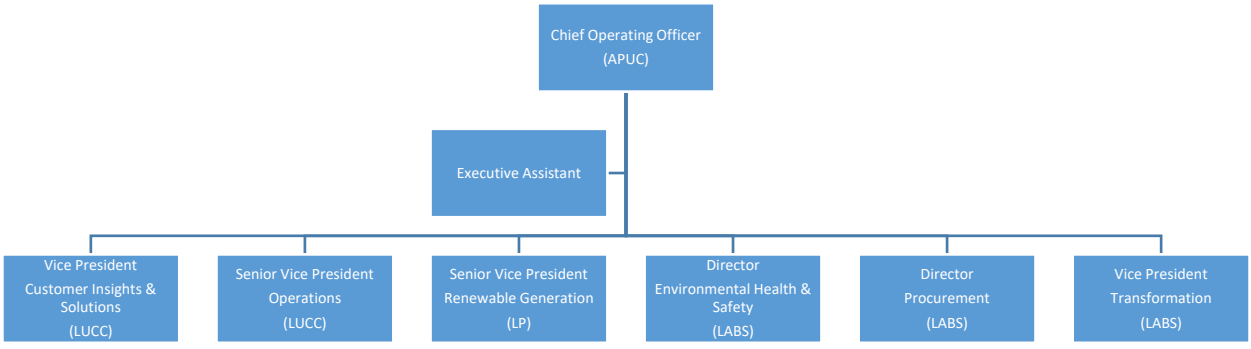
Audits are done annually and reviews are performed quarterly on all facilities owned by APUC on an aggregate level. These corporate parent level audits reduce the cost of the stand-alone audits. Customers receive benefits of additional financial rigor, as well as access to capital, and financial soundness checks by independent third parties.

HUMAN RESOURCES



The Human Resources functions are led by the Chief Human Resources Officer. The Chief Human Resources Officer is responsible for Learning and Development, Environment, Health and Safety, Total Rewards, Corporate Communications, and the regional Human Resources teams. The Human Resources functions include the training and development of employees, ensuring employees are provided healthy and safe work environments, and receive competitive salaries and benefits. The Human Resources services are critical to ensuring that APUC's most valuable assets, our employees, are satisfied and engaged which minimizes employee turnover and associated costs.

OPERATIONS



This shared services model also provides Liberty Gold Canyon and Liberty EDO with operational, engineering and procurement services. For example, there are modality teams for the various businesses within the APUC family. The water modality team provides a means for regularly sharing best practices and experience among the various water and sewer utilities across the country. The regulated utilities under Liberty Utilities are able to take advantage of favorable terms for procurement of services and materials under this model, as well as leverage operational and engineering expertise across the Liberty Utilities footprint.

EXHIBIT JS-DT2

ALGONQUIN POWER & UTILITIES CORP.

COST ALLOCATION MANUAL

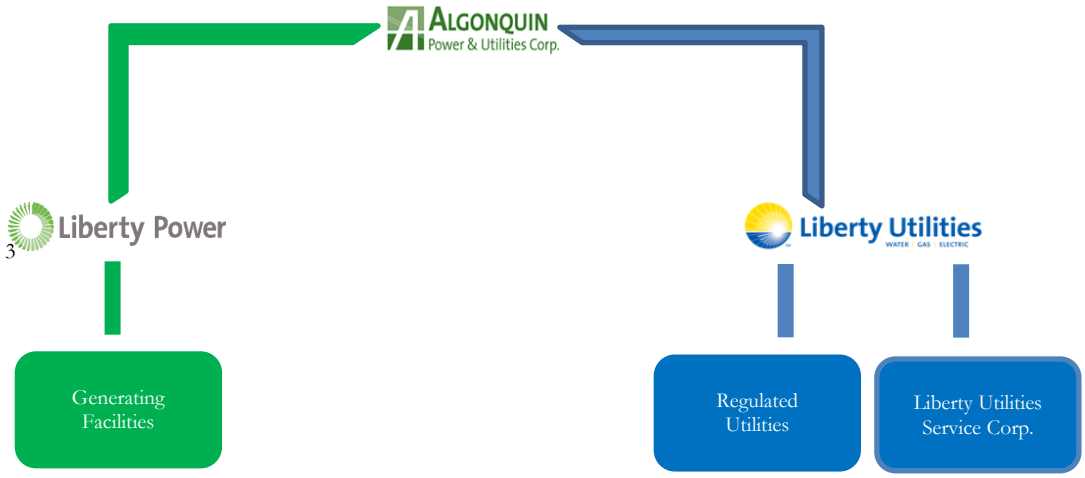
V2017 Effective: January 1st, 2017

TABLE OF CONTENTS

1. INTRODUCTION

The purpose of this manual is to provide a detailed explanation of services provided by Algonquin Power & Utilities Corp ("APUC") and its affiliates to other entities within the APUC family of businesses and to describe the Direct Charge[1] and Indirect Charge[2] Methodologies used for those services. The following organization chart identifies, at a high level, the corporate structure of APUC.

Figure 1: Simplified APUC Corporate Structure



This Cost Allocation Manual ("CAM") has been completed in accordance and conformance with the *NARUC Guidelines for Cost Allocations and Affiliate Transactions* ("NARUC Guidelines"). More specifically, the founding principles of this Cost Allocation Manual are to a) directly charge as much as possible to the entity that procures any specific service, and b)

[1] Direct charges (sometimes referred to as assigned costs) are costs incurred by one company for the exclusive benefit of, or specifically identified with, one or more other companies, and which are directly charged (or assigned) to the company or companies that specifically benefited. Under the NARUC Guidelines, "Direct Costs" are defined as "costs which can be specifically identified with a specific service or product."

[2] Indirect charges (sometimes referred to as allocated costs) are costs incurred by one company that are for the benefit of either (a) all of the APUC companies or (b) all of the regulated companies, and which are charged to the benefited companies using a methodology and set of logical allocation factors that establish a reasonable link between cost causation and cost recovery. Under the NARUC Guidelines, "Indirect Costs" are defined as "costs that cannot be identified with a particular service or product. This includes but not limited to overhead costs, administrative, general, and taxes."

[3] As of April 2017, Algonquin Power Co. (APCo) is doing business under the name Liberty Power. All Liberty Power employees in Canada will become employed by Liberty Utilities (Canada) Corp. in 2017. Liberty Power employees in the United States will remain employed by Algonquin Power Fund (America) Inc.

to ensure that unauthorized subsidization of unregulated activities by regulated activities, and vice versa, does not occur. For ease of reference, the NARUC Guidelines are attached as Appendix 1.

Costs allocated can take the form of: direct labor, direct material, direct purchased services and indirect charges (as described in Tables 1, 4a and 4b in this CAM). These costs are charged by the providing party to the receiving part at fully distributed costs.

2. THE APUC CORPORATE STRUCTURE

APUC owns a widely diversified portfolio of independent power production facilities and regulated utilities[4] consisting of water distribution, wastewater treatment, electric and gas distribution utilities. While power production facilities are located in both Canada and the United States, regulated distribution utility operations are located in the United States.[5] APUC is publicly traded on the New York Stock Exchange and the Toronto Stock Exchange[6]. APUC's structure as a publicly traded holding company provides substantial benefits to its regulated utilities through access to capital markets.

APUC is the ultimate corporate parent that provides financial and strategic management, corporate governance, and oversight of administrative and support services to Liberty Utilities (Canada) Corp. ("LUC") and its subsidiaries as well as to Algonquin Power Co. ("APCo") d/b/a Liberty Power and its subsidiaries. The services provided by APUC are necessary for all affiliates, including LUC and the regulated utility subsidiaries of Liberty Utilities Co. (referred to as "Liberty Utilities"), to have access to capital markets for capital projects and operations. These services are expensed at APUC and are performed for the benefit of Liberty Power and Liberty Utilities and their respective businesses.

APUC and its affiliates benefit from APUC's expertise and access to the capital markets through the use of certain shared services, which maximizes economies of scale and minimizes redundancy. In short, it provides for maximum expertise at lower costs. Further,

[4] All distribution and transmission utilities are owned, either directly or indirectly, by Liberty Utilities Co., which is itself indirectly owned by Liberty Utilities (Canada) Corp.

[5] Algonquin Tinker Gen Co. owns transmission assets in New Brunswick, Canada, which are subject to regulation by the New Brunswick Energy and Utilities Board.

[6] Common shares, preferred shares, and instalment receipts of APUC are traded on the Toronto Stock Exchange under the symbols AQN, AQN.PR.A, AQN.PR.D, and AQN.IR. APUC's common shares are also listed on the New York Stock Exchange under the symbol AQN. Additional corporate information can be found at the company's website, algonquinpower.com.

the use of shared expertise allows each of the entities to receive a benefit it may not be able to achieve on a stand-alone basis such as strategic management advice and access to capital at more competitive rates.

3. SCOPE OF SERVICES FROM APUC AND HOW THOSE COSTS ARE DISTRIBUTED

This section provides an overview of the services provided from APUC, and method used to distribute the associated costs for these services throughout the organization.

3.1 Services and Cost Allocation from APUC to Liberty Utilities and Liberty Power

3.1.1 Description of APUC Services and Costs

APUC provides benefits to its subsidiaries by providing financing, financial control, legal, executive and strategic management and related services. APUC charges labor rates for these shared services at cost, which is the dollar hourly rate per employee as recorded in APUC's payroll systems, grossed up for burdens such as payroll taxes, health benefits, retirement plans, other insurance provided to employees, and other employee benefits. These labor costs are charged directly to the entity incurring these costs based on timesheets to the extent possible. If labor is for the benefit of all subsidiaries then the allocation methodologies used for indirect costs are applied. See Appendix 2 for a more detailed discussion of the costs incurred by APUC.

APUC also charges non-labor services which includes Financing Services. Financing Services means the selling of units to public investors in order to generate the funding and capital necessary (be it short term or long term funding, including equity and debt) for the entire organization, including subsidiaries of Liberty Utilities and Liberty Power, as well as providing legal services and other associated costs in connection with the issuance of debt and equity.

In connection with the provision of Financing Services, APUC incurs the following types of costs: (i) strategic management costs (board of director, third-party legal services, accounting services, tax planning and filings, insurance, and required auditing); (ii) capital access costs (communications, investor relations, trustee fees, escrow and transfer agent fees); (iii) financial control costs (audit and tax expenses); and (iv) other administrative costs (examples: rent, depreciation, general office costs).

The capital raised by APUC is used by Liberty Utilities (and its regulated subsidiaries) and Liberty Power for current and future capital investments. The services provided by APUC are critical and necessary to Liberty Utilities and its regulated subsidiaries and Liberty Power because without those services they would not have a readily available source of capital funding. Further, relatively small utilities may have difficulty attracting capital on a stand-alone basis.

Indirect costs from APUC, excluding corporate capital, are pooled and allocated to LUC (and subsequently, to LUC's subsidiaries) and Liberty Power using the method summarized in Table 1. Each corporate cost type, or function, has been reviewed to properly identify the factors driving those costs. Each function or cost type is typically driven by more than one factor and each has been assigned an appropriate weighting. Table 1 includes a brief commentary on the rationale for each cost driver and weighting, along with examples for each cost type.

The services provided by APUC optimize the performance of the utilities, keeping rates low for customers while ensuring access to capital is available. If the utilities did not have access to the services provided by APUC, they would be forced to incur associated costs for financing, capital investment, audits, taxes and other similar services on a stand-alone basis, which would substantially increase such costs. Simply put, without incurring these costs, APUC would not be able to invest capital in its subsidiaries, including the regulated utilities.

Table 1: Summary of Corporate Allocation Method of APUC Indirect Costs

Type of Cost	Allocation Methodology	Rationale	Examples
Legal Costs	Net Plant 33.3% Number of Employees 33.3% O&M 33.3%	This function is driven by factors which include Net Plant, as typically the higher the value of plant, the more legal work it attracts; similarly, a greater number of	Employee labor and related administration and programs; Third party legal services

			employees are typically more indicative of larger facilities that require greater levels of attention; and O&M costs tend to be a third factor indicative of size and legal complexity.	
Tax Services	Revenue O&M Net Plant	33.3% 33.3% 33.3%	This function is driven by a variety of factors that influence the size and relative tax complexity, including Revenues, O&M and Net Plant. Tax activity can be driven by each of these factors.	Employee labor and related administration and programs, including Third party tax advice and services
Audit	Revenue O&M Net Plant	33.3% 33.3% 33.3%	This function is driven by a variety of factors that influence the size and complexity of Audit, including Revenues, O&M and Net Plant. Audit activity can be driven by each of these factors.	Employee labor and related administration and programs, including third party accounting and audit services
Investor Relations	Revenue O&M Net Plant	33.3% 33.3% 33.3%	This function is driven by factors which reflect the relative size and	Employee labor and related administration and programs,

			scope of each affiliate - Revenues, Net Plant and O&M costs.	including third party Investor day communications and materials
Director Fees and Insurance	Revenue O&M Net Plant	33.3% 33.3% 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Board of Director fees, insurance and administration
Licenses, Fees and Permits	Revenue O&M Net Plant	33.3% 33.3% 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Third party costs
Escrow and Transfer Agent Fees	Revenue O&M Net Plant	33.3% 33.3% 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Third party costs
Other Professional Services	Revenue O&M Net Plant	33.3% 33.3% 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Third party costs

Other Administration Costs	Oakville Employees 50% Total Employees 50%	This function is driven by factors which are indicative of number of employees.	Office administration costs. Employee labor and related administration
Executive and Strategic Management	Revenue 33.3% O&M 33.3% Net Plant 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Employee labor and related administration that is not directly attributable to any entity

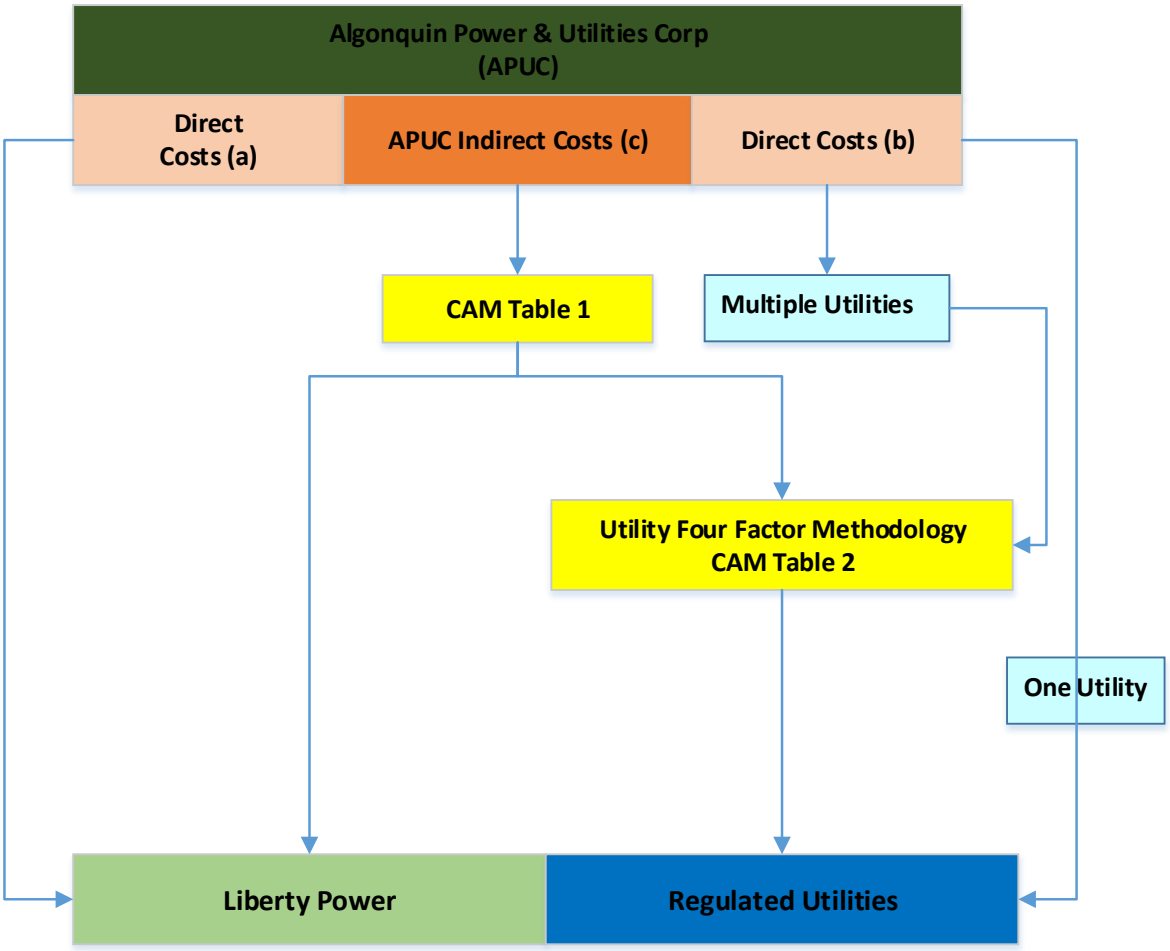
Notwithstanding the above, if a charge is related either solely to the regulated utility business or to the power generation business Liberty Power, then all of those costs will be direct charged, or assigned, to the business segment for which they are incurred. If a cost can be directly attributable to a specific entity, it will be directly charged to that entity.

In the event that organizational realignments occur, resulting in certain other services or costs to come from APUC, any allocations (if any) will be done as per the "Executive and Strategic Management" line in Table 1 above until the CAM is updated.

3.1.2 Description of the APUC Cost Flows

Please refer to Figure 2 for a diagram of the various flows of costs from APUC.

Figure 2: Illustration of APUC Corporate Cost Distributions



(a) Costs that are directly assignable to unregulated companies.
(b) Costs that are directly assignable to one regulated company, or that benefit all regulated operations.
(c) Costs that benefit both unregulated and regulated operations.

As illustrated in Figure 2 and as described above, APUC incurs three types of costs that are passed on to its direct and indirect subsidiaries. The first type is APUC's costs that directly benefit a particular specific unregulated company, which are directly assigned to that unregulated company (i.e., Liberty Power or one of its subsidiaries). The second type is APUC's costs that directly benefit a particular regulated company, which are directly assigned to that regulated company[7]. The third type are APUC's remaining costs that benefit the entire

[7] This could be directly to LUC (which would subsequently be allocated over utility subsidiaries of LUC) or to a specific utility for which the service was necessary.

enterprise (both regulated and unregulated), which are allocated between regulated and unregulated company groups pursuant to CAM Table 1. Information within Table 1 includes: (a) each type of cost incurred by APUC that is to be allocated between regulated and unregulated parts of the business; (b) the factors used to allocate each type of cost between regulated and unregulated activity; (c) the rationale for selecting the factors that are used for allocation; and (d) examples of the specific allocated costs. The costs allocated to the regulated companies as a group are then reallocated to individual utility companies using the Utility Four-Factor allocation methodology set forth in CAM Table 2 (described below), resulting in utility-specific allocated charges from APUC.

For an example of how an APUC invoice would be assigned or allocated, please see Appendix 3.

Certain costs, which are incurred for the benefit of APUC's businesses, are not allocated to any utility subsidiary. These costs include certain corporate travel and certain overheads.

4. SCOPE OF SERVICES PROVIDED BY LUC AND HOW COSTS ARE DISTRIBUTED

This section provides an overview of the services and the cost methodology for LUC.

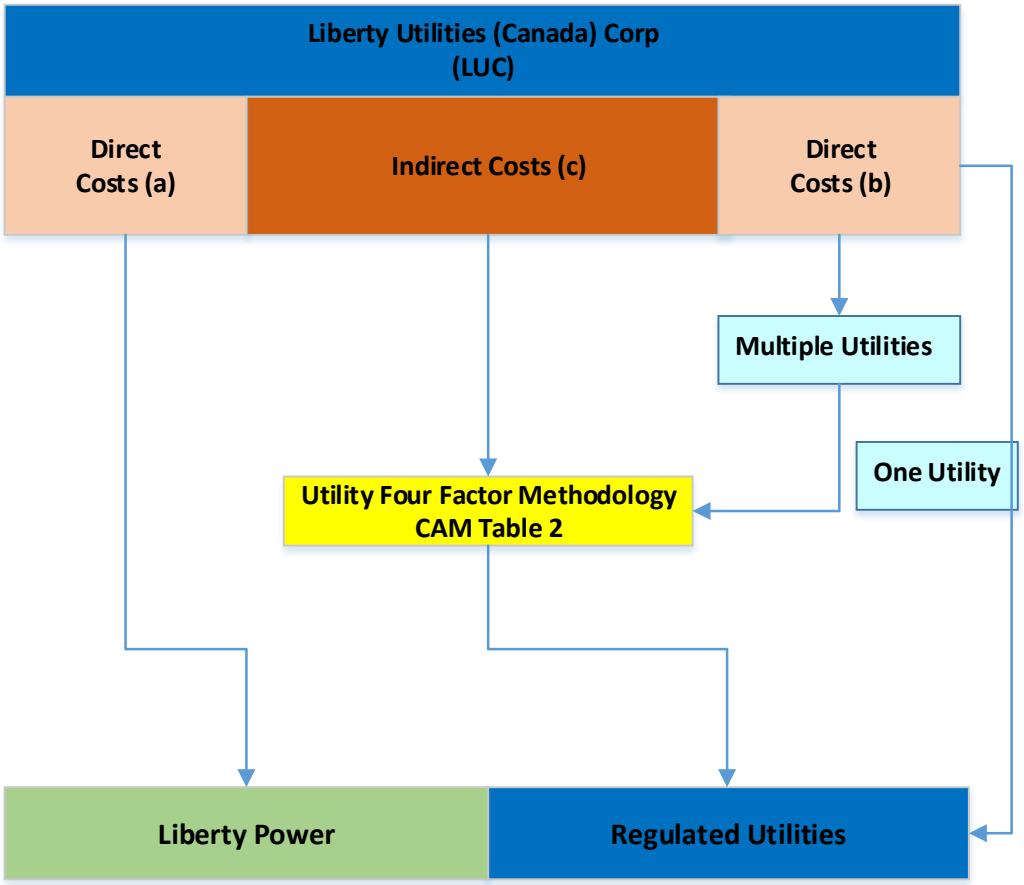
4.1 Overview of LUC Services and Costs

Various services and methods of cost distribution arise from LUC and can be categorized as those provided: (a) specifically to regulated utilities, (b) specifically to Liberty Power, or (c) to the entire organization (under the business unit of Liberty Algonquin Business Services ("LABS")). Figure 3 identifies the flow of costs from dedicated utility support and dedicated Liberty Power staff within LUC. Figure 4 identifies the flow of costs from the shared business and corporate services staff and functions ("LABS") within LUC. Both Figures 3 and 4 are depicted below in this section.

As illustrated in Figure 3, LUC incurs three types of costs. The first type is an LUC cost that directly benefits a particular Liberty Utilities affiliate (i.e., regulated company), which is directly assigned to that regulated company. The second type is an LUC cost that benefits all of the Liberty Utilities regulated companies, and which is allocated using the Utility Four-Factor Methodology described in CAM Table 2. The third type is a cost that only benefits and is directly charged to Liberty Power. All three of these cost types are described in section 4.2 below.

As illustrated in Figure 4, shared services costs arising from LUC are those from shared services[8] that benefit both the regulated group of companies and the unregulated group of companies within the APUC family; which are allocated between the two groups pursuant to the methodology described in section 4.3 and as set forth in CAM Table 4.

Figure 3: Illustration of LUC Corporate Cost Distributions

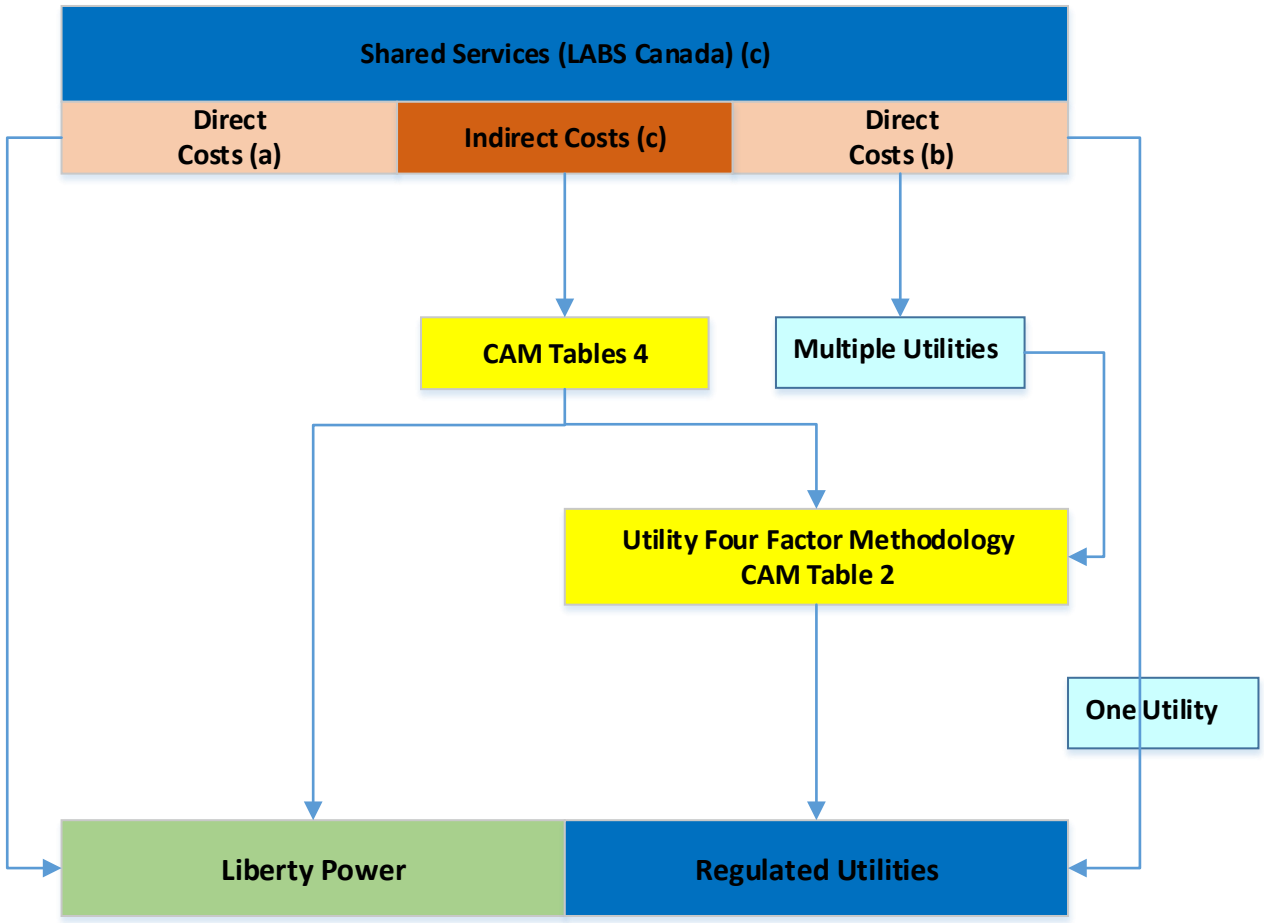


Notes:

(a) Costs that are directly assignable to unregulated companies
(b) Costs that are directly assignable to one or more specific regulated companies.
(c) Costs that benefit all regulated operations.

[8] As discussed later, shared support services that benefit both regulated and unregulated businesses within APUC are provided within Liberty Algonquin Business Services ("LABS"), which is a business unit with staff employed within LUC and LUSC. Shared services staff serve both regulated and unregulated entities. LABS staff within the corporate office in Canada are employed within LUC; LABS staff in the US are employed within LUSC. As new U.S.-based utilities are added to the Liberty-Algonquin organization, there could be a transitionary period in which some of these shared services staff and functions may also remain employed within the new utility until such time that they may be transitioned to become an employee of Liberty Utilities Service Corp. ("LUSC").

Figure 4: Illustration of LUC Shared Services Cost Distributions



Notes:

(a) Costs that are directly assignable to unregulated companies.
(b) Costs that are directly assignable to one or more regulated companies.
(c) Costs that benefit both unregulated and regulated operations.

4.2 LUC Services and Costs Provided to Liberty Utilities and Liberty Power

4.2.1 Services to Liberty Utilities

LUC provides services to Liberty Utilities such as: executive, regulatory strategy, energy procurement, operations, utility planning, administration, and customer experience.

LUC will assign costs that can be directly attributable to a specific utility. These include direct labor and direct non-labor costs. However, because the indirect LUC costs cannot be directly attributed to an individual utility, LUC allocates its indirect labor and indirect non-labor costs, including capital costs, to its regulated utilities using a Utility Four-Factor Methodology[9]. LUC uses the Utility Four-Factor Methodology to allocate costs incurred for the benefit of all of its regulated assets ("System-Wide Costs") to all of its utilities.

The Utility Four-Factor Methodology allocates costs by relative size and scope of the utilities. The methodology used by LUC involves four allocating factors, or drivers: (1) Utility Net Plant; (2) Total Customers; (3) Non-Labor Expenses; and (4) Labor Expenses, with each factor assigned an equal weight, as shown in Table 2 below.

Table 2: Utility Four-Factor Methodology Factors and Weightings

Factor	Weight
Customer Count	40%
Utility Net Plant	20%
Non-Labor Expenses	20%
Labor Expenses	20%
Total	**100%**

LUC uses the Utility Four-Factor Methodology to allocate to its regulated utilities the system-wide indirect labor and indirect non-labor costs within LUC (from its utility-dedicated staff, and from the shared services functions within LUC).

Table 3 provides a simplified hypothetical example to demonstrate how the Utility Four-Factor Methodology would be calculated based on ownership of only two hypothetical utilities.

[9] Please note, indirect costs sent to utilities via the 4-factor will consist of 1) indirect costs from LUC's utility-dedicated staff and services, plus 2) the indirect costs from APUC, 3) the indirect costs retained within LUC from LABS (the shared services staff and services within LUC), and 4) the indirect costs allocated from LUSC.

Table 3: Utility Four-Factor Methodology Example

Factor	Utility 1	Utility 2	Total All Utilities	Utility 1 % of Total	Factor Weight	Utility 1 Allocation
Utility Net Plant ($)	727	371	1098	66%	20%	13%
Customer Count (#)	6000	2000	8000	75%	40%	30%
Labor Expenses ($)	57	32	89	64%	20%	13%
Non-Labor Expenses ($)	108	41	149	72%	20%	14%
Total Allocation						71%

As can be seen from these hypothetical numbers in Table 3, Utility 1 would be allocated 71% of the total indirect costs incurred by LUC, based on its relative size and application of the Utility Four-Factor Methodology. Utility 2 would be allocated the remaining 29%. LUC has developed and utilized this methodology to better allocate costs, recognizing that larger utilities require more time and management attention and incur greater costs than smaller ones.

On occasion there may be costs which are incurred for the benefit of two or more utilities, but not all of the utilities. These costs are directly assigned to utilities as per the vendor invoice, or, if the invoice doesn't specify a share for each utility, the Utility Four-Factor Methodology is used. In this situation, the weighting is determined by only including the utilities that benefited from the service and excluding the utilities that did not receive the service. For an example of how an LUC invoice would be assigned or allocated, please see Appendix 4.

4.2.2 LUC Services to Liberty Power.

A sub-set of LUC employees provide dedicated services to Liberty Power such as: executive, energy services, asset management, business development, and operations. All costs (labor and non-labor) incurred for these services will be directly charged to Liberty Power (no

indirect costs are allocated from this group). Labor costs are tracked through timesheets and directly charged to Liberty Power.

4.3 Shared Services from LUC

The last type of costs arising from LUC are those from shared services[10] that benefit both the regulated group of subsidiary companies owned by Liberty Utilities and Liberty Power.

Consistent with the organization practices described earlier, shared services and costs (within LUC[11]) are assigned when they are directly attributable to a specific affiliate company (such as a specific distribution utility) or business unit[12] (such as Liberty Utilities or Liberty Power). Labor charges for LUC shared services staff are assigned using timesheets that depict the amount of time that is to be direct charged to either Liberty Utilities or Liberty Power (or a specific subsidiary within Liberty Utilities. or Liberty Power).

Please refer to Figure 4 above for a diagram of the various flows of costs that may arise from the shared services staff and functions within LUC[13].

Indirect costs for services from the shared services functions that cannot be directly assigned are allocated between the regulated and unregulated business units, Liberty Utilities and Liberty Power, pursuant to the methodology set forth in CAM Tables 4a and 4b. Similar to Table 1, Tables 4a and 4b include: (a) each type of cost incurred by shared services functions within LUC that is to be allocated between regulated and unregulated parts of the business; (b) the factors used to allocate each type of cost between regulated and unregulated activity; (c) the rationale for selecting the factors that are used for allocation; and (d) examples of the specific allocated costs. The costs allocated to the regulated companies as a group are then reallocated to individual companies using the Utility Four-Factor Methodology set forth in CAM Table 2, resulting in utility-specific allocated charges from LUC.

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[10] Liberty Algonquin Business Services ("LABS") is a business unit found organizationally within LUC and LUSC that serves both regulated and unregulated entities. The LABS business unit provides shared services throughout the organization. LABS employees and functions provided from Canada are employed within LUC; LABS employees and functions located in the U.S. are typically employed within LUSC.

[11] As will be discussed further in section 5, shared services to the entire APUC organization are also provided from staff within LUSC.

[12] To clarify, if a LABS service is for only one specific organization, such as the unregulated generation business, Liberty Power, the cost will be directly charged to that business unit.

[13] Sometimes referred to as "LABS Canada."

For an example of how an invoice or cost within LUC's shared services (LABS) would be assigned or allocated, please see Appendix 5.

4.3.1 Business Services and Corporate Services

LUC shared services that would be provided to the entire company, i.e., Liberty Power and Liberty Utilities, are internally referenced under two names - Business Services and Corporate Services. The services and functions within each category are shown in the tables below[14]. Indirect costs from Business Services and Corporate Services are allocated using the following methodology shown in Tables 4a and 4b, respectively, which are designed to closely align the costs with the driver of the activity.

Table 4a: Summary of Corporate Allocation Method of LUC[15] Business Services Indirect Costs

Type of Cost	Allocation Methodology	Rationale	Examples
Information Technology	Number of Employees 90% O&M 10%	IT function is driven by factors which include number of employees and O&M. The larger the number of employees, the more support, software and IT infrastructure is required.	Enterprise wide support, architecture, etc. Third party fees
Human Resources	Number of Employees 100%	HR function is driven by number of employees. A greater number of employees requires	HR policies, payroll processing, benefits,

[15] And LUSC shared services functions.

		additional HR support	employee surveys
Training	Number of Employees 100%	Training is directly proportional to the number of employees per function	Courses, lectures, in house training sessions by third party providers
Facilities and Building Rent	Oakville Employees 100%	Office space occupied by employees accurately reflects space requirements of each subsidiary	Corporate office building
Environment, Health, Safety and Security	Number of Employees 100%	EHSS training, etc. is directly proportional to the number of employees per function	Enterprise wide programs, employee labor and related administration
Procurement	O&M 50% Capital Expenditures 50%	Procurement function is based on typical proportion of expenditures	Enterprise wide support and related administration
Executive and Strategic Management	Revenue 33.3% O&M 33.3% Net Plant 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Employee labor and related administration that is not directly attributable to any entity

Technical Services	Net Plant 33.3% Revenue 33.3% O&M 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate-Revenues, Net Plant and O&M costs.	Employee labor and related administration that is not directly attributable to any entity
Utility Planning	Net Plant 33.3% Revenue 33.3% O&M 33.3%	This function is driven by factors which reflect the scope of each affiliate Management - Revenues, Net Plant and O&M costs.	Employee labor and related administration that is not directly attributable to any entity

Table 4b: Summary of Corporate Allocation Method of LUC[16] Corporate Services Indirect Costs

Risk Management	Net Plant 33.3% Revenue 33.3% O&M 33.3%	This function is driven by factors which reflect the relative size and complexity of Risk Management - Revenues, Net Plant and O&M costs.	Employee labor and related administration, Software platform, fees and administration

[16] And LUSC shared services functions.

Financial Reporting, Planning and Administration	Revenue 33.3% O&M 33.3% Net Plant 33.3%	This function is driven by factors which reflect the relative size and complexity of Financial Reporting and Admin. - Revenues, Net Plant and O&M costs.	Employee labor and related administration and third party fees
Treasury	Capital Expenditures 25% O&M 50% Net Plant 25%	Treasury activity is typically guided by the amount of necessary capex/plant for each utility, and operating costs/cash flow	Third party financing, employee labor and related administration and programs
Internal Audit	Net Plant 25% O&M 75%	This function is driven by factors which reflect the relative size and complexity of Internal audit activity. Larger Plant and operating costs of a given facility drive more activity from IA.	Third party fees, employee labor and related administration and programs
External Communications	Total Employees 100%	Communications cost is directly proportional to the number of employees	Enterprise wide support and related administration
Legal Costs	Net Plant 33.3%	This function is driven by factors	Employee labor and related

	Number of Employees 33.3% O&M 33.3%	which include Net Plant, as typically the higher the value of plant, the more legal work it attracts; similarly, a greater number of employees are typically more indicative of larger facilities that require greater levels of attention; and O&M costs tend to be a third factor indicative of size and legal complexity.	administration and programs, including third party legal
Compliance	Revenue 33.3% O&M 33.3% Net Plant 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Employee labor and related administration that is not directly attributable to any entity

5. LIBERTY UTILITIES SERVICE CORP.

This section provides an overview of some of the services (as outlined in Table 5) and the cost methodology for Liberty Utilities Service Corp. ("LUSC").

Most U.S.-based utility employees are employed by LUSC and are dedicated to serve particular utilities. All employees' labor costs, such as salaries, and associated labor costs, such as benefits, insurance etc. are to be paid by LUSC and direct charged to the company to which the employee is dedicated and performs work. Services provided by employees within LUSC

to each regulated utility shall be distributed on a time sheet basis to the extent possible. In infrequent instances where time sheeting may not be possible, the allocation factors shown in Tables 4a and 4b are to be used, as will be explained below.

5.1 Shared Services from LUSC

LUSC employs some individuals who provide shared services (listed in Table 5 below). Costs distributed by LUSC will include those from shared services employees: (a) where the function benefits both Liberty Utilities and Liberty Power businesses and (b) where the function benefits some or all of the regulated utilities within Liberty Utilities (e.g., energy procurement services).

Consistent with the organizational shared services practices described earlier, shared services and costs (within LUSC) are assigned when they are directly attributable to a specific affiliate company (such as a specific distribution utility, for example) or business unit (such as Liberty Utilities or Liberty Power). Labor charges for LUSC shared services staff are assigned using timesheets that depict the amount of time that is to be direct charged to either Liberty Utilities or Liberty Power (or a specific subsidiary within Liberty Utilities or Liberty Power).

The type of U.S. shared services that benefits both Liberty Utilities and Liberty Power businesses is referred to as LABS U.S. The LABS U.S. indirect costs for services from the shared services staff and functions within LUSC that cannot be directly assigned are allocated between the regulated and unregulated business units, Liberty Utilities and Liberty Power, and are distributed in the same manner per CAM Tables 4a and 4b described for shared services staff and functions within LUC. Consistent with the practices within LUC, the costs allocated from LUSC to the regulated companies as a group (i.e. to Liberty Utilities) are then reallocated to individual utility companies within the Liberty Utilities structure using the Utility Four-Factor Methodology set forth in CAM Table 2, resulting in utility-specific allocated charges from LUSC.

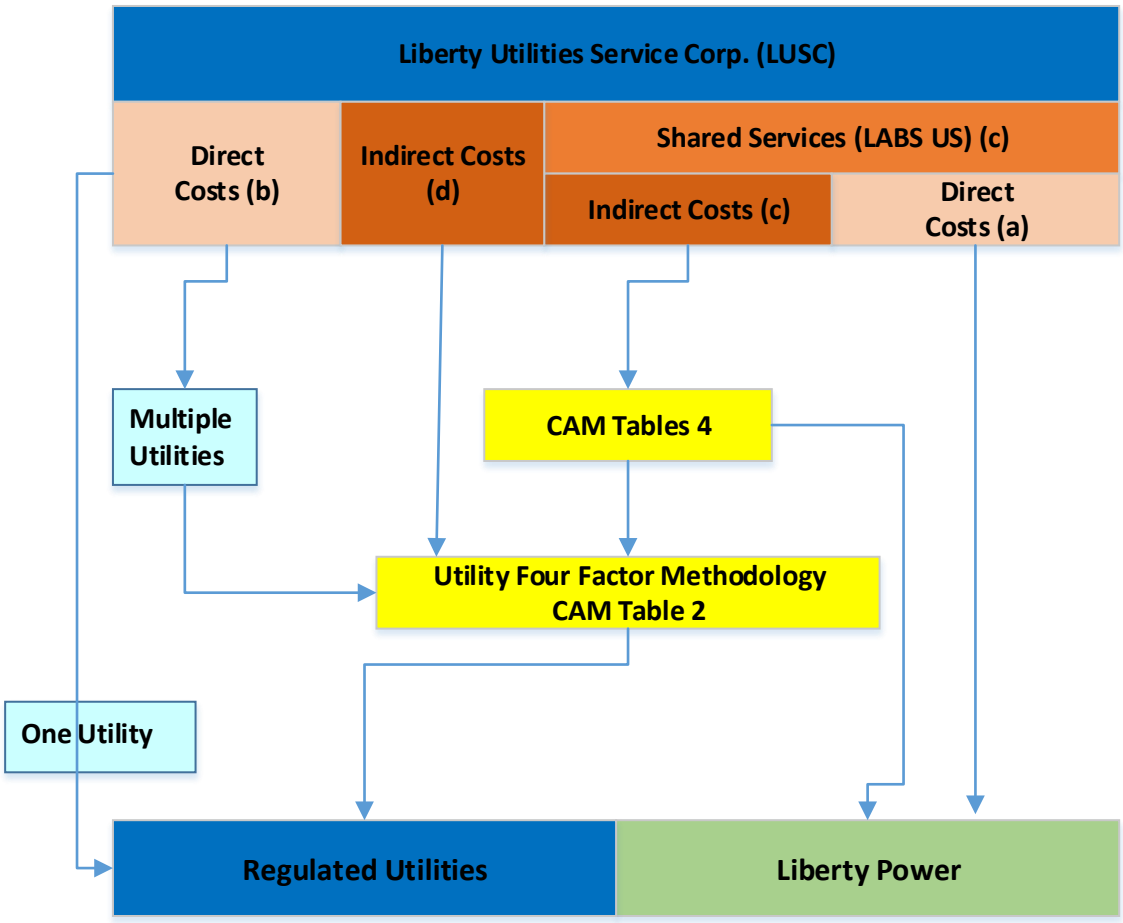
The indirect costs from the U.S. shared services that only benefit the regulated utilities are distributed using the Utility Four-Factor Methodology set forth in CAM Table 2, resulting in utility-specific allocated charges from LUSC.

Figure 5 below depicts the various flows of costs from LUCS.

Table 5 – List of Shared Services provided by Liberty Utilities Service Corp.

Customer Care and Billing
IT/Tech Support
Human Resources
Gas Control
Legal
Compliance
Regulatory & Government Relations
Environmental, Health, Safety and Security
Procurement
Operations
Engineering; Dispatch and Control
Outage Management
GIS/Mapping
Vegetation Management
Energy Procurement
Accounting and Finance
Managerial
Utility Planning
Customer Communication

Figure 5: Illustration of LUSC Cost Distributions



Notes:

(a) Costs that are directly assignable to unregulated companies.
(b) Costs that are directly assignable to regulated companies.
(c) Costs that benefit both unregulated and regulated operations.

The allocation methodology may be adjusted based on the number of participating utilities. For example, Customer Service representatives who serve only the New Hampshire utilities will only have their indirect costs allocated, if any, to the two utilities within New Hampshire. Labor costs associated with energy procurement are directly billed to the utilities requiring energy procurement services using timesheets.

6. COST DISTRIBUTION AT THE REGIONAL OR STATE UTILITY LEVEL

Within the Liberty Utilities organization, the organizational structure and reporting relationships may evolve as the organization grows and develops. Costs and services provided to the regional or state utility level from other corporate entities are directly assigned to the extent possible and distributed over the utilities within the state or region for which they are provided. Any services and costs which cannot be directly assigned will be allocated to the utilities within the region or state using the Regional Four-Factor Methodology (25% weighting for the factors of: customer count, utility net plan, non-labor expenses, and labor expenses), unless another method of allocation is legally required.

In addition, each of the regulated entities will distribute costs amongst their affiliated entities in accordance with applicable laws/rules and affiliated service agreements. These cost allocation methods are consistent with the principles of this CAM.

7. CORPORATE CAPITAL

APUC or LUC will make capital investments such as corporate headquarters, IT systems, etc. that benefit the various operating businesses. The costs of these investments may be distributed monthly in the form of an intercompany operating expense charge, that captures the depreciation expense and cost of capital associated with the particular assets, or an alternate method of capital allocation based on the particular needs of the project. All costs associated to service the investment will be allocated to Liberty Power and Liberty Utilities, if applicable, typically based on the allocation method from which the capital investment is made. For example, if the capital investment is made in Human Resources then the allocation methodology used for Human Resources to allocate non-capital indirect costs as shown in Table 4a will be used to allocate the charge associated with the corporate capital expenditures, including the cost of capital, depreciation, and all other associated costs. From time to time, the distribution of costs associated with a corporate capital investment may use an alternate

method. Any corporate capital charges allocated or assigned to LUC are then reallocated to individual Liberty Utilities distribution utilities, or a sub-set of one or multiple distribution utilities, using the Utility Four-Factor Methodology set forth in CAM Table 2.

8. CAM TEAM AND TRAINING

The oversight of the CAM is the responsibility of the corporate Regulatory Department. Any updates or revisions are coordinated and completed by this Department. A CAM Team will be created consisting of trained employees to oversee the operations and management of the CAM principles throughout the organization.

The CAM, and any support material, is available to all employees via the Company intranet. Employee training on the CAM will be provided via the Company's Learning Management System.

9. AUDIT, RECORD KEEPING & AFFILIATE TRANSACTION RULES

Records of each company will be maintained such that all affiliate transactions are auditable. The records will document the cost of transactions, the methods used to distribute the costs, and descriptions of the services provided. The records will be retained for a minimum of three years or as required by law or regulation. The regulator will have access to records, consistent with applicable laws, regarding transactions between the regulated utility and its affiliates. All companies subject to affiliate transaction rules, whether state or federal, will comply with such requirements.

10. UPDATING ALLOCATIONS

Allocation percentages[17] are updated annually. These annual updates to the allocation percentages are based on the most recent audited financial statements and other actual, year-end information. The updated percentages come into effect each April 1st and are valid through to the following March 31st. The Utility Four-Factor Methodology allocation percentages are also updated as an entity is either acquired or sold.

[17] To clarify, the factors and weightings are expected to remain constant. It is the underlying information used to calculate the allocation percentages that is updated annually, such as the most recent net plant figures, or the most recent numbers of employees, for example.

11. APPENDICES

APPENDIX 1 - NARUC GUIDELINES FOR COST ALLOCATIONS

Guidelines for Cost Allocations and Affiliate Transactions:

The following Guidelines for Cost Allocations and Affiliate Transactions (Guidelines) are intended to provide guidance to jurisdictional regulatory authorities and regulated utilities and their affiliates in the development of procedures and recording of transactions for services and products between a regulated entity and affiliates. The prevailing premise of these Guidelines is that allocation methods should not result in subsidization of non-regulated services or products by regulated entities unless authorized by the jurisdictional regulatory authority. These Guidelines are not intended to be rules or regulations prescribing how cost allocations and affiliate transactions are to be handled. They are intended to provide a framework for regulated entities and regulatory authorities in the development of their own policies and procedures for cost allocations and affiliated transactions. Variation in regulatory environment may justify different cost allocation methods than those embodied in the Guidelines.

The Guidelines acknowledge and reference the use of several different practices and methods. It is intended that there be latitude in the application of these guidelines, subject to regulatory oversight. The implementation and compliance with these cost allocations and affiliate transaction guidelines, by regulated utilities under the authority of jurisdictional regulatory commissions, is subject to Federal and state law. Each state or Federal regulatory commission may have unique situations and circumstances that govern affiliate transactions, cost allocations, and/or service or product pricing standards. For example, The Public Utility Holding Company Act of 1935 requires registered holding company systems to price "at cost" the sale of goods and services and the undertaking of construction contracts between affiliate companies.

The Guidelines were developed by the NARUC Staff Subcommittee on Accounts in compliance with the Resolution passed on March 3, 1998 entitled "Resolution Regarding Cost Allocation for the Energy Industry" which directed the Staff Subcommittee on Accounts together with the Staff Subcommittees on Strategic Issues and Gas to prepare for NARUC's consideration, "Guidelines for Energy Cost Allocations." In addition, input was requested from other industry parties. Various levels of input were obtained in the development of the Guidelines from the Edison Electric Institute, American Gas Association, Securities and Exchange Commission, the Federal Energy Regulatory Commission, Rural Utilities Service

and the National Rural Electric Cooperatives Association as well as staff of various state public utility commissions.

In some instances, non-structural safeguards as contained in these guidelines may not be sufficient to prevent market power problems in strategic markets such as the generation market. Problems arise when a firm has the ability to raise prices above market for a sustained period and/or impede output of a product or service. Such concerns have led some states to develop codes of conduct to govern relationships between the regulated utility and its non-regulated affiliates. Consideration should be given to any "unique" advantages an incumbent utility would have over competitors in an emerging market such as the retail energy market. A code of conduct should be used in conjunction with guidelines on cost allocations and affiliate transactions.

A. DEFINITIONS

1. Affiliates - companies that are related to each other due to common ownership or control.

2. Attestation Engagement - one in which a certified public accountant who is in the practice of public accounting is contracted to issue a written communication that expresses a conclusion about the reliability of a written assertion that is the responsibility of another party.

3. Cost Allocation Manual (CAM) - an indexed compilation and documentation of a company's cost allocation policies and related procedures.

4. Cost Allocations - the methods or ratios used to apportion costs. A cost allocator can be based on the origin of costs, as in the case of cost drivers; cost-causative linkage of an indirect nature; or one or more overall factors (also known as general allocators).

5. Common Costs - costs associated with services or products that are of joint benefit between regulated and non-regulated business units.

6. Cost Driver - a measurable event or quantity which influences the level of costs incurred and which can be directly traced to the origin of the costs themselves.

7. Direct Costs - costs which can be specifically identified with a particular service or product.

8. Fully Allocated costs - the sum of the direct costs plus an appropriate share of indirect costs.
9. Incremental pricing - pricing services or products on a basis of only the additional costs added by their operations while one or more pre-existing services or products support the fixed costs.

10. Indirect Costs - costs that cannot be identified with a particular service or product. This includes but not limited to overhead costs, administrative and general, and taxes.

11. Non-regulated - that which is not subject to regulation by regulatory authorities.

12. Prevailing Market Pricing - a generally accepted market value that can be substantiated by clearly comparable transactions, auction or appraisal.

13. Regulated - that which is subject to regulation by regulatory authorities.

14. Subsidization - the recovery of costs from one class of customers or business unit that are attributable to another.

B. COST ALLOCATION PRINCIPLES

The following allocation principles should be used whenever products or services are provided between a regulated utility and its non-regulated affiliate or division.

1. To the maximum extent practicable, in consideration of administrative costs, costs should be collected and classified on a direct basis for each asset, service or product provided.

2. The general method for charging indirect costs should be on a fully allocated cost basis. Under appropriate circumstances, regulatory authorities may consider incremental cost, prevailing market pricing or other methods for allocating costs and pricing transactions among affiliates.

3. To the extent possible, all direct and allocated costs between regulated and non-regulated services and products should be traceable on the books of the applicable regulated utility to the applicable Uniform System of Accounts. Documentation should be made available to the appropriate regulatory authority upon request regarding transactions between the regulated utility and its affiliates.

4. The allocation methods should apply to the regulated entity's affiliates in order to prevent subsidization from, and ensure equitable cost sharing among the regulated entity and its affiliates, and vice versa.

5. All costs should be classified to services or products which, by their very nature, are either regulated, non-regulated, or common to both.

6. The primary cost driver of common costs, or a relevant proxy in the absence of a primary cost driver, should be identified and used to allocate the cost between regulated and non-regulated services or products.

7. The indirect costs of each business unit, including the allocated costs of shared services, should be spread to the services or products to which they relate using relevant cost allocators.

C. COST ALLOCATION MANUAL (NOT TARIFFED)

Each entity that provides both regulated and non-regulated services or products should maintain a cost allocation manual (CAM) or its equivalent and notify the jurisdictional regulatory authorities of the CAM's existence. The determination of what, if any, information should be held confidential should be based on the statutes and rules of the regulatory agency that requires the information. Any entity required to provide notification of a CAM(s) should make arrangements as necessary and appropriate to ensure competitively sensitive information derived therefrom be kept confidential by the regulator. At a minimum, the CAM should contain the following:

1. An organization chart of the holding company, depicting all affiliates, and regulated entities.

2. A description of all assets, services and products provided to and from the regulated entity and each of its affiliates.

3. A description of all assets, services and products provided by the regulated entity to non-affiliates.

4. A description of the cost allocators and methods used by the regulated entity and the cost allocators and methods used by its affiliates related to the regulated services and products provided to the regulated entity.

D. AFFILIATE TRANSACTIONS (NOT TARIFFED)

The affiliate transactions pricing guidelines are based on two assumptions. First, affiliate transactions raise the concern of self-dealing where market forces do not necessarily drive prices. Second, utilities have a natural business incentive to shift costs from non-regulated competitive operations to regulated monopoly operations since recovery is more certain with captive ratepayers. Too much flexibility will lead to subsidization. However, if the affiliate transaction pricing guidelines are too rigid, economic transactions may be discouraged.

The objective of the affiliate transactions' guidelines is to lessen the possibility of subsidization in order to protect monopoly ratepayers and to help establish and preserve competition in the electric generation and the electric and gas supply markets. It provides ample flexibility to accommodate exceptions where the outcome is in the best interest of the utility, its ratepayers and competition. As with any transactions, the burden of proof for any exception from
the general rule rests with the proponent of the exception.

1. Generally, the price for services, products and the use of assets provided by a regulated entity to its non-regulated affiliates should be at the higher of fully allocated costs or prevailing market prices. Under appropriate circumstances, prices could be based on incremental cost, or other pricing mechanisms as determined by the regulator.

2. Generally, the price for services, products and the use of assets provided by a non-regulated affiliate to a regulated affiliate should be at the lower of fully allocated cost or prevailing market prices. Under appropriate circumstances, prices could be based on incremental cost, or other pricing mechanisms as determined by the regulator.

3. Generally, transfer of a capital asset from the utility to its non-regulated affiliate should be at the greater of prevailing market price or net book value, except as otherwise required by law or regulation. Generally, transfer of assets from an affiliate to the utility should be at the lower of prevailing market price or net book value, except as otherwise required by law or regulation. To determine prevailing market value, an appraisal should be required at certain value thresholds as determined by regulators.

4. Entities should maintain all information underlying affiliate transactions with the affiliated utility for a minimum of three years, or as required by law or regulation.

E. AUDIT REQUIREMENTS

1. An audit trail should exist with respect to all transactions between the regulated entity and its affiliates that relate to regulated services and products. The regulator should have complete access to all affiliate records necessary to ensure that cost allocations and affiliate transactions are conducted in accordance with the guidelines. Regulators should have complete access to affiliate records, consistent with state statutes, to ensure that the regulator has access to all relevant information necessary to evaluate whether subsidization exists. The auditors, not the audited utilities, should determine what information is relevant for a particular audit objective. Limitations on access would compromise the audit process and impair audit independence.

2. Each regulated entity's cost allocation documentation should be made available to the company's internal auditors for periodic review of the allocation policy and process and to any jurisdictional regulatory authority when appropriate and upon request.

3. Any jurisdictional regulatory authority may request an independent attestation engagement of the CAM. The cost of any independent attestation engagement associated with the CAM, should be shared between regulated and non-regulated operations consistent with the allocation of similar common costs.

4. Any audit of the CAM should not otherwise limit or restrict the authority of state regulatory authorities to have access to the books and records of and audit the operations of jurisdictional utilities.

5. Any entity required to provide access to its books and records should make arrangements as necessary and appropriate to ensure that competitively sensitive information derived therefrom be kept confidential by the regulator.

F. REPORTING REQUIREMENTS

1. The regulated entity should report annually the dollar amount of non-tariffed transactions associated with the provision of each service or product and the use or sale of each asset for the following:

a. Those provided to each non-regulated affiliate.
b. Those received from each non-regulated affiliate.
c. Those provided to non-affiliated entities.

2. Any additional information needed to assure compliance with these Guidelines, such as cost of service data necessary to evaluate subsidization issues, should be provided.

Source:
http://www.naruc.org/Publications/Guidelines%20for%20Cost%20Allocations%20and%20Affiliate%20Transactions.pdf

APPENDIX 2 – DETAILED EXPLANATION OF APUC COSTS

1. APUC STRATEGIC MANAGEMENT COSTS

Strategic management decisions are critical for any public utility. The need for strategic management is even more pronounced for APUC as a publicly traded company, which depends on access to capital funding through public sales of units. APUC seeks to hire talented strategic managers that aid in running each facility owned by the company as efficiently and effectively as possible. This ensures the long term health of each utility and ensures that rates are kept as low as possible without compromising the level of service. It also facilitates each regulated utility's access to necessary capital funding at reduced costs. The costs included in Strategic Management Costs fall into the following categories.

a. Board of Directors

The Board of Directors provides strategic oversight on all company affairs including high level approvals of strategy, operation and maintenance budgets, capital budgets, etc. In addition, the Board of Directors provides corporate governance and ensures that capital and costs are incurred prudently, which ultimately protects ratepayers.

b. General Legal Services

General legal services involve legal matters not specific to any single facility, including review of audited financial statements, annual information filings, Sedar filings, review of contracts with credit facilities, incorporation, tax issues of a legal nature, market compliance, and other similar legal costs. These legal services are required in order for APUC to provide capital funding to individual utilities, without which the utilities could not provide adequate service. Additionally, the services ensure that APUC's subsidiaries remain compliant in all aspects of operations and prevent those entities from being exposed to unnecessary risks.

c. Professional Services

Professional Services including strategic plan reviews, capital market advisory services, ERP System maintenance, benefits consulting, and other similar professional services. By providing these services at a parent level, the subsidiaries are able to benefit from economies of scale. Additionally, some of these services improve APUC's access to capital which benefits all of its subsidiaries.

2. ACCESS TO CAPITAL MARKETS

One of APUC's primary functions is to ensure its subsidiaries have access to quality capital. APUC is listed on the New York Stock Exchange ("NYSE") and the Toronto Stock Exchange ("TSX"), leading financial markets. In order to allow its subsidiaries to have continued access to those capital markets, APUC incurs the following costs. These services and costs are a prerequisite to the subsidiaries continued access to those capital markets.

a. License and Permit Fees

In connection with APUC's participation in the NYSE and the TSX, APUC incurs certain license and permit fees such as Sedar fees, annual filing fees, licensing fees, etc. These licensing and permit fees are required in order to sell units on the NYSE and the TSX, which in turn provides funding for utility operations.

b. Escrow Fees

In connection with the payment of dividends to unit holders, APUC incurs escrow fees. Escrow fees are incurred to ensure continued access to capital and ensure continuing and ongoing investments by shareholders. Without such escrow fees, APUC's subsidiaries would not have a readily available source of capital funding.

c. Unit Holder Communications

Unit holder communication costs are incurred to comply with filing and regulatory requirements of the NYSE and the TSX and meet the expectations of shareholders. These costs include items such as news releases and unit holder conference calls. In the absence of shareholder communication costs, investors would not invest in the units of APUC, and in turn, APUC would not have capital to invest in its subsidiaries. With such communications services, the subsidiaries would not have a readily available source of capital funding.

3. APUC FINANCIAL CONTROLS

Financial control costs incurred by APUC include costs for audit services and tax services. These costs are necessary to ensure that the subsidiaries are operating in a manner that meets audit standards and regulatory requirements, which have strong financial and operational controls, and financial transactions are recorded accurately and prudently. Without these services, the regulated utilities would not have a readily available source of capital funding.

a. Audit Fees

Audits are done on a yearly basis and reviews are performed quarterly on all facilities owned by APUC on an aggregate level. These corporate parent level audits reduce the cost of the stand-alone audits significantly for utilities which must perform its own separate audits. Where stand-alone audits are not required, ratepayers receive benefits of additional financial rigor, as well as access to capital, and financial soundness checks by third parties. Finally, during rate cases, the existence of audits provides staff and intervenors additional reliance on the company records, thus reducing overall rate case costs. The aggregate audit is necessary for the regulated utilities to have continued access to capital markets and unit holders.

b. Tax Services

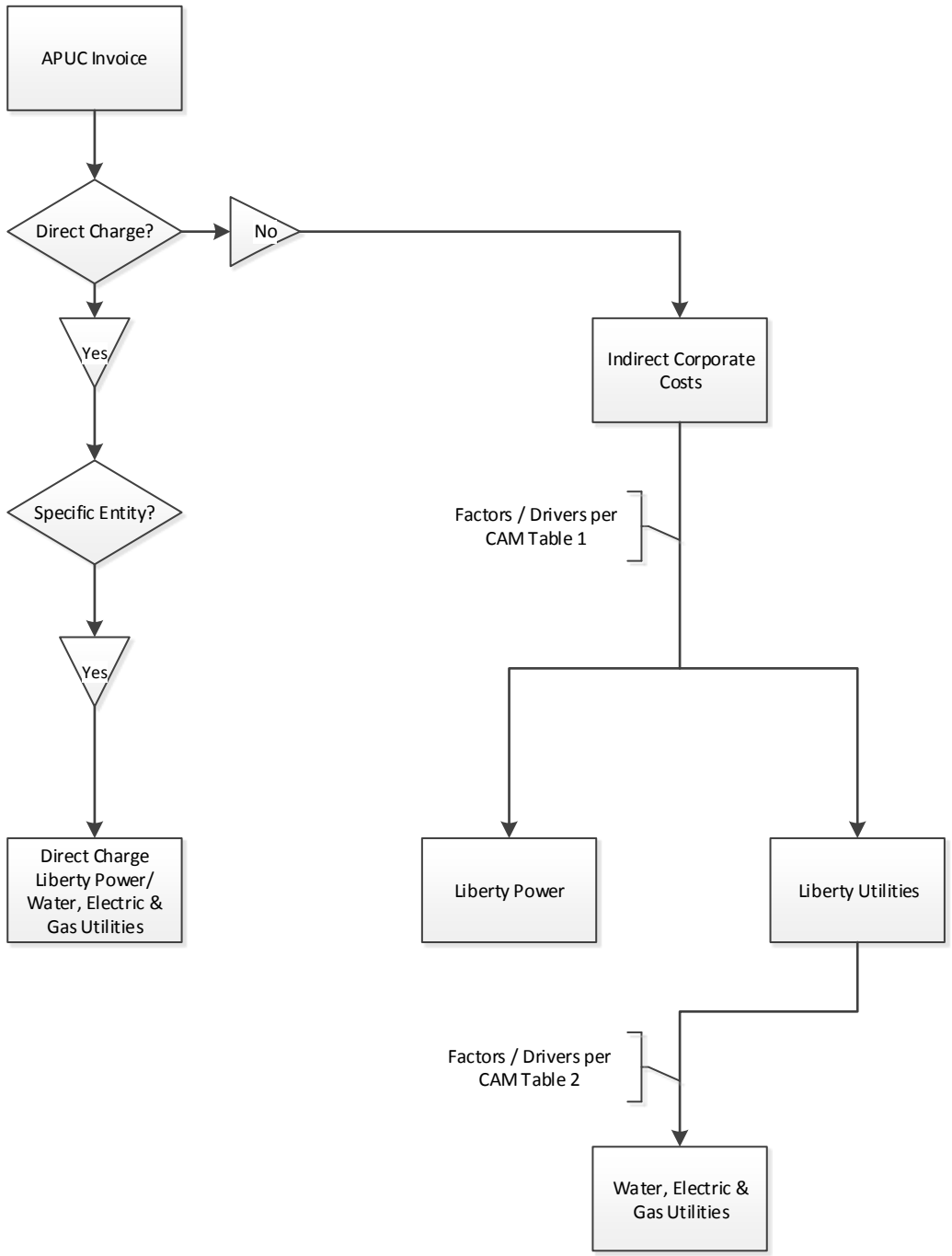
Taxes are paid on behalf of the regulated utilities at the parent level as part of a consolidated United States tax return. Tax services such as planning and filing are provided by third parties. Filing tax returns on a consolidated basis benefits each regulated utility by reducing the costs that otherwise would be incurred by such utility in filing its own separate tax return.

4. APUC ADMINISTRATIVE COSTS

Finally, administrative costs incurred by APUC, in some cases via other corporate entities, such as rent, depreciation of office furniture, depreciation of computers, and general office costs are required to house all the services mentioned above. Without these administrative costs, the employees throughout the APUC organization could not perform their work and provide the necessary services to the regulated utilities. These administrative costs also include training for corporate employees.

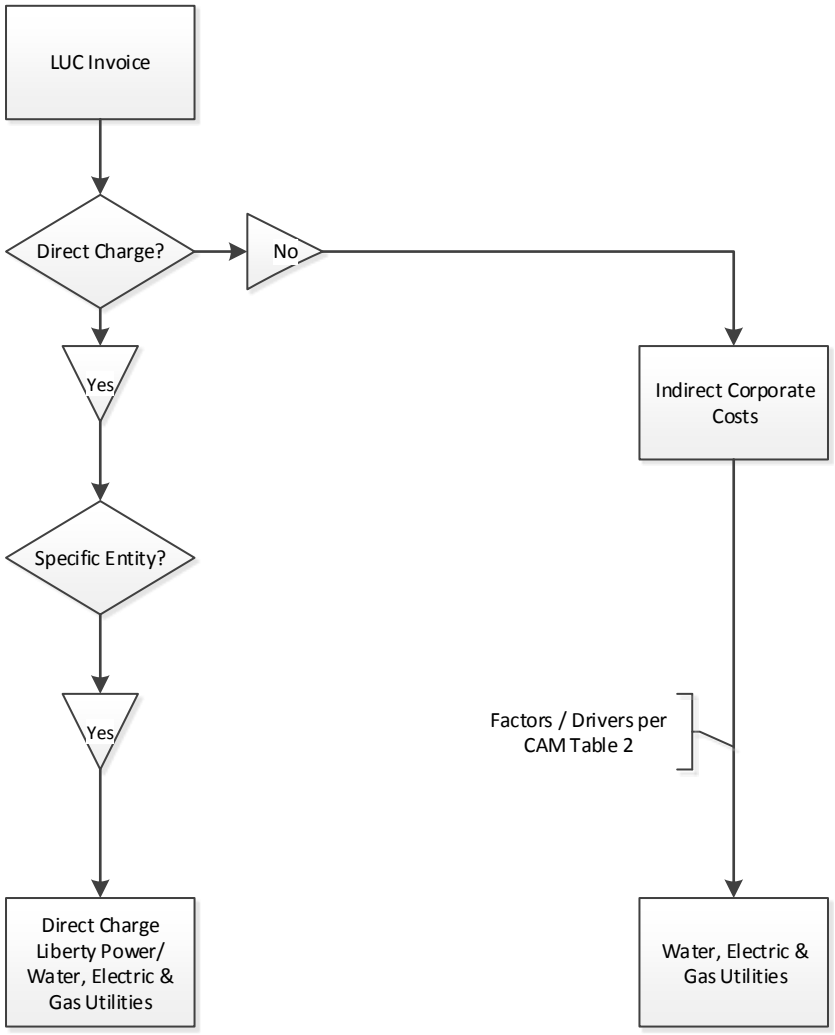
APPENDIX 3 – LIFE OF AN APUC INVOICE

A schematic is provided below showing the trail of an invoice received by APUC for services to be charged to its subsidiaries. The schematic is intended to visually explain the distribution of charges from APUC to Liberty Power and Liberty Utilities companies.



APPENDIX 4 – LIFE OF A LIBERTY UTILITIES INVOICE

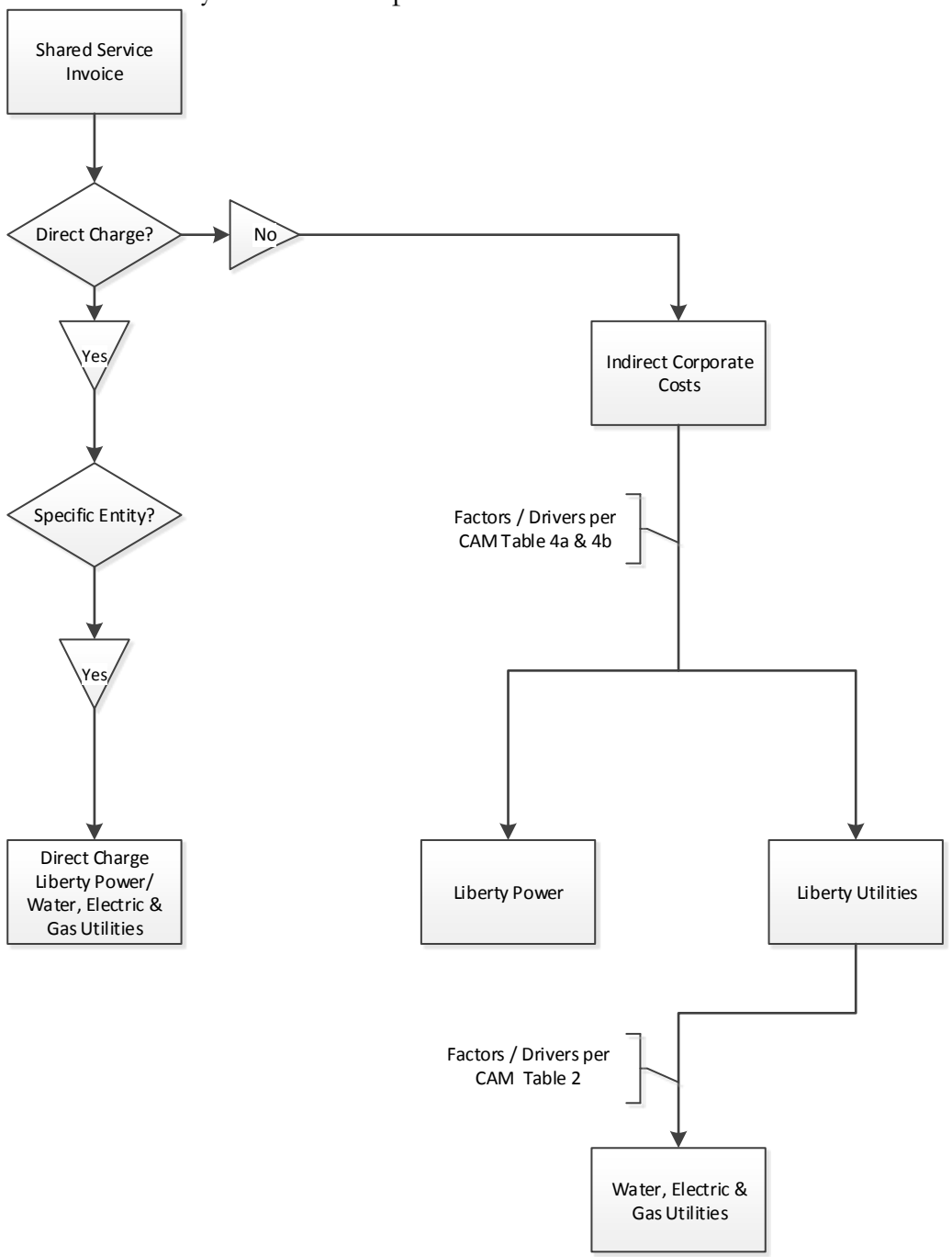
A schematic is provided below showing the trail of an invoice received by Liberty Utilities (LUC) for services to be charged to its utility subsidiaries[18]. The schematic is intended to visually explain the distribution of charges from LUC to Liberty Utilities companies.



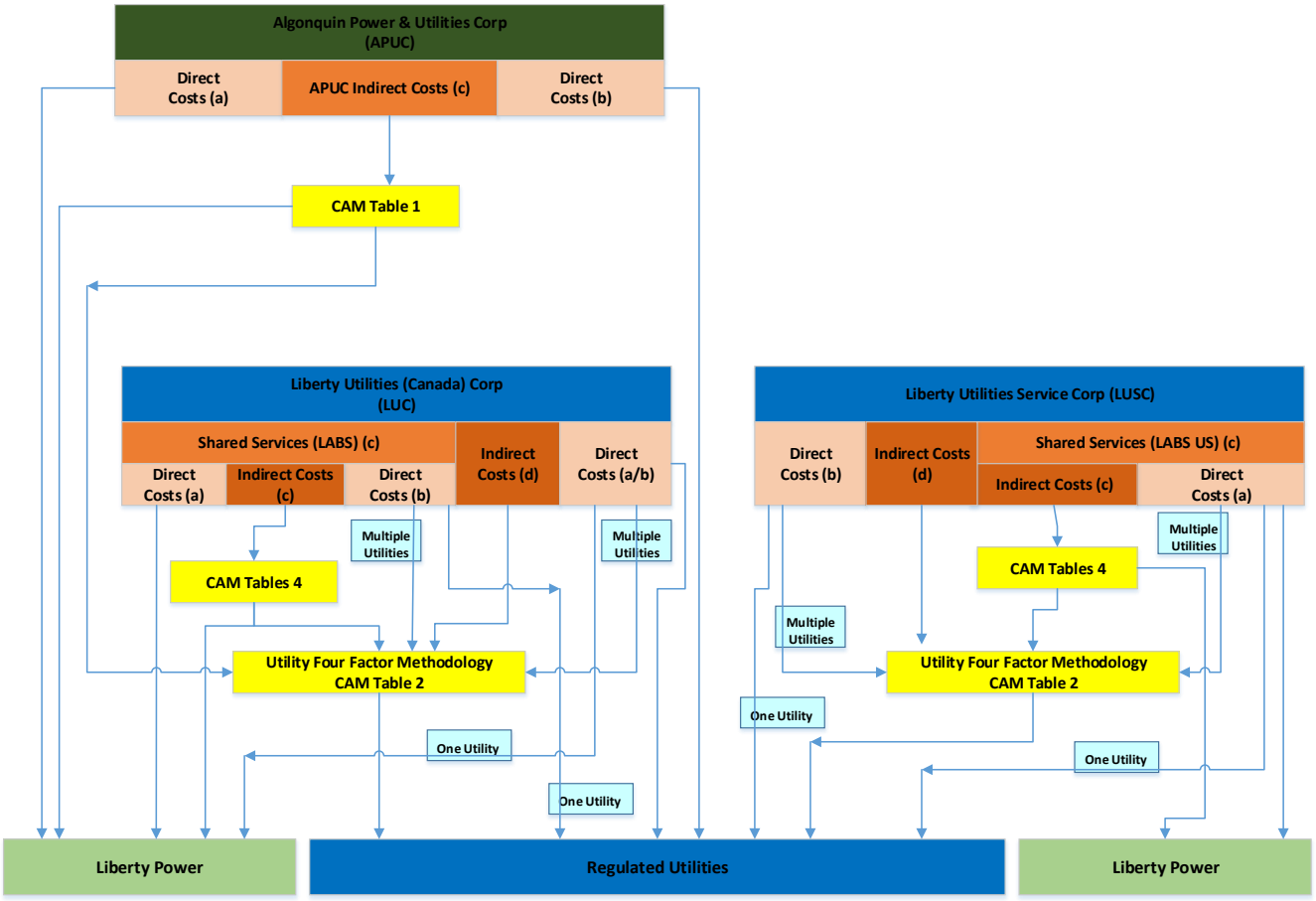
[18] This is for utility-dedicated LUC staff and services (not shared services staff).

APPENDIX 5 – LIFE OF A SHARED SERVICES INVOICE

A schematic is provided below showing the trail of an invoice for shared services provided within Liberty Utilities or LUSC for services to be charged to affiliates and subsidiaries. The schematic is intended to visually explain the distribution of charges from shared services to Liberty Power and Liberty Utilities companies.



APPENDIX 6 – COMPOSITE ILLUSTRATION OF ORGANIZATIONAL COST DISTRIBUTION



Notes:

(a) Costs that are directly assignable to unregulated companies.
(b) Costs that are directly assignable to regulated companies.
(c) Costs that benefit both unregulated and regulated operations
(d) Costs that benefit all regulated operations.

APPENDIX 7 – GLOSSARY OF TERMS

Algonquin Power & Utilities Corp. ("APUC")- is a publicly traded company and the ultimate corporate parent of Liberty Utilities and Liberty Power subsidiaries. It provides financial and strategic management, corporate governance, and oversight of administrative and support services to all its subsidiaries.

Algonquin Power Co. ("Liberty Power")- is a subsidiary of APUC whose primary business is in energy generation through renewal (solar and wind) sources and thermal generating facilities.

Cost Allocation Manual (CAM) – a document that explains how service company costs are assigned to affiliate companies and explains the nature of the services to be provided between affiliates.

Direct Costs- (sometimes referred to as assigned costs)- costs incurred by one company for the exclusive benefit of, or specifically identified with, one or more other companies, and which are directly charged (or assigned) to the company or companies that specifically benefited.

Fully Distributed Cost (FDC)– means a methodology that examines all costs of an enterprise in relation to all the goods and services that are produced. FDC requires recognition of all costs incurred directly or indirectly used to produce a good or service. Costs are assigned either through a direct or allocated approach. Costs that cannot be directly assigned or indirectly allocated (e.g. general and administrative) must also be included in the FDC calculation through a general allocation.

Indirect Costs- costs that cannot be identified with a particular service or product. This includes but not limited to overhead costs, administrative, general, and taxes.

Liberty Utilities Co.- is a subsidiary of APUC and the direct or indirect owner of regulated utilities.

Liberty Utilities (Canada) Corp. ("LUC") - is a subsidiary of APUC and employs Canadian-based employees.

Liberty Utilities Service Corp. ("LUSC")-is a subsidiary of APUC and employs U.S.-based distribution utility employees and those U.S. based employees providing shared services.

Liberty Algonquin Business Services ("LABS")- is a business unit with staff employed within LUC and LUSC. These employees provide shared services to both the utility and non-utility businesses within APUC.

NARUC – National Association of Regulatory Utility Commissioners.

Service Agreement – a written agreement specifying the terms and conditions upon which services are provided to and from affiliated entities.
Utility Four-Factor – is an allocation methodology used to allocate indirect costs to regulated utilities based on the following factors: Utility Net Plant, Customer Count, Non-Labor expenses, and labor expenses.

APPENDIX 8 - VERSION LOG

1. Base Year- January 1 2014
2. V2014, July 1, 2015
3. V2017, January 1 2017 (Includes April 2017 Updates)

EXHIBIT JS-DT3

Assessment of cost allocation manual

Algonquin Power and Utilities Corporation

July 16, 2021

pwc

July 16, 2021

Ms. Jill Schwartz
Director, Regulatory Shared Services
602 S Joplin Avenue
Joplin, Missouri 64818

Dear Ms. Schwartz:

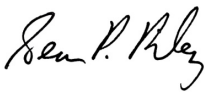
Thank you for the opportunity to work with you and your team on this project to review the cost allocation manual and allocation process.

We have completed our interviews and meetings with your management team and have prepared this report to summarize observations arising from our meetings.

Please find enclosed our report assessing Algonquin Power and Utilities Corporation's methods for accumulating and allocating holding/service company costs.

Please do not hesitate to contact me ((802) 730-3364) or Alan Felsenthal ((312) 405-9581) should you have any questions or comments on this report.

Very truly yours,



Sean P. Riley
Partner

Alan D. Felsenthal
Managing Director

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Scope of the report

At the request of Algonquin Power and Utilities Corporation ("APUC"), we have prepared this report to assess the processes used to capture and allocate holding/service company costs to its regulated and unregulated affiliates.

APUC's processes are included in their Cost Allocation Manual, V2017 Effective: January 1st, 2017 ("CAM").

Our process for completing this assessment included the following procedures:

1. Interviewing various APUC management representatives to obtain an understanding of the various activities performed, including the methodology utilized for excluding certain costs from allocation (primarily business development/acquisition activities) and the method of charging/allocating holding/service company costs to the individual affiliates.

2. Comparing the Company's allocation methodology to allocation methodologies of other United States utility holding/service companies as reported in their annual report to the Federal Energy Regulatory Commission ("FERC") on Form 60.

3. Reviewing documents and other available support issued by the various regulatory jurisdictions (Canada and United States) relating to allocated costs and recovery of such costs in the ratemaking process.

4. Testing a sample of transactions to determine that the allocation methodology set forth in the CAM was operating as described.

This report includes:

5. A description of the current process used to capture, assign and allocate APUC costs affiliates.

6. An assessment of the current process compared to the guidance provided by National Association of Regulatory Utility Commissioners ("NARUC") and FERC.

7. An assessment as to whether the processes for allocating holding/service company costs as described in the CAM are being followed.

Limitations & assumptions

Our work was performed on the basis that information provided to us was accurate and complete. Additionally, our engagement cannot be relied upon to disclose errors, irregularities, or illegal acts, including fraud that may exist.

Our Services were performed, and this Deliverable was prepared for the sole use and benefit of, and pursuant to a client relationship exclusively with, Liberty Utilities ("the Company"). PwC is providing no opinion, attestation or other form of assurance and disclaims any contractual or other responsibility to others based on their access to or use of the Deliverable. Accordingly, the information in this Deliverable may not be relied upon by anyone other than Client.

Qualifications of PwC

PricewaterhouseCoopers, which was formed in 1998 from a merger between Price Waterhouse and Coopers & Lybrand, has a long history in client services that dates back to the nineteenth century. Both firms originated in London during the mid-1800s. Today, we serve 26 industries, including the Power & Utilities industry. Our industry-focused services in the fields of assurance, tax, human resources, transactions, performance improvement, information technology and crisis management have helped resolve complex client and stakeholder issues worldwide. We also bring our knowledge and talent to help educational institutions, the federal government, non-profits, and international relief agencies to address their unique business issues.

Our U.S. firm, comprised of over 55,000 professionals, is organized around three core lines of service:

Assurance and Audit: Providing innovative, high quality, independent, and cost-effective services related to an organizations' financial control, regulatory reporting, shareholder value and technology needs;

Tax: Providing a wide range of innovative specialists' resources in three main areas: tax structuring, tax compliance and human resources; and

Advisory: Providing advice and assistance related to transactions, performance improvement, and crisis management based on long-term quality relationships with clients.

As a global network of firms, we share common standards, values, and policies, applying the same processes, systems, and approaches around the world.

PwC's power & utilities practice:

Nationally and globally, we are a leading provider of services in the utility industry. Our philosophy in serving the utility industry is to employ dedicated resources who focus on utility industry clients. This integrated practice demonstrates our commitment to the convergence of the utility industry and enables us to provide worldwide access to information through a variety of local resources. Our depth of resources and range of experience is enhanced by our strong base of utility clients. In the United States, we are the public accountants or consultants for more than 400 clients in the electric, gas, water, and renewable (clean) energy sectors.

Our power and utilities practice provides professional services to companies of many sizes, across many segments of the industry. We serve the needs of utility clients by employing more than 4,500 dedicated resources around the world. This provides our teams with an understanding of regulated and unregulated utility operations and services.

Our U.S. practice consists of more than 1,400 professionals serving clients in the electric, gas, water, and renewable energy sectors, including a dedicated utilities team within our National Office.

Complex accounting and regulatory support practice:

Within our Power and Utilities industry team, we have a highly specialized group, the Complex Accounting and Regulatory Solutions practice (CARS). Our CARS practice is dedicated to helping regulated companies in the energy and utilities industries manage their regulatory risk and solve complex accounting problems. Our seasoned team has deep experience working with regulated entities. The individuals in our CARS practice have many years of experience serving rate regulated entities (electric utilities, gas utilities, water utilities).

Executive summary

We were engaged to assess the company's process for capturing, assigning and allocating holding/service company costs incurred as described in the CAM as well as assess the CAM's compliance with guidance provided by the NARUC and the FERC. Our assessment addressed whether the allocations described in the CAM are based on cost-causative factors (direct charging, indirect attribution) or a multi-factor general allocator that are designed to prevent cross- subsidization (regulated versus unregulated affiliates, regulated electric versus regulated gas versus regulated water, United States versus Canada). In addition, we reviewed management's cost allocation workbooks to determine if the costs were allocated in accordance with the process stated in the CAM.

Based on completing these procedures and analyses, we determined the methodology for capturing holding/service company costs and allocating such costs to the Company's affiliates is reasonable, supportable and consistent with guidance promulgated by NARUC and FERC. The results of transaction testing found that the mechanics of the allocation process are working as designed.

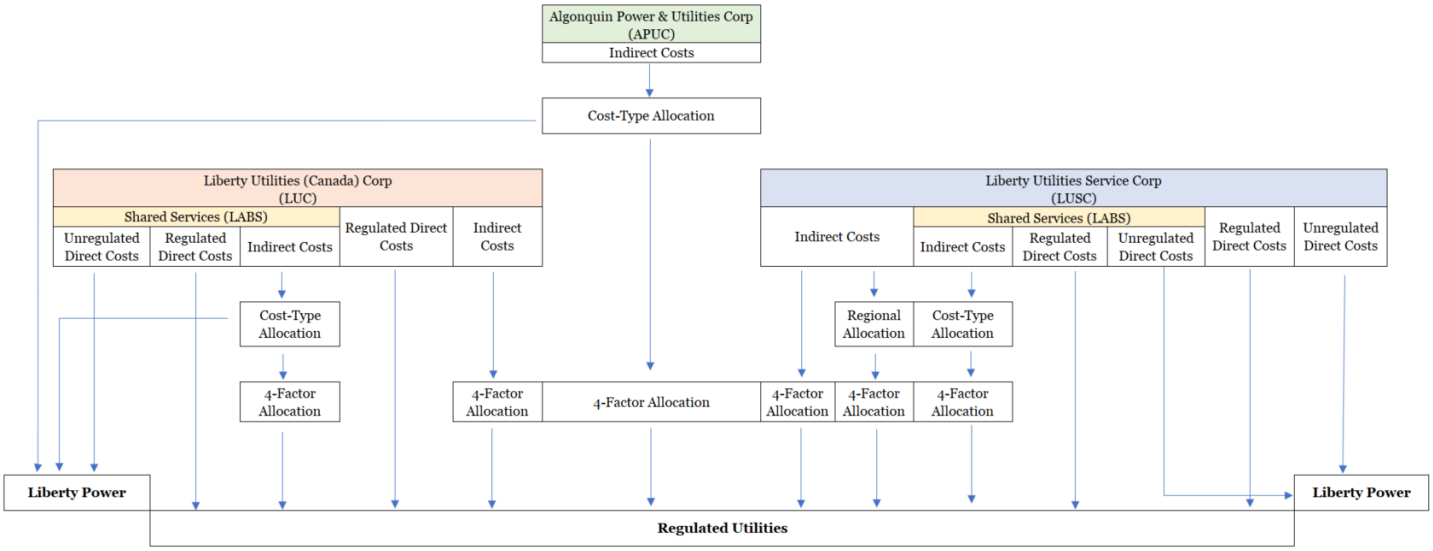
Procedures and observations

Background

Algonquin Power and Utilities Corporation ("APUC") is the ultimate parent holding company with both regulated and non-regulated entities. APUC is further organized into Liberty Utilities (Canada) Corporation ("LUC") and Liberty Utilities Service Corporation ("LUSC"). The primary distinction between LUC and LUSC is the geographical location of the related employees. Specifically, employees reporting to LUC are located in Canada and LUSC employees reside in the United States of America. The employee's location does not drive function and as such, these indirect costs are pooled for allocation to relevant entities. Both LUC and LUSC are further supported by a shared service company, Liberty Algonquin Business Services ("LABS").

As recommended by NARUC and FERC guidance, holding/service company costs are first directly charged to individual regulated or unregulated affiliates when an activity can be identified as relating to a specific affiliate or group of affiliates. Such direct-charged costs are removed from the indirect allocation pool.[1]

The majority of the remaining costs are allocated in two tiers. The first allocation is performed to divide the costs between regulated and nonregulated entities. This is performed based on the nature of the cost and allocated by cost-causative drivers or the modified Massachusetts method (weighting of several factors described in more detail in the Allocation Factors section). The second allocation is performed to further allocate the regulated costs among the regulated entities. At this point, these regulated costs are accumulated into one cost pool and allocated based on a modified Massachusetts Method general allocator as described in more detail within the Allocation Factors section. Note that both LUC and LUSC services are specific to regulated entities only so their costs are allocated through the general allocator only. Refer to the simplified corporate structure and visual allocation mapping below:



[1] See Guidelines for Cost Allocations and Affiliate Transactions, issued by the National Association of Regulatory Utility Commissioners and FERC Order 667, Repeal of the Public Utility Holding Company Act of 1935 and Enactment of the Public Utility Holding Company Act of 2005, 113 FERC ¶ 61,248.

Additionally, to provide background on each of the service companies, refer to the breakout of the fiscal 2020 direct charges and indirect charges as shown in the table below:

Company	Direct - regulated	Direct - unregulated	Indirect - regulated	Indirect - unregulated	Total costs
APUC	$ -	$ -	$ 18,049,595	$ 5,532,927	$ 23,582,521
LUC	$ 9,417,230	$ -	$ 5,766,158	$ -	$ 15,183,388
LUSC[2]	$ 16,461,390	$ 192,333	$ 23,730,840	$ -	$ 40,384,563
LABS[3]	$ 56,303,561	$ 5,007,501	$ 22,707,695	$ 4,394,112	$ 88,412,869
Total	**$ 82,182,181**	**$ 5,199,834**	**$ 70,254,288**	**9,927,039**	**$ 167,563,341**
% of Total Costs	**49%**	**3%**	**42%**	**6%**	**100%**

As noted above, costs are directly and indirectly charged at each company level to both the regulated business and unregulated business. In total, 52% of 2020 holding/service company costs were direct charged and 48% of 2020 allocable costs were indirectly charged. Of the $87,382,014 of direct charged costs, 94% were directly charged to the regulated business. Of the $80,181,327 of indirect costs, 88% were allocated to the regulated affiliates. Further, of the indirect shared services provided for the enterprise (APUC & LABS), 80% is allocated to the regulated utilities. LUC and LUSC do not allocate indirect costs to LP.

Management reviews the CAM on at least an annual basis to identify any needed updates. If there are changes in the business structure or other material events that impact allocation of costs, management will consider if updates to the CAM or the underlying allocation structure are necessary more frequently.

Reasonableness of cost pool to allocate

To assess the reasonableness of the cost pool to allocate, we performed various procedures to determine peer comparability and the necessity and benefit of such costs to the entity receiving such allocation.

Peer Comparability

We performed a preliminary analysis over peer comparability to assess how APUC, LUC and LUSC compare to other affiliate companies in terms of their percentage of direct vs. indirect billing of holding company/service company costs. Refer to Exhibit 1 for detailed analysis. We conducted interviews with holding/service company representatives to understand how both labor and non-labor costs are billed. Through these discussions, we understand that labor costs are recorded through employees charging their time. Employees are instructed to charge time to specific time codes set up for projects or entities. They understand that only time that cannot be directly billed is recorded to the general charge-code. Employees' time is also then subject to review by their supervisor who further assesses the appropriateness of the time charged. Non-labor costs are directed to the main billing contact who is responsible for assessing the charge for applicability to specific entities' or for general allocation. Again, the billing contact is instructed to direct charge where applicable.

As shown in the previous table, the three business units comprising the consolidated holding/service company allocation pool (APUC, LUC, LUSC) direct charged approximately 52% of the holding/service company pool in fiscal year 2020. To focus on the shared service companies, we also considered the percentage of direct cost charging from LUC and LUSC, calculating that over 60% of costs are direct charged. We observe that this is comparable with other U.S. companies as further discussed below. The percentage of direct charging varies each year depending on the specific activities

[2] LUSC includes costs from the East, Central and West regions as well as Libcorp cost pools.
[3] LABS includes employees in both Canada and the United States.

performed for/requested by the affiliates.

Peer data for fiscal year 2020 was not yet available. However, we were able to review the FERC Form 60's filed with the FERC for fiscal year 2019 (the most recent year that a full population is available as of the date of this report). The FERC Form 60 is the "Annual Report of Centralized Service Companies" required to be filed by all centralized utility service companies in the U.S. (that have not been granted a waiver), and although we recognize that APUC is not a service company, the distinction between holding company and service company activities is typically not significant and the FERC Form 60 data is the most widely representative data available to provide a sample of allocation methodologies that have been adopted across U.S. utilities. Each FERC Form 60 is required to include a schedule, "Schedule XVII - Analysis of Billing - Associate Companies," reporting direct billed and indirect billed costs. Through this analysis we determined that the mean of the percentage of direct cost charges as a percentage of total cost is 63% and the median is 67%. In fiscal year 2019, LUC and LUSC reported percentages greater than these amounts at 72% and 91%, respectively, suggesting a more comprehensive process for direct cost charging.

APUC's percentage was 25%, which is below the mean and median, but consistent with our understanding of the cost pool at the APUC level as it is the holding company and not a shared service company. Given the three companies consolidate into APUC, we also performed a calculation combining the three APUC business units and calculated direct billings of 81%, which is also higher than both the mean and median of other FERC Form 60 filers in 2019, suggesting more cost causative direct billing and smaller cost pools from which to indirectly allocate.

Necessity and Benefit

To elaborate on the Background section above, APUC is the ultimate corporate parent that provides financial and strategic management, corporate governance, and oversight of administrative and support services. The activities in this cost pool are a necessary part of being a publicly traded business, and are designed to complement, rather than duplicate, costs incurred at the subsidiaries. We noted in a review of the fiscal year 2019 reports of 44 utility service companies and past communications by the FERC and the NARUC that it is a common and widely accepted practice for North American utilities to allocate costs to regulated and non-regulated subsidiaries that are of a "corporate overhead" nature. Such costs include, but are not limited to, executive management, investor relations, internal audit and legal. In reviewing the CAM against the NARUC guidelines, we observed the nature of costs in the allocated pools follow this guidance.

LUC and LUSC also provide services to Liberty Utilities. As noted previously, both LUC and LUSC are supported by a centralized shared service company known as LABS that also provides business and corporate support services to the Company and its affiliates. It should be noted that LUC and LUSC only differ in their employee's geography with LUC employees residing in Canada and LUSC employees residing in the United States. Cost pools at LUC, LUSC and LABS relate to the following areas: information technology, human resources, training, facilities and building rent, environment, health, safety and security, procurement, executive and strategic management, technical services, utility planning as well as corporate services including: risk management, financial reporting, planning and administration, treasury, internal audit, external communications, legal costs and compliance.

Whether the costs are incurred by a service company or holding company does not affect the NARUC or FERC allocation guidance and, as a result, the approaches to identify allocable cost pools used by utility service companies such as LUC, LUSC and LABS are generally valid for APUC as well.

In understanding the types of costs included in each cost pool, we then considered the following qualitative and quantitative factors in assessing the reasonableness of the costs that are allocated to its subsidiaries:

1. Are the activities performed necessary for the Company's subsidiaries, and do they provide demonstrated benefits?

2. Are the costs duplicative in nature?

3. Are the costs similar in nature to costs that other utility holding companies have successfully recovered through rate cases in the U.S. and Canada?

To assess these questions, we conducted interviews with certain employees with knowledge of cost types making up each pool. We used a risk-based approach to determine which departments to interview, focusing primarily on the cost pools with larger balances. For those pools where interviews were not performed, we subjected such cost pools to our selection testing of source documents as well as comparative procedures against other companies filing FERC Form 60s. We also obtained the detailed listing of costs included within each company cost pool (APUC, LUC and, LUSC) and scanned the expenses making up those balances against the descriptions included within the CAM. Our primary observation is historically allocated costs are costs required to satisfy responsibilities to customers, shareholders, and regulators, and to enable effective corporate oversight.

For a selection of individual costs within each of the companies' pools, we requested the underlying source documents to review the related invoice(s) and/or calculation spreadsheet to further validate the appropriateness of its inclusion in the cost pool for allocation as well as the appropriate cost-type coding to the extent it is allocated by cost-type. Through these procedures, it was observed that the cost pools are reasonable and consistent with other U.S. companies.

In addition to assessing the costs included in the cost pool, our interviews with members of management also suggest that the Company has appropriately identified specific costs to exclude from the allocable cost pool (e.g., business development costs, retirement costs, meals and entertainment, foreign exchange gains and losses, and donations). Through interviews as well as review of the monthly allocations, we also noted that these costs are either processed through the allocation or removed from the pool prior to allocation to prevent the likelihood of subsidization by certain entities. During the fiscal year 2020, approximately $58M in costs were originally included within the cost pool for allocation, as they were not direct charged, and subsequently excluded and removed from the cost pool prior to allocation.

Beyond the cost pool exclusions, there is another process by which affiliates may challenge a charge that does not seem to directly benefit the entity. Two examples of this would be if a Canadian entity erroneously received a United States regulatory fee or if a gas company received an electric charge in error. In both cases, the receiving entity may challenge that billing to ensure necessity and benefit of costs allocated. In those instances, management has noted that these costs have historically been removed from those entities suggesting effective internal controls for identification and resolution of costs billed inappropriately.

A necessity and benefit analysis is summarized within Exhibit 2. In analyzing the cost pools that APUC, LUC and LUSC and its subsidiaries have historically allocated to its subsidiaries, we considered information obtained through interviews with management, review of internal records, and review of published data relating to other utility service/holding companies.

Role Clarity

APUC's services allow for access to the capital markets and provide for maximum expertise at lower costs. If the utilities did not have access to the services provided by APUC, LUC and LUSC they would be forced to incur associated costs for financing, capital investment, audits, taxes and other similar services on a stand-alone basis, which would substantially increase such costs. One overriding rationale supporting a service/holding company concept is the scope and scale; that is, rather than each affiliate having a certain individual or group provide services to the individual entity, a service/holding company can provide such services to a number of affiliates with the individual receiving an allocated portion of the service/holding company cost. Costs that may appear to overlap across APUC, LUC, LUSC and the local entity were further reviewed with findings summarized within Exhibit 4. Functions included within this analysis were reviewed based on higher cost balances and discussed with management to assess overlap and functionality. The costs included in the exhibit represent the largest balances with the potential for duplication. While, finance, legal and human resources are cost types for which services are both allocated and performed directly at the local entity, we did not identify any instances of redundancy through this exercise.

Allocation methodology

In addition to assessing the cost pool, we also reviewed the associated allocation factors as well as reperformed management allocation calculation to verify its compliance with the CAM.

Allocation factors

In past decisions and written communications, the regulators in the Company's jurisdictions have expressed the view that direct charging of service/holding company costs to specific entities, where supportable, is preferred. After direct charging, utility service/holding companies should first allocate costs by cost drivers with a cost-causative linkage to the respective cost pool where possible, and finally allocate the remainder of costs using a general factor. The percentage of direct charging will vary from year to year depending on the nature and size of projects and responses to requests from affiliates. As previously stated, the combined APUC, LUC and LUSC directly charged more than half of the holding/service company costs in fiscal year 2020 (more than 60% by the LUC and LUSC service companies) and, in 2019 (where peer information is available) at a higher level than its peers in fiscal year 2019. NARUC's cost allocation principles state that the general method for charging indirect costs should be on a fully allocated cost basis.

APUC

When APUC cannot identify indirect cost drivers for any of its functional areas, a "relevant proxy" as a general allocator for corporate overhead type costs is used. A general allocator is an acceptable approach under NARUC and FERC in order to fully distribute the costs in the cost pools. APUC's costs are organized into cost pools and are weighted through two levels of multi-factored allocations to ensure allocations across entities is appropriate.

Services at APUC are provided to both regulated and non-regulated companies. To first divide between the two, APUC allocates by cost-type and a related cost causative driver or a general allocator to avoid subsidization between regulated and non-regulated companies. The regulated cost pool is then subject to a four-factor general allocator, allocating costs based on a weighting of 40% customer count, 20% utility net plant, 20% non-labor expenses, and 20% labor expenses. This weighting has been determined by management to be most appropriate as to avoid vertically integrated utilities, owning their own generation facilities, from receiving exorbitant allocation. As such, the higher weighting on customer count results in a more equitable and representative distribution of the shared services costs.

LUC and LUSC

At LUC, indirect costs are allocated directly through the general allocator as costs are incurred in support of all regulated entities. At LUSC, costs are recorded based on the various region/group (East, Central, West, Libcorp, and LABS) and then subject to the four-factor methodology. Costs within the East, Central, and West regions are allocated only to the specific utilities within those regions. For example, in the East region costs are only allocated to Granite State, EnergyNorth, Georgia, New England Gas, New Brunswick Gas, St. Lawrence Gas, and Tinker Transmission. Costs within Libcorp are allocated to all utilities following the four-factor methodology with a nuance for energy procurement related costs. Any Libcorp costs related to Energy Procurement are not allocated to water companies. Costs within LABS are first allocated between regulated and nonregulated entities by cost pool percentage as shown in Exhibit 2, and then to the local utilities using the four-factor method.

Although FERC and U.S. state regulators do not have a specific set of rules on the development of a general allocation factor, they have been clear that they prefer a general allocator that incorporates the weighting of multiple factors. Additionally, Canadian regulators appear to also prefer a general allocator that weights multiple factors. This approach recognizes that there is not one perfect allocator and using a combination of factors reduces the subjectivity of using one individual measure as the basis for allocation. The Massachusetts method (or modified Massachusetts method) is the most widely used method of allocating corporate general costs that cannot be assigned a specific cost driver, and it has been widely accepted by the FERC, U.S. state and Canadian regulators. The original Massachusetts method involved the equal weighting of three factors: plant, revenues, and labor. The modified Massachusetts method includes variations of approach (e.g., gross margin as a substitute for revenue, O&M expense as a substitute for labor, etc.). In any event, a general allocation factor that includes some indicator of operations (expense) and capital investment (assets) is often accepted.

We also examined whether the costs are similar in nature to costs that other utility holding companies and/or service companies have historically allocated to their subsidiaries, see Exhibit 3. To aid in this analysis, we reviewed the fiscal year 2019 FERC Form 60s as noted above. Each FERC Form 60 is required to include a schedule, “Schedule XXI – Methods of Allocation,” that specifies all functions for which the service company is allocating costs, and a description of the method of allocation (we discuss methods of allocation later in this report). We analyzed the allocation factors within the FERC Form 60s of APUC’s peers based on the “comparator group” reported within the 2020 and 2019 Management Information Circular posted on the Company’s website. Through this exercise, we compared both the general allocator as well as cost causative factors by cost pools used by APUC allocators that have been accepted by the FERC and the New Brunswick Energy and Utilities Board, noting that the Company’s allocation methodology of utilizing a general allocator is consistent with its peers and there were no cost pools identified that would suggest the Company is an outlier.

Given the costs subject to this pool do not have an obvious cost-causative driver to allocate, this weighting is considered appropriate because, as stated above, to not weigh any one factor more than another. From analysis of the FERC Form 60s filed in 2019, we further verified that the use of a general allocator is common among the Company’s peers.

Mathematical accuracy

We obtained the monthly allocation files for each month during the fiscal year 2020 for each company (APUC, LUC, LUSC and LABS) and reviewed the files for consistency in calculations. Further, we selected two months at random to perform a detailed recalculation from the cost pool detail through the relevant allocations down to the final entity. Through these procedures, for the two-months subject to testing, we determined the costs are being allocated in accordance with the company’s CAM. Refer to the illustrative example below for further detail on the procedures performed.

Illustrative example - Cost allocator

Cost allocation factors are updated annually, and periodically throughout the year when changes to the business occur. The cost allocator calculation is completed for all four business units (APUC, LABS, LUC, and LUSC) within a single manual spreadsheet. During 2020, cost allocation factors were updated in April, June, and November. As such, in accordance with audit testing methodology for attribute testing, we determined it appropriate to test two months (April and November) of allocators and complete the procedures for all business units. Refer to the screenshot below for PwC’s testing over the APUC cost allocator for April:

APUC
April 2020 - March 2021 Allocation
as at April xx, 2020

	All Employees Headcount	%	O&M USD	%	Revenue USD	%	Net Plant USD	%	Oakville Employees Headcount	%
LP (APCO)	176	7%	75,209	15%	240,692	20%	2,444,382	34%	90	29%
LU	2,266	93%	412,456	85%	980,770	80%	4,754,373	66%	219	71%
Total	2,442	100%	487,665	100%	1,221,462	100%	7,198,755	100%	309	100%
	-		-		-		-		-	
Legal Costs		33-333%		33-333%				33-333%		
Tax Services				33-333%		33-333%		33-333%		
Audit				33-333%		33-333%		33-333%		
Investor Relations				33-333%		33-333%		33-333%		
Director Fee & Insurance				33-333%		33-333%		33-333%		
Licenses, Fees, and Permits				33-333%		33-333%		33-333%		
Escrow & transfer Agent Fees				33-333%		33-333%		33-333%		
Other Professional Services				33-333%		33-333%		33-333%		
Office Administration Costs		50.00%								50.00%
Travel- CAM category is Other Other Professional Services.				33-333%		33-333%		33-333%		
Executive ~~Salaries~~ and Strategic Management				33-333%		33-333%		33-333%		

2020 Percentages			
Summary	APCO	LU	Total
Legal Costs	18.9%	81.1%	100.00%
Tax Services	23.0%	77.0%	100.00%
Audit	23.0%	77.0%	100.00%
Investor Relations	23.0%	77.0%	100.00%
Director Fee & Insurance	23.0%	77.0%	100.00%
Licenses, Fees, and Permits	23.0%	77.0%	100.00%
Escrow & transfer Agent Fees	23.0%	77.0%	100.00%
Other Professional Services	23.0%	77.0%	100.00%
Office Administration Costs	18.2%	81.8%	100.00%
Travel- CAM category is Other Other Professional Services.	23.0%	77.0%	100.00%
Executive and Strategic Management	23.0%	77.0%	100.00%

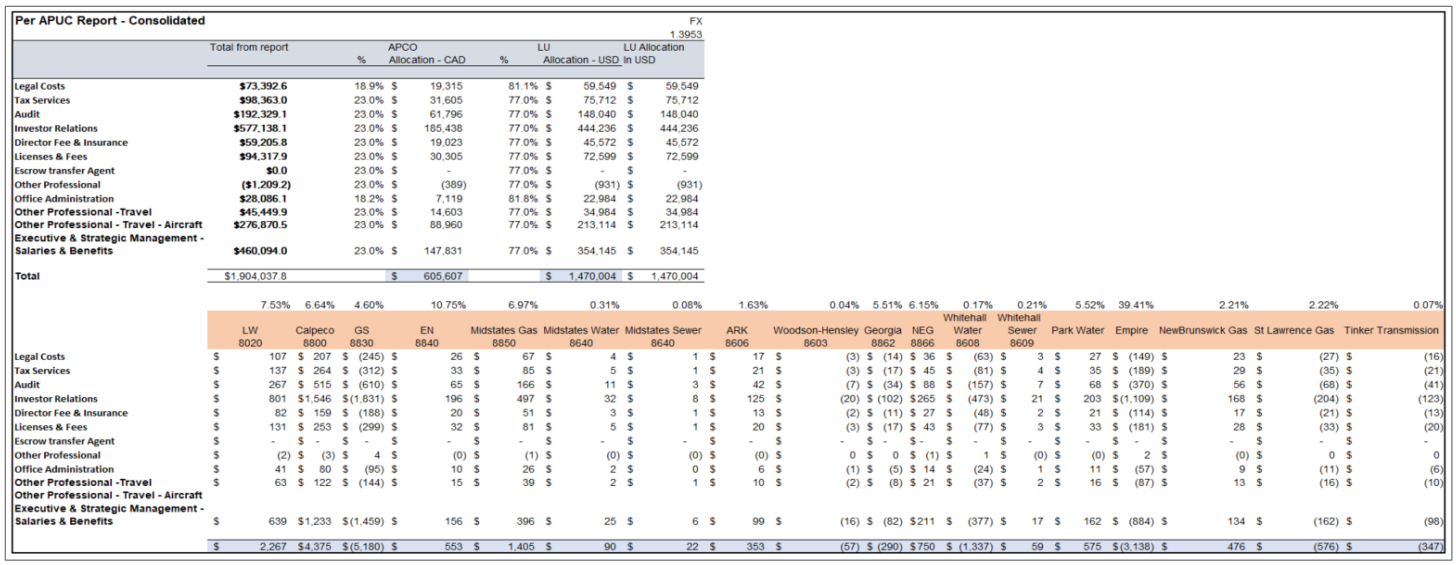
2019 Percentages			
Summary	APCO	LU	Total
Legal Costs	17.9%	82.1%	100.00%
Tax Services	21.5%	78.5%	100.00%
Audit	21.5%	78.5%	100.00%
Investor Relations	21.5%	78.5%	100.00%
Director Fee & Insurance	21.5%	78.5%	100.00%
Licenses & Fees	21.5%	78.5%	100.00%
Escrow transfer Agent	21.5%	78.5%	100.00%
Other Professional	21.5%	78.5%	100.00%
Office Administration	17.4%	82.6%	100.00%
Travel	21.5%	78.5%	100.00%
Executive Salaries	21.5%	78.5%	100.00%

LU Comparison
-1.0%
-1.5%
-1.5%
-1.5%
-1.5%
-1.5%
-1.5%
-1.5%
-0.8%
-1.5%
-1.5%

As noted in the screenshot above, first we traced and agreed all inputs to the allocations to the original source data. Second, we recalculated the allocation percentage between the regulated and non- regulated business based on the initial inputs. Third, we traced and agreed the cost pool allocation to the CAM guidance. Finally, we recalculated the distinct cost pool allocator by applying the three-factor method as described in the methodology. We completed the same tie out and recalculation procedures on the cost allocator calculations for LABS, LUC, and LUSC, determining that the allocation factors are mathematically accurate.

Illustrative example - Cost pool calculation

Each month the cost allocators, calculated above, are applied to their cost pools to appropriately calculate their allocations. To determine if costs are allocated in accordance with the CAM, we recalculated the allocation of costs to all entities for two months. Refer to the screenshot below for our recalculation over APUC cost pool calculations and final allocation:



Per APUC Report - Consolidated

FX 1.3953

	Total from report		APCO Allocation - CAD		LU Allocation - USD	LU Allocation in USD
		%		%		
Legal Costs	$73,392.6	18.9%	$ 19,315	81.1%	$ 59,549	$ 59,549
Tax Services	$98,363.0	23.0%	$ 31,605	77.0%	$ 75,712	$ 75,712
Audit	$192,329.1	23.0%	$ 61,796	77.0%	$ 148,040	$ 148,040
Investor Relations	$577,138.1	23.0%	$ 185,438	77.0%	$ 444,236	$ 444,236
Director Fee & Insurance	$59,205.8	23.0%	$ 19,023	77.0%	$ 45,572	$ 45,572
Licenses & Fees	$94,317.9	23.0%	$ 30,305	77.0%	$ 72,599	$ 72,599
Escrow transfer Agent	$0.0	23.0%	$ -	77.0%	$ -	$ -
Other Professional	($1,209.2)	23.0%	$ (389)	77.0%	$ (931)	$ (931)
Office Administration	$28,086.1	18.2%	$ 7,119	81.8%	$ 22,984	$ 22,984
Other Professional -Travel	$45,449.9	23.0%	$ 14,603	77.0%	$ 34,984	$ 34,984
Other Professional - Travel - Aircraft	$276,870.5	23.0%	$ 88,960	77.0%	$ 213,114	$ 213,114
Executive & Strategic Management - Salaries & Benefits	$460,094.0	23.0%	$ 147,831	77.0%	$ 354,145	$ 354,145
Total	$1,904,037.8		$ 605,607		$ 1,470,004	$ 1,470,004

	7.53%	6.64%	4.60%	10.75%	6.97%	0.31%	0.08%	1.63%	0.04%	5.51%	6.15%	0.17%	0.21%	5.52%	39.41%	2.21%	2.22%	0.07%
	LW 8020	Calpeco 8800	GS 8830	EN 8840	Midstates Gas 8850	Midstates Water 8640	Midstates Sewer 8640	ARK 8606	Woodson-Hensley 8603	Georgia 8862	NEG 8866	Whitehall Water 8608	Whitehall Sewer 8609	Park Water	Empire	NewBrunswick Gas	St Lawrence Gas	Tinker Transmission
Legal Costs	$ 107	$ 207	$ (245)	$ 26	$ 67	$ 4	$ 1	$ 17	$ (3)	$ (14)	$ 36	$ (63)	$ 3	$ 27	$ (149)	$ 23	$ (27)	$ (16)
Tax Services	$ 137	$ 264	$ (312)	$ 33	$ 85	$ 5	$ 1	$ 21	$ (3)	$ (17)	$ 45	$ (81)	$ 4	$ 35	$ (189)	$ 29	$ (35)	$ (21)
Audit	$ 267	$ 515	$ (610)	$ 65	$ 166	$ 11	$ 3	$ 42	$ (7)	$ (34)	$ 88	$ (157)	$ 7	$ 68	$ (370)	$ 56	$ (68)	$ (41)
Investor Relations	$ 801	$1,546	$(1,831)	$ 196	$ 497	$ 32	$ 8	$ 125	$ (20)	$ (102)	$265	$ (473)	$ 21	$ 203	$(1,109)	$ 168	$ (204)	$ (123)
Director Fee & Insurance	$ 82	$ 159	$ (188)	$ 20	$ 51	$ 3	$ 1	$ 13	$ (2)	$ (11)	$ 27	$ (48)	$ 2	$ 21	$ (114)	$ 17	$ (21)	$ (13)
Licenses & Fees	$ 131	$ 253	$ (299)	$ 32	$ 81	$ 5	$ 1	$ 20	$ (3)	$ (17)	$ 43	$ (77)	$ 3	$ 33	$ (181)	$ 28	$ (33)	$ (20)
Escrow transfer Agent	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Professional	$ (2)	$ (3)	$ 4	$ (0)	$ (1)	$ (0)	$ (0)	$ (0)	$ 0	$ 0	$ (1)	$ 1	$ (0)	$ (0)	$ 2	$ (0)	$ 0	$ 0
Office Administration	$ 41	$ 80	$ (95)	$ 10	$ 26	$ 2	$ 0	$ 6	$ (1)	$ (5)	$ 14	$ (24)	$ 1	$ 11	$ (57)	$ 9	$ (11)	$ (6)
Other Professional -Travel	$ 63	$ 122	$ (144)	$ 15	$ 39	$ 2	$ 1	$ 10	$ (2)	$ (8)	$ 21	$ (37)	$ 2	$ 16	$ (87)	$ 13	$ (16)	$ (10)
Other Professional - Travel - Aircraft																		
Executive & Strategic Management - Salaries & Benefits	$ 639	$1,233	$(1,459)	$ 156	$ 396	$ 25	$ 6	$ 99	$ (16)	$ (82)	$211	$ (377)	$ 17	$ 162	$ (884)	$ 134	$ (162)	$ (98)
	$ 2,267	$4,375	$(5,180)	$ 553	$ 1,405	$ 90	$ 22	$ 353	$ (57)	$ (290)	$750	$ (1,337)	$ 59	$ 575	$(3,138)	$ 476	$ (576)	$ (347)

As noted in the screenshot above, first we traced and agreed the cost pool bucketing to the source files. To assess the cost pool bucketing, we inspected 64 selections across the four business units and confirmed the cost pool was appropriate and that the expenditure was necessary and beneficial to each business unit for which it was ultimately allocated. Second, we traced and agreed the regulated vs. unregulated allocation percentages to the cost allocator described above. Third, we recalculated the dollar amount allocated to regulated vs. unregulated by applying the percentage to the cost pool buckets. Fourth, we traced and agreed the utility specific allocation to the four-factor methodology within the CAM. Finally, we recalculated the dollar amount allocated to each utility by applying the appropriate four factor allocation to each regulated cost pool bucket. We completed the same tie out and recalculation procedures on the cost pool calculations for LABS, LUC, and LUSC, determining that costs are allocated in accordance with the CAM.

Exhibit 1 – FERC Form 60 analysis – Direct charging percentages

Schedule XVII – Analysis of billing – Associate companies (Account 457)[4]

Company	Direct charges	Indirect charges	Total	% Direct
Allegheny Energy Service Corporation	(3,478,868)	0	(3,478,868)	100%
ATC Management Inc.	114,256,597	0	114,256,597	100%
Avangrid Service Company	215,445,184	0	215,445,184	100%
Columbia Pipeline Group Service Company	12,927,828	0	12,927,828	100%
National Grid Engineering & Survey, Inc.	62,724,377	111,955	62,836,332	100%
National Grid USA Service Company Inc.	2,679,362,707	39,549,266	2,718,911,973	99%
Entergy Nuclear Operations, Inc.	538,316,287	11,945,559	550,261,846	98%
Entergy Operations, Inc.	592,825,726	14,157,781	606,983,507	98%
Entergy Enterprises, Inc.	137,526,565	5,436,297	142,962,862	96%
Entergy Services, LLC	1,493,373,708	82,312,730	1,575,686,438	95%
Liberty Utilities Service Corp	**185,577,826**	**19,236,654**	**204,814,480**	**91%**
Ameren Services Company	438,304,912	66,277,755	504,582,667	87%
Southern Company Services, Inc.	1,641,635,744	266,203,999	1,907,839,743	86%
Southern Nuclear Operating Company, Inc.	872,884,799	150,090,430	1,022,975,229	85%
American Electric Power Service Corporation	1,395,321,358	263,838,026	1,659,159,384	84%
PPL EU Services Corporation	118,378,939	36,711,919	155,090,858	76%
Dominion Energy Southeast Services, Inc.	321,131,139	118,588,606	439,719,745	73%
Liberty Utilities (Canada) Corp.	**62,489,175**	**23,992,759**	**86,481,934**	**72%**
Alliant Energy Corporate Services, Inc.	219,475,201	98,350,743	317,825,944	69%
Duke Energy Business Services, LLC	2,492,153,525	1,242,623,655	3,734,777,180	67%
AES U.S. Services, LLC	82,321,803	41,619,490	123,941,293	66%
CenterPoint Energy Service Company, LLC	423,258,832	216,453,598	639,712,430	66%
Dominion Energy Services, Inc.	518,940,004	326,727,735	845,667,739	61%

[4] Source: "Schedule XVII - Analysis of Billing" - Associate Companies per the FERC Form 60's filed with the FERC for fiscal year 2019

Company	Direct charges	Indirect charges	Total	% Direct
GridLiance Management, LLC	12,085,046	9,419,192	21,504,238	56%
Xcel Energy Services Inc.	754,303,916	619,273,619	1,373,577,535	55%
Eversource Energy Service Company	417,811,235	464,890,694	882,701,929	47%
Unitil Service Corporation	28,680,426	33,453,185	62,133,611	46%
Exelon Business Services Company, LLC	840,951,644	1,063,651,695	1,904,603,339	44%
NiSource Corporate Services Company	198,658,714	265,830,801	464,489,515	43%
PPL Services Corporation	51,763,704	89,118,515	140,882,219	37%
FirstEnergy Service Company	318,454,007	591,305,053	909,759,060	35%
WEC Business Services LLC	186,529,804	464,906,991	651,436,795	29%
PHI Service Company	105,727,868	289,546,938	395,274,806	27%
LG&E and KU Services Company	91,447,624	252,903,989	344,351,613	27%
TECO Services, Inc.	22,150,108	65,564,577	87,714,685	25%
Algonquin Power & Utilities Corp.	**4,774,034**	**14,491,067**	**19,265,101**	**25%**
Sempra North American Infrastructure, LLC	29,809,865	92,018,710	121,828,575	24%
PNMR Services Company	32,978,879	102,332,822	135,311,701	24%
Black Hills Service Company, LLC	69,693,105	275,855,498	345,548,603	20%
Sempra Services Corporation	0	5,737,848	5,737,848	0%
Grand Total	**17,780,973,347**	**7,724,530,151**	**25,505,503,498**	**70%**
Mean				**63%**
Median				**67%**
APUC Consolidated	**252,841,035**	**57,720,480**	**310,561,515**	**81%**

Exhibit 2 – Necessity and benefits analysis of company costs

Necessity attributes:	Benefit attributes
1. Corporate governance	1. Reduce risk or avoid risk
2. Regulatory mandate	2. Increase employee productivity
3. Legal compliance	3. Provide management information
4. Management oversight	4. Enhance corporate performance
5. Corporate Operational execution	5. Increase reliability
6. Strategic planning	

Business Unit	Cost type	Are the activities performed necessary for theenterprise?	Do the activities provide demonstrated benefits?	Allocation methodology
APUC	Legal Costs[5]	1, 2, 3	1	Net Plant 33.3% Number of Employees 33.3% O&M 33.3%
APUC	Tax Services	3	1	Revenue 33.3% O&M 33.3% Net Plant 33.3%
APUC	Audit	2, 3	1, 5	Revenue 33.3% O&M 33.3% Net Plant 33.3%
APUC	Investor Relations	1, 6	1, 5	Revenue 33.3% O&M 33.3% Net Plant 33.3%
APUC	Director Fees and Insurance	1, 3, 4, 5, 6	1, 4, 5	Revenue 33.3% O&M 33.3% Net Plant 33.3%
APUC	Licenses, Fees and Permits	2, 3, 5	1, 5	Revenue 33.3% O&M 33.3% Net Plant 33.3%
APUC	Escrow and Transfer Agent Fees	3, 5	1, 5	Revenue 33.3% O&M 33.3%

[5] Refer to Exhibit 4 for analysis of costs that may appear to overlap across APUC, LUC, LUSC and the local entity

Business Unit	Cost type	Are the activities performed necessary for the enterprise?	Do the activities provide demonstrated benefits?	Allocation methodology
				Net Plant 33.3%
APUC	Other Professional Services	5, 6	4	Revenue 33.3% O&M 33.3% Net Plant 33.3%
APUC	Other Administration Costs	5	2	Oakville Employees 50% Total Employees 50%
APUC	Executive and Strategic Management	5, 6	1, 4	Revenue 33.3% O&M 33.3% Net Plant 33.3%
LABS	Information Technology	5	2, 3, 4, 5	Number of Employees 90% O&M 10%
LABS	Human Resources[5]	5	1, 3, 4, 5	Number of Employees 100%
LABS	Training	1, 2, 3, 5	1, 2, 4, 5	Number of Employees 100%
LABS	Facilities and Building Rent	5	4	Oakville Employees 100%
LABS	Environment, Health, Safety and Security	2, 3, 5	1, 5	Number of Employees 100%
LABS	Procurement	2, 5	1, 4, 5	O&M 50% Capital Expenditures 50%
LABS	Executive and Strategic Management	5, 6	1, 4	Revenue 33.3% O&M 33.3% Net Plant 33.3%
LABS	Technical Services	5	4	Net Plant 33.3% Revenue 33.3% O&M 33.3%
LABS	Utility Planning	2, 5	1, 4, 5	Net Plant 33.3% Revenue 33.3% O&M 33.3%
LABS	Risk Management	5	1, 5	Net Plant 33.3% Revenue 33.3% O&M 33.3%
LABS	Financial Reporting, Planning and Administration[5]	2, 3, 5, 6	1, 3, 4	Revenue 33.3% O&M 33.3% Net Plant 33.3%
LABS	Treasury[5]	3, 5, 6	1, 3, 4	Capital Expenditures 25% O&M 50% Net Plant 25%

Business Unit	Cost type	Are the activities performed necessary for the enterprise?	Do the activities provide demonstrated benefits?	Allocation methodology
LABS	Internal Audit	2, 3, 4	1, 3, 5	Net Plant 25% O&M 75%
LABS	External Communications			Total Employees 100%
LABS	Legal Costs[5]	3	1, 5	Net Plant 33.3% Number of Employees 33.3% O&M 33.3%
LABS	Compliance	1, 2, 3, 4	1, 3, 5	Revenue 33.3% O&M 33.3% Net Plant 33.3%
LUSC/LUC	Customer Care and Billing	5	4, 5	Four Factor Allocator
LUSC/LUC	IT/Tech Support	5	2, 3, 4, 5	Four Factor Allocator
LUSC/LUC	Human Resources[5]	5	1, 3, 4, 5	Four Factor Allocator
LUSC/LUC	Gas Control	2, 5	1, 3, 5	Four Factor Allocator
LUSC/LUC	Legal[5]	1, 2, 3	1	Four Factor Allocator
LUSC/LUC	Compliance	1, 2, 3, 4	1, 3, 5	Four Factor Allocator
LUSC/LUC	Regulatory & Government Relations	1, 2, 3	1, 5	Four Factor Allocator
LUSC/LUC	Environmental, Health, Safety and Security	2, 3, 5	1, 5	Four Factor Allocator
LUSC/LUC	Procurement	2, 5	1, 4, 5	Four Factor Allocator
LUSC/LUC	Operations	5	2, 4, 5	Four Factor Allocator
LUSC/LUC	Engineering; Dispatch and Control	5	2, 4, 5	Four Factor Allocator
LUSC/LUC	Outage Management	5	1, 2, 4, 5	Four Factor Allocator
LUSC/LUC	GIS/Mapping	5	3, 4, 5	Four Factor Allocator
LUSC/LUC	Vegetation Management	5	1, 5	Four Factor Allocator
LUSC/LUC	Energy Procurement	2, 5	1, 4, 5	Four Factor Allocator
LUSC/LUC	Accounting and Finance[5]	2, 3, 5, 6	1, 3, 4	Four Factor Allocator
LUSC/LUC	Managerial	1, 5, 6	1, 4, 5	Four Factor Allocator
LUSC/LUC	Utility Planning	2, 5	1, 4, 5	Four Factor Allocator
LUSC/LUC	Customer Communication	5	1, 5	Four Factor Allocator

Exhibit 3 – FERC form 60 analysis – General allocator methodology

Schedule XXI – Methods of allocation[6]

	Algonquin power & utilities Corp.	Liberty utilities (Canada) Corp.	Alliant energy corporate services, Inc.	CenterPoint energy service company, LLC	PNMR services company	Black hills corporation
4 Factor	Utilities (40% customer count, 20% utility net plant, 20% non-labor exp, 20% labor exp)	Utilities (40% customer count, 20% utility net plant, 20% non-labor exp, 20% labor exp)				
3 Factor	Legal Costs (33% Plant, 33% # of employees, 33% OM) Tax Services (33% Rev, 33% OM, 33% Plant) Audit (33% Rev, 33% OM, 33% Plant) Investor Relations (33% Rev, 33% OM, 33% Plant) Director Fees and Insurance (33% Rev, 33% OM, 33% Plant) Escrow and transfer Agent Fees (33% Rev, 33% OM, 33% Plant) Other Professional Services (33% Rev, 33% OM, 33% Plant) Executive and Strategic Management (33% Rev, 33% OM, 33% Plant)	Executive and Strategic Management (33% Rev, 33% OM, 33% Plant) Technical Services (33% Rev, 33% OM, 33% Plant) Utility Planning (33% Rev, 33% OM, 33% Plant) Risk Management (33% Rev, 33% OM, 33% Plant) Financial Reporting, Planning, and Administration (33% Rev, 33% OM, 33% Plant) Treasury (25% capex, 50% OM, 25% Plant) Legal Costs (33% # of employees, 33% OM, 33% Plant) Compliance (33% Rev, 33% OM, 33% Plant)	Legal costs (33% # of employees, 33% total assets, 33% op. revs) Taxes (33% # of employees, 33% total assets, 33% op. revs) Benefits (33% # of employees, 33% total assets, 33% op. revs) Planning (33% # of employees, 33% total assets, 33% op. revs) Materials management (materials, supplies, and services)	Asset Ratio Corporate Governance Costs (40% assets, 40% gross margin, 20% head count)	Utility Shared Services (Massachusetts methods)	Blended ratio (33% gross margin, 33% asset cost, 33%, payroll)

[6] Source: "Schedule XXI – Methods of Allocation" per the FERC Form 60's filed with the FERC for fiscal year 2019

	Algonquin power & utilities Corp.	Liberty utilities (Canada) Corp.	Alliant energy corporate services, Inc.	CenterPoint energy service company, LLC	PNMR services company	Black hills corporation
2 Factor		IT (90% # of employees, 10% OM) Procurement (50% OM, 50% capex) Internal Audit (25% net plant, 75% OM)	Engineering and Construction (utility type and function)	Operating Expense ratio	Facilities and Building (Sq. footage and occupancy)	
1 Factor	Other Admin Costs (# of employees)	Human Resources (# of employees) Training (# of employees) Facilities and Building Rent (# of employees) Environment, Health, Safety, and Security (# of employees) External Communications (# of employees)	IT (# of employees) Transportation (# of employees) Human Resources (# of employees) Facilities and Building (# of employees) Power planning (volumes) Electric production admin (volumes) Electric and gas delivery admin (# of customers) Environmental affairs (volumes) Customer billing/payment processing (# of bills) Customer Service, Customer Assistance and Customer Relations (# of customers) Public and Community Affairs (# of employees or customers) Rates (# of customers) Electric System Maintenance (miles of distribution lines) Investor Relations (total assets) Insurance and Risk Management (Total assets) Internal audit (Op. Revs) Real Estate and Right of way (gross plant) Fuel (volumes) Gas Acquisition and dispatch (volumes) Accounting (Op. Revs) Other Admin (Op. Revs) Finance (Op. Revs)	Head Count Ratio w/retirees Head Count Ratio w/o retirees Head Count Ratio w/retirees and inactive employees Union Head Count Ratio Wellness Head Count Ratio Direct Labor Ratio Client Unit Usage Ratio Sq. Footage Ratio Cross-Charges	IT (# of employee's) Financial Systems (volume of transactions) A/P Admin and Maintenance (volume of transactions) Depreciation, Asset Retirement, clearing completed construction projects to plant, fixed asset software maintenance (depreciable assets) Work management system (transaction count) Benefits (# of employee's) Ethics (# of employee's) Governance (# of employee's) Payroll (# of employee's) People Services (# of employee's) Communications (# of employee's)	

Exhibit 4 – Delineation of roles and responsibilities

This exhibit shows our analysis of costs that may appear to overlap across APUC, LUC, LUSC and the local entity. As shown below, we did not identify any instances of redundancy through this exercise.

Cost pool	Shared service role (costs allocated from APUC, LUC, LUSC or LABS)	Local utility role
Finance	The Finance/Treasury organization ensures that regulated utilities meet audit standards and regulatory requirements, have strong financial and operational controls, and are recording financial transactions accurately and prudently. They receive inputs from the utilities to consolidate and manage intercompany billings. Finance/Treasury also coordinates financing for capital projects for the regulated utilities along with capital planning and related services.	Finance focuses on specific entity performance and reports to the centralized finance group.
Legal	Legal services oversees all general legal matters pertaining to all entities. These legal services include review of audited financial statements, annual information filings, Sedar filings, review of contracts, incorporation, tax issues of a legal nature, market compliance, and other legal issues.	Legal departments at the local utility level focus on specific rate cases or items relevant to the entity's jurisdictions.
Human Resources	The Human Resources functions include the management and oversight of training and development of employees, ensuring employees are provided healthy and safe work environments, and receive competitive salaries and benefits.	Human resource functions at the utility level are focused on activities such as hiring and employee- related matters specific to that entity.

Thank you

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EXHIBIT JS-DT4

Liberty Utilities

Indirect overhead capitalization report – West Region

July 9, 2021

pwc

Table of contents

1. Scope of the report

PricewaterhouseCoopers LLP (“PwC”) was engaged by Liberty Utilities Co. (“Liberty” or “the Company”) to perform a time study for the West Region (“the Study”). The purpose of the Study is to estimate the percentage of indirect labor generated by the West Region shared service departments that support construction or capital activities. This percentage will be applied to the pool of Liberty’s West Region shared service costs such that an appropriate amount may be charged to the appropriate plant accounts. Both the Federal Energy Regulatory Commission (“FERC”) and the National Association of Regulatory Utility Commissioners (“NARUC”) accounting guidance permit such capitalization in order to achieve intergenerational equity by permitting recovery from regulated customers of construction-related costs (through depreciation charges) over the period in which the plant assets are being used to provide service to the customers.

This report includes:

- A background on the regulatory basis for capitalization,
- The West Region shared service departments in-scope for the Study,
- A description of PwC’s department head survey and individual time study methodology, and
- A summary of results and findings from the Study.

Limitations & assumptions of the study

Our work was limited to the specific procedures and analysis described herein for the Liberty Utilities West Region shared service company (site ledger code 8884). Our work was performed on the basis that information provided to us was accurate and complete. We did not review Liberty Utilities’ cost allocation methodology and application for fiscal year 2021 or any other year. Further, the capitalization rate developed as part of this study is a direct result of the costs charged to the West Region as provided to us by the Company and the nature of the activities performed by the individuals in the scope of our study. To the extent that these costs change, either in amount or nature, and/or the nature of the activities performed or the individuals included in the West Region cost pool change, management is responsible for determining the impact on the capitalization percentage and determining if an updated study is warranted. We also did not audit, verify or otherwise validate any underlying data, employee department mapping, or metrics, except as specifically noted by us in this report. Additionally, our engagement cannot be relied upon to disclose errors, irregularities, or illegal acts, including fraud that may exist.

Our Services were performed and this Deliverable was prepared for the sole use and benefit of, and pursuant to a client relationship exclusively with, Liberty Utilities ("the Company"). PwC is providing no opinion, attestation or other form of assurance and disclaims any contractual or other responsibility to others based on their access to or use of the Deliverable. Accordingly, the information in this Deliverable may not be relied upon by anyone other than Client.

2. Qualifications of PwC

PricewaterhouseCoopers, which was formed in 1998 from a merger between Price Waterhouse and Coopers & Lybrand, has a long history in client services that dates back to the nineteenth century. Both firms originated in London during the mid-1800s. Today, we serve 26 industries, including the Power & Utilities industry. Our industry-focused services in the fields of assurance, tax, human resources, transactions, performance improvement, information technology and crisis management have helped resolve complex client and stakeholder issues worldwide. We also bring our knowledge and talent to help educational institutions, the federal government, non-profits, and international relief agencies to address their unique business issues.

Our US firm, comprised of over 55,000 professionals, is organized around three core lines of service:

- **Assurance and Audit**: Providing innovative, high quality, independent, and cost-effective services related to an organizations' financial control, regulatory reporting, shareholder value and technology needs;
- **Tax**: Providing a wide range of innovative specialists' resources in three main areas: tax structuring, tax compliance and human resources; and
- **Advisory**: Providing advice and assistance related to transactions, performance improvement, and crisis management based on long-term quality relationships with clients.

As a global network of firms, we share common standards, values, and policies, applying the same processes, systems, and approaches around the world.

PwC's Power & Utilities Practice:

Nationally and globally, we are a leading provider of services in the utility industry. Our philosophy in serving the utility industry is to employ dedicated resources who focus on utility industry clients. This integrated practice demonstrates our commitment to the convergence of the utility industry and enables us to provide worldwide access to information through a variety of local resources. Our depth of resources and range of experience is enhanced by our strong base of utility clients. In the United States, we are the public accountants or consultants for more than 400 clients in the electric, gas, water, and renewable (green) energy sectors.

Our power and utilities practice provides professional services to companies of many sizes, across many segments of the industry. We serve the needs of utility clients by employing more than 4,500 dedicated resources around the world. This provides our teams with an understanding of regulated and unregulated utility operations and services.

Our US practice consists of more than 1,400 professionals serving clients in the electric, gas, water, and renewable energy sectors, including a dedicated utilities team within our National Office. We are one of the few firms with fully integrated industry resources across all three lines of service (Assurance, Tax, and Advisory), and these relationships enable us to take a broader look across the sector to identify leading practices, common issues, and other insights.

Complex Accounting and Regulatory Support Practice:

Within our Power and Utilities industry team, we have a smaller, highly specialized group, the Complex Accounting and Regulatory Solutions practice (CARS). Our CARS practice is dedicated to helping regulated companies in the energy and utilities industries manage their regulatory risk and solve complex accounting problems. Our seasoned team has deep experience working with regulated entities. The individuals in our CARS practice have many years of experience serving rate regulated entities (regulated electric, gas, and water utilities).

3. Executive summary

We were engaged by Liberty to perform a time study for the West Region shared services departments. The purpose of the Study was to develop a comprehensive study to support the capitalization of appropriate indirect overhead costs incurred by the West Region's shared services employees.

Shared services play an important role in a utility's capital program. Activities such as planning and budgeting for capital expenditures, recruiting and training a workforce to perform construction work, processing time reports and vouchers needed to pay employees and vendors for construction services, and accounting for the construction activities are all essential elements of successful construction projects. Active involvement in the construction program by executive management to provide leadership, oversight, and regulatory support are also key. Because shared service time is routinely charged to the Administrative & General ("A&G") category of accounts in the FERC Uniform System of Accounts ("USoA"), a distinct accounting methodology is often required to accurately reflect the cost of these services in the cost of a construction project.

Both NARUC and FERC USoA recognize the importance of including indirect overhead costs as part of the cost of construction as indicated in their plant instructions, which are almost identical. The following guidance is provided from the FERC USoA Electric (Gas) Plant Instruction, Number 4, *Overhead Construction Costs*:

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 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 payroll charges includible in construction overheads shall be based on timecard 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.

The above guidance along with certain other provisions of the FERC USoA Electric and Gas Plant instructions make it clear that construction work orders should contain all costs, directly charged and indirectly allocated, as it relates to construction activities. To identify the extent to which A&G functions support construction activities, FERC and NARUC guidance suggest that time cards/time reporting or periodic time studies are an appropriate way to determine the portion of A&G expenses that can be credited and capitalized. Documentation should exist to support such capitalization.

Consistent with the direction provided by both FERC and NARUC, we focused on time, using a combination of time studies and surveys of supervisory employees. Our approach to conducting the Study included the following steps:

1. Determine the costs and cost centers included in the department head survey and individual time-study.
2. Develop and distribute a customized survey for department heads overseeing all in-scope West Region shared service departments, in order to obtain the department head's estimate of the percentage of time spent by his / her department supporting capital activities in excess of amounts directly charged to capital.
3. Review department head surveys, and sample a selection of employees from the in-scope West Region shared service departments and department a time study form to analyze the actual time spent for a study period.
4. Conduct training for individual time study participants and distribute time study forms.
5. Provide ad-hoc support to time study participants. Verify and review the results real-time.
6. Discuss and develop the appropriate allocation metric for time study hours categorized as "Time Bucket #4", defined as "hours spent on activities, a portion of which relates to capital projects, where the employee did not have a supportable basis to estimate the capital-related hours, and therefore a methodology using Company metrics is necessary to reasonably estimate the proportion of these hours that pertain to capital activities."
7. Compare results of the time-study against the department head survey, and conduct follow-up interviews with time study participants or department heads to understand differences, identify reconciling items and assess reasonableness of final department results.
8. Calculate a final capitalization percentage by using 2020 actual department indirect costs of all West Region departments and applying the survey/study results to each department.

Based on the results of this study, we have determined that a capitalization rate of **32.43%** is reasonable and supportable to apply against the West Region shared service indirect labor and costs.

As this study is of necessity based on historical activities, organizational structure, and costs, we recommend that this study be periodically reviewed to determine if an update should be performed to reflect changes in operating activity, organizational structures, and costs between periodic full studies.

4. Liberty Utilities' West Region

4.1 Overview of shared services cost pools

The employees providing A&G and other shared services-type work to the regulated utilities of Liberty are organized into three business units:

- **Algonquin Power & Utilities Corp ("APUC")**: provides shared services to both Liberty Power (generating facilities) and Liberty Utilities (regulated utilities). APUC is not included within the scope of this study.
- **Liberty Utilities (Canada) Corp. ("LUCC")**: is the legal employer of Canada-based employees and provides shared services to both Liberty Power (generating facilities) and Liberty Utilities (regulated utilities). LUCC is not included within the scope of this study.
- **Liberty Utilities Service Corp. ("LUSC")**: is the legal employer of virtually all U.S.-based employees. LUSC employees provide support to Liberty Power (generating facilities) and Liberty Utilities (regulated utilities).

Following significant growth in its regulated utility companies, in 2017, Liberty organized its regulated utilities into three regions for management purposes: East, Central, and West.

The West Region includes LUSC employees in the following subdivisions:

- Utility-dedicated employees who are generally dedicated to support one or more of the following utilities in Arizona, California and Texas:
  - Liberty Utilities (CalPeco Electric) LLC ("CalPeco")
  - Liberty Utilities (Park Water) Corp. ("Park Water")
  - Liberty Utilities (Black Mountain Sewer) Corp. ("Black Mountain")
  - Liberty Utilities (Cordes Lakes Water) Corp. ("Cordes Lakes")
  - Liberty Utilities (Rio Rico Water & Sewer) Corp. ("Rio Rico")
  - Liberty Utilities (Gold Canyon Sewer) Corp. ("Gold Canyon")
  - Liberty Utilities (Entrada Del Oro Sewer) Corp. ("EDO")
  - Liberty Utilities (Bella Vista Water) Corp. ("Bella Vista")
  - Liberty Utilities (Litchfield Park Water & Sewer) Corp. ("LPSCO")
  - Liberty Utilities (Woodmark Sewer) Corp. ("Woodmark")
  - Liberty Utilities (Tall Timbers Sewer) Corp. ("Tall Timbers")
  - Liberty Utilities (Silverleaf Water) LLC ("Holly Lake", "Hill Country", "Piney Shores", "Big Eddy")
  - Liberty Utilities (Seaside Water) LLC ("Galveston")
- West Region shared services employees who provide support to all the utilities identified above

This Study focused solely on the LUSC West Region shared services employees who support the associated Liberty Utilities listed above. Our study did not assess how costs are allocated to these utilities, but rather on the time spent on construction activities performed by the West Region shared services employees.

4.2 Current process for capitalization of costs within LUSC West Region

Liberty Utilities' West Region current accounting practices allow for capitalization of shared service labor through the direct charging of internal orders associated with specific capital projects. Employees are asked to directly charge internal capital work orders where applicable and practical. However, due to the indirect nature of the services provided by these employees, most of the time spent by LUSC shared services employees are charged to the department's indirect "operations" project code, representing the cost pool upon which the percentage developed from this Study will be applied.

5. PwC's capitalization survey and study approach

5.1 Determine costs and cost centers included in the department head survey and individual time-study

The West Region cost pool includes labor and non-labor costs from approximately 39 LUSC shared services employees and seven departmental cost centers based on the system-generated employee listing. These departmental cost centers include many traditional A&G functional areas.

To determine the total cost pool in-scope for the time study, management provided both the labor and non-labor costs charged to site ledger code 8884 "operations" codes for each in-scope department for 2020. Management then reviewed the individuals charging time to this site ledger code "operations" codes to confirm the accuracy and completeness of the costs being charged to each department and the employees who consist of each department. Management also provided a detail of 2020 non-labor costs included in the West Region cost pool, which included categories such as outside services, travel expenses, employee benefits, payroll tax expenses, training and office expenses. We reviewed this detail and noted non-recurring costs related to COVID-19 pandemic charged to the West Region from LUSC. We have excluded these costs from our calculations. The majority of the non-labor costs consisted of employee related items such as employee benefits and travel expenses, which we believe is reasonable to be capitalized at the same rate as the labor costs as the full employee cost should be subject to capitalization (e.g. benefits should be capitalized at the same percentage as salaries) and travel expense would likely relate to capital in the same proportion as the employee's activities.

The remaining non-labor expenses were primarily categorized as outside services. Outside services costs were included in the Talent Acquisition, Accounting and Finance, and Executive departments. Based on the details provided by management, the outside services costs for the Talent Acquisition department totalled approximately $57,000 and primarily relate to external recruiters. As a result, it is appropriate that these costs receive the same capitalization percentage as the internal employees studied. The Accounting & Finance and Executive department outside services costs totalled approximately $1,400,000 and primarily represent internal resources. These resources include 21 Liberty employees (included in the 39 West Region employees detailed above) assigned to Liberty Utilities (Sub) Corp. ("Sub Corp") in the human resources information system who support the West Region in various accounting and finance functions. Given the amounts associated with the Sub Corp employees (approximately $1.4 million), and since each individual has different roles within the accounting and finance function, we determined that it was not appropriate to apply a blanket capitalization percentage across the Sub Corp employees supporting the West Region. Instead, management provided the job titles and Accounting & Finance sub-function for each of the employees, along with an estimate of each individual's capitalization percentage. We compared the estimates for each employee to West Region individuals we studied who had similar job titles and sub-functions. Refer to **Section 5.8** for further details around our considerations of the Sub Corp individuals included in the West Region cost pool.

We also reviewed the seven West Region shared service departments to determine which departments were in-scope for our study. One department - Internal Audit (8884-9824) - had immaterial costs associated with the department (less than 1% of the total West Region cost pool) and therefore we determined it was appropriate to apply the overall West Region capitalization percentage developed to this department.

The remaining six departments of the West Region shared services center cost pool were considered in-scope for purposes of the Study.

5.2 Develop and distribute department head survey

For each in-scope department, each department head was provided a survey requesting the department head to provide an estimate of department time spent on capital activities in excess of amounts charged directly to capital, taking into consideration the year as a whole including any impacts of seasonality.

To the extent all employees in the department have similar roles and responsibilities, one overall percentage for the department was provided representing the total amount of time spent on capitalizable activities or construction activities in excess of amounts directly charged to capital for each person in the department. If the department head believed that roles and responsibilities, and therefore amount of time applicable to capital activities, varies by employee, the survey prompted the department head to provide an estimated percentage by employee. The survey also included free text entry fields which required the department head to summarize the general roles and responsibilities of the department along with the nature of activities performed by the department in support of construction.

As part of our survey process, we noted the individuals in the Executive department (8884-9860) consisted primarily of individuals who were also department heads of other in-scope West Region departments. There was one individual from the Executive department, the Supply Chain Director, who was not subjected to the department head survey, and therefore we prepared a customized survey to understand his roles and responsibilities, and obtained an estimate of his individual indirect capitalization percentage. We also customized the survey provided to the West Region President to understand his oversight role across the West Region as a whole. We found that most of the Executives' indirect capitalization percentage was consistent with that of the individuals in his / her department; however, a few Executives determined that their indirect capitalization percentage varies from that of their respective departments given the varying responsibilities they have in their capacity as Executives. In the latter scenario, the department head would be prompted to estimate his own capitalization percentage and provide an explanation of why it would be different than that of his / her department.

Prior to the distribution of department head surveys, all department heads were required to attend a virtual kick-off training on February 24, 2021 via WebEx. During the training, we discussed the objectives of our labor-time study, expectations from the department heads throughout the survey process, the types of activities that would qualify as related to construction, and the timeline for our time study. The training deck was emailed to all participants after the training as a reference point while they completed their survey forms. The survey link to each department head's personalized survey was emailed to them in a subsequent communication.

5.3 Review department head estimates and select individuals for time-study

We received responses to all department head surveys and conducted interviews with select department heads to understand in detail the roles and responsibilities of each person in their department and how they developed their estimate of the indirect capitalization percentage.

In order to corroborate the estimates provided by the department head, we haphazardly selected individuals using professional judgment and our Firm's accepted sampling methodology. The Customer Experience department (8884-9865) only consisted of one employee and less than 1% of the total West Region cost pool; therefore, no employees were selected for this department. The interviews held with department heads helped inform our sampling selections. For example, where the department head noted that the percentage of capital work performed by individuals varies across the department, we selected a representative sample of one from each sub-grouping of roles within the department. Approximately 23% of all in-scope employees were included in our study.

We developed a time study form to be completed by all time study participants to collect information about the nature of each selected individual's work activities over a two-week study period (the weeks of March 8, 2021 and March 15, 2021 were selected). The time-study form was completed twice daily during the study weeks to capture morning and afternoon activities each day and included fields for employees to log the hours spent in each of five "Time Buckets" (defined below) along with a description of the activities performed. Each participant was also asked to identify whether the activities performed for the day are generally representative of what he or she does for the year in order to determine whether any seasonal or abnormal factors should be accounted for when developing the estimate.

The five “Time Buckets” used throughout the time study are:

> **Time Bucket #1**: Hours spent on capital activities related to Liberty Utilities directly charged to a capital work order. These hours are excluded from the calculation of the capitalization rate for this study as they are not included in the indirect cost pool.
>
> **Time Bucket #2**: Hours spent on capital activities related to Liberty Utilities that are not directly charged to a capital work order.
>
> **Time Bucket #3**: Non-capital project tasks (e.g. “O&M” expense type activities).
>
> **Time Bucket #4**: Hours spent on activities, a portion of which relates to capital projects; however, the employee did not have a supportable basis to estimate it. As described below in Section 5.5, this bucket relates to time that has a relation to both capital and expense activities, but the activities cannot be directly assigned to one or the other. As a result, a methodology using Company metrics was developed to reasonably estimate the proportion of these hours that pertain to capital activities.
>
> **Time Bucket #5**: PTO/Vacation hours. These hours are excluded from the calculation of the capitalization rate for this study; however, these hours are included within the indirect cost pool and therefore are allocated to capital at the same rate as other indirect hours under the basis that such employee benefits should be allocated to capital activities consistently with the employees’ productive time. In our experience this is consistent with industry practice as the capital activities identified are cost causative for these Time Bucket #5 costs.

Instructions were included within both the department head survey and the daily time study form, including a definition of each Time Bucket along with examples of capitalizable activities.

Refer to **Appendix A** for a sample of the department head survey and individual time study forms, including the examples of capitalizable activities linked in each survey and study form.

5.4 Conduct training for individuals participating in the time study and distribute time study forms

Prior to the start of the study week, all individuals selected for the time study were required to attend a kick-off training on Friday, March 5, 2021. During the training, we discussed the objectives of the study along with key project milestones, reviewed the regulatory guidance governing the capitalization of indirect costs, performed a live walk-through of the individual time study forms, discussed examples of capitalizable activities in the “Time Buckets” noted above, and allowed time for a Q&A session.

The training materials were emailed to participants along with a summary of key discussion points shortly after the training for reference throughout the study weeks.

The time-study period began the following Monday on March 8, 2021. Individual time study forms were completed twice daily: once in the morning at 12:00 pm EST, due back by 1:00 pm EST to cover the morning working hours, and once in the afternoon at 3:00 pm EST, due back by 6:00pm EST to cover the afternoon working hours. Morning and afternoon time study forms were expected to add up to at least eight hours each day (or at minimum 40 hours for the week).

5.5 Provide ad-hoc support to time study participants, and review results real-time

Over the course of the time study weeks, PwC and Liberty Utilities made available a joint team of six individuals (“Liberty Utilities Project Team”) to field questions, conduct follow-up discussions with individuals and department heads, and review results on a real-time basis. The joint team held several dozen follow-up conversations with study participants. While many of the discussions were unique, generally the follow-up conversations sought to:

- Clarify the time study or department head survey responses;

- Ask specific questions about types of work activity performed, both capitalizable activities and O&M activities, to validate activities are appropriately bucketed between the Time Buckets in accordance with the definitions of each bucket laid out in the instructions;
- Confirm any data validation errors or mechanical requirements of completing the time-study documents (e.g. ensure that all daily hours add up to at least eight hours, and 40 hours for each study week, reviewing to ensure all fields were completed, ensuring vacation time was captured in Time Bucket #5 and not Time Bucket #3);
- Understand the nature of the activities that participants classify in Time Bucket #4 to determine whether the hours should be allocated to another Time Bucket. The expectation was that the hours in Time Bucket #4 should be rare and limited to select departments (e.g. Accounts Payable, Procurement or Human Resources); and/or
- Discuss the possible metrics to be used to allocate the hours in Time Bucket #4.

In several instances, there was missing information or incomplete information in the surveys or time-study forms. For example, an individual might have allocated hours to Time Bucket #2 but did not describe any capital activities performed in the free text field or described activities that were expense-related work. We followed-up with the individuals or department heads to clarify the fields in the survey and study forms or requested a description of capital activities that were missing.

As a result of these procedures we identified in real-time any misunderstanding about the nature of capitalizable activities, misunderstanding of the Time Bucket definitions, and other administrative issues. As a result, we corrected the data and instructed the study participants to properly record their time entry prospectively.

5.6 Determine the appropriate allocation metric for Time Bucket #4

There are certain departments where there are certain activities with no supportable basis for estimating the amount of time, although it was clear that there was a cost causative relationship to capital projects. Throughout our training and during our real-time review of results, we emphasized that Time Bucket #4 was expected to be used sparingly and generally isolated to specific functions such as Accounts Payable, Procurement or Human Resources. These departments are expected to be performing activities where it would be impractical or impossible to allocate the time between capital and expense.

For the departments where individuals identified activities that belong in Time Bucket #4, we discussed with the department heads and also amongst the Liberty Utilities Project Team the most appropriate allocation metric for this bucket of time on a department-by-department basis depending on the nature of the underlying activity.

When determining the appropriate allocation metric, we considered the nature of the department's responsibilities. For example, a significant portion of the Accounts Payable sub-function within the Accounting & Finance department role involves reviewing, processing, and paying invoices relating to capital and O&M expenditures. We determined that an allocation metric of total capital spend across the West Region most closely reflects the time spent on these blended capital and O&M activities for the Accounts Payable specialists within the Accounting & Finance department. Similarly, the Human Resources department handles the entire workforce in the West Region, which includes employees working on both capital and expense projects. Accordingly, an allocation metric based on the capitalization rate of the underlying employees at the utility companies was selected.

The allocation metrics were compiled from various internal data sources and systems. The metrics identified were multiplied by the hours that individuals allocated to Time Bucket #4 and added to Time Bucket #2 hours to determine the total indirect hours which pertained to capital from the individual time study forms. These hours were divided by the total indirect hours (the sum of Time Buckets #2, #3, and #4) to determine the capitalization percentage for a given employee as applicable. Approximately 26% of the time incurred by the West Region employees studied represented metrics-based time. Individuals with Time Bucket #4 hours are primarily Human Resources and Environmental Health & Safety employees whose time is generally expected to be metrics-based given the broad nature of the activities they perform.

5.7 Compare department head estimates against time study results and conduct interviews to understand any differences

We compiled all department head survey indirect capital percentages collected from the department head surveys. If the department head provided estimated percentages by individual employees, an average of all the percentages across the employees in the department was used to determine the estimated percentage for the department. However, for purposes of comparison to our time study results we compared the estimate for the individual selected to that employee's specific time study results.

To the extent that there were differences +/- 10% between the department head survey percentage and the time-study results, we conducted follow-up interviews with the time study participants and/or department heads to understand the source of the differences. This variance was deemed to be reasonable based on our professional judgment as there is likely to be some variability from week to week on specific activities performed by the selected employees. Further, we did not note a consistent over- or under-estimation bias that would indicate the department heads' process was not reasonable. As part of this process we followed-up with the department head to understand the rationale behind the capitalization percentage estimate and discuss in detail the work performed by the department and how that work supports capital activities. There were also instances where the department head was asked to review the results of the time study for select employees to help reconcile the difference between the department head estimate and the time study result.

In our follow-up conversations with the individuals in the time study, we re-confirmed the hours in the Time Buckets to ensure that hours were accurately allocated and inquired of any unusual seasonality factors. In certain cases, this resulted in a shift in the hours reported based on a refined understanding of the activities and the appropriate categorization of the associated hours. These efforts resulted in minor increases as well as decreases to the capitalization percentage.

There were three instances - Legal (8884-9823), Executive (8884-9860), and Accounting & Finance (8884-9820) - where the department heads' estimates differed from the individual time study results over the 10% threshold or required additional investigation. As a result, we held additional discussions with the department head and time study individuals to resolve or reconcile differences and develop an appropriate percentage to use in the study.

For the Legal department (8884-9823), we noted that the individual selected spent most of her time during the study weeks on wildfire litigation cases, which represent expense-related activities (Bucket #3). Therefore, this individual's actual time study results suggested a capitalization percentage of 3% versus the 36% estimated by the department head. While litigation matters represent normal activities for the individual, she noted that there was more wildfire litigation related work during the study weeks than normal that consumed her time, and therefore her normal workload was shifted to other individuals in the department. Through discussions with the individual as well as the Legal department head, we obtained an understanding of the individual's normal workload and how her normal workload involves capital activities. Based on this normalized view, her capitalization percentage is consistent with the department head's estimate of 36%. When considering the West Region Legal department as a whole, and the qualitative factors around the individual's abnormal workload balance, we determined that the department head estimate of 36% remains reasonable and supportable.

The Executive department (8884-9860) difference involved the capitalization percentage for the West Region Director of Human Resources, whose capitalization percentage estimate for himself mirrored that of his West Region Human Resources department of 27%. His actual time study results reflected a smaller 19% capitalization percentage. Based on discussions with the Director of Human Resources, the disparity between his estimate and actual time study results is due to time-off and travel days (Bucket #5 hours) he incurred during the study week that is not typical of a normal work week. Generally, he would spend more of his time on employee matters (representing Bucket #4 hours). To verify this, we calculated his capitalization percentage assuming all of his Bucket #5 hours should be moved to Bucket #4 under normal circumstances, noting that his normalized capitalization percentage would be 22%, which is within a reasonable range of his 27% estimate. As such, we determined that his 27% estimate for the Human Resources department is reasonable and supportable.

For the Accounting & Finance department (8884-9820), the department head's estimate and time study results were compared on an individual basis, given the department is composed of several sub-groups that all have various roles and responsibilities, and thereby capitalization percentages. Two individuals studied both performed capital forecasting and budgeting activities (Financial Planning & Analysis subgroup) where the department head estimated a 40% capitalization percentage; however, their time study results suggested a capitalization rate of 25% - 28%. Based on discussions with the Accounting & Finance department heads as well as the two individual time study participants, we noted that the study weeks were not indicative of a normal work week for these individuals. Given the timing of the study in March, these individuals were more heavily focused on annual reporting activities including the preparation of a compliance report on property taxes. Generally, these individuals indicated that their time would be spent developing capital and O&M budgets for the AZ and TX utility companies with a 50/50 time split between capital and O&M activities. Based on the seasonality considerations, we concluded that the department head estimate for these individuals of 40% is reasonable.

Where there were differences between individual time-study results and department heads' estimates, the additional discussions with department heads and time-study individuals helped us reconcile or resolve differences and develop an appropriate percentage to use in the study. Absent any significant differences with the individual time study (defined as +/- 10%), the department head estimate was used as the final percentage.

5.8 Calculate the final capitalization percentage by using a weighted average of all West Region department percentages

Once the final percentages were determined for each West Region department, we used a weighted average to calculate a total West Region shared service capitalization percentage to be applied to the total West Region shared service cost pool (labor and included non-labor costs), consistent with the Company's historical methodology.

As was noted in Section 5.1 of the report, we also incorporated the capitalization percentage and related non-labor costs for the 21 Sub Corp employees supporting the West Region Accounting & Finance department in our final West Region capitalization percentage. We do note that the cost of these employees were charged to both the Executive and Accounting & Finance department, but all supported Accounting & Finance only. Since the 21 Sub Corp employees were identified after the study weeks concluded, we conducted an interview with the Accounting & Finance department head to understand each individual's responsibilities. Similar to the West Region Accounting & Finance department, the 21 Sub Corp employees performing accounting and finance functions for the West Region have varying roles and responsibilities, depending on each individual's sub-group (e.g. General Accounting, Property Accounting, or Accounts Payable). Generally, we found that the 21 individuals held roles analogous to that of West Region individuals we studied, and we applied the percentages of the West Region individuals studied to the Sub Corp individuals.

For eight Sub Corp individuals with general accounting roles, we aligned these individuals to a West Region Senior Financial Analyst (whose individual capitalization percentage was 15% per our study results), and confirmed the roles were analogous by conducting interviews with three of the eight General Accountants. While each of the three General Accountants interviewed had slightly different capitalization percentages (ranging from 0% to 38%), the average capitalization percentage of the 3 individuals interviewed was 18%, which is in line with the 15% applied from the West Region individual studied in a similar role. As such, we determined it was reasonable to apply the West Region 15% to the population of Sub Corp General Accountants.

In other instances, the Sub Corp individuals had roles where a capitalization percentage could be reasonably estimated through actual West Region metrics or through historical knowledge we have obtained from prior time studies conducted for the Company. For example, we utilized the West Region capital spend metric of 55% to estimate the capitalization percentage of the seven individuals in Sub Corp Accounts Payable sub-group, and we used the West Region capital labor dollars metric of 27% to estimate the capitalization percentage of the Sub Corp Payroll Accountant. For the two Property Accountants, we aligned the capitalization percentage with the open Property Accounting Manager role in the West of 95% which also aligned with our study of Liberty's Central Region. For the Revenue Accountant, we determined that because her role represents operations and generally not related to capital activities, a 0% capitalization would be appropriate and reasonable for this role. There were also two individuals with mixed roles - Revenue / Fixed Asset Accountant and Payroll / Intercompany Accountant. For the mixed roles, we averaged the

capitalization rates of the Revenue and Fixed Asset Accountant or Payroll and Intercompany Accountant roles based on our study and experience to approximate the individual's blended responsibilities.

Across the 21 Sub Corp individuals performing accounting and finance roles in support of the West Region, we determined an average capitalization percentage of 39%, applied to $1,400,000 of non-labor costs for the West Region, which were charged to the West Region Executive and Accounting & Finance departments.

After completing these procedures, including an appropriate weighting of the various departments, the resulting capitalization percentage for the West Region as a whole is **32.43%**.

6. Results and discussion

6.1 Summary of results and impact

Through the procedures performed, a **32.43%** is a reasonable, supportable estimate of the indirect time and costs incurred by the West Region shared services employees to be capitalized. The following table calculates the derivation of the overall capitalization rate using the rates determined by each department in the West Region from our Study results.

Department	Department No.	Fiscal Year 2020 Costs[1]	Percentage of Capital Time for the Department	Weighted Average[2]
Accounting & Finance	9820	$ 456,324	48.00%	4.73%
Outside Services - Accounting & Finance[3]	9820 - OS	$ 667,272	39.00%	5.62%
Customer Experience	9865	$ 44,385	7.00%	0.07%
Environmental Health & Safety	9815	$ 242,420	20.00%	1.06%
Executive	9860	$ 1,688,660	26.00%	9.61%
Outside Services - Executive[4]	9860 - OS	$ 771,339	39.00%	6.54%
Legal	9823	$ 364,868	36.00%	2.88%
Talent Acquisition	9813	$ 281,350	26.00%	1.60%
Outside Services - Human Resources / Talent Acquisition[5]	9813 - OS	$ 57,526	26.00%	0.33%
TOTAL		**$ 4,579,266**		**32.43%**

[1] Refer to section 5.1 for a discussion of the cost build-up. Fiscal year 2020 costs were used, as they were the last full year's worth of results available at the time of our Study.

[2] The weighted average amounts are calculated by taking the "Fiscal Year 2020 Costs" for each department, divided by the total costs of $4,579,266 and multiplied by the "Percentage of Capital Time for the Department" column.

[3] Represents the 21 Sub Corp individuals who perform accounting and finance functions in support of the West Region and their time is manually billed to the West Region indirect cost pool. Refer to Sections 5.1 and 5.8 of this report for additional detail.

[4] Represents the 21 Sub Corp individuals who perform accounting and finance functions in support of the West Region and their time is manually billed to the West Region indirect cost pool. Refer to Sections 5.1 and 5.8 of the report for additional detail.

[5] Represents external recruiting services provided to the West Region Human Resources & Talent Acquisition department. Refer to Section 5.1 of this report for additional detail.

Appendices

Appendix A – Sample department head survey and time study templates

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Q0. **Liberty Utilities (West Region) Department Head Survey - Accounting & Finance**

The purpose of the indirect overhead study is to determine the appropriate amount of time spent by employees, incremental to amounts directly charged to capital work orders, in support of capital projects that should be capitalized as indirect overhead of capital projects for the West Region Accounting & Finance department. As a reminder, please refer to the following document for examples of capitalizable activities as shared during our training: Examples of capitalizable activities. If you have any questions, please reach out to the Liberty Project Team (Jill Schwartz and Beverly Hines) or PwC project managers Dara Fang (dara.x.fang@pwc.com) or Mark Panza (mark.r.panza@pwc.com).

Reminder: note that this survey is an individual effort. Please do not share your responses or discuss the responses of the survey below with your department.

Thank you for your continued participation and cooperation in this time study!

Q1. Name

Q2. Please provide a brief description of your department's roles and responsibilities.

Q3. Please provide a brief description of your roles and responsibilities in overseeing the department.

Q4. For the individuals in your department, is the percentage of time spent on capital projects IN EXCESS of amounts directly charged to capital work orders consistent among all individuals in your department?

- ○ Yes
- ○ No

Q4a. Please download the following file: Crystal Greene - Accounting and Finance - West to use to describe the roles and responsibilities of each individual in your department, along with your estimate of the capitalizable time for each individual. We would appreciate your attention and effort in this procedure, as this is a key step in our determination of individual time study participants. Once you are completed with the form, please upload your response in the following step. Please let the Liberty Project Team (Jill Schwartz, Beverly Hines, or PwC) know if you have any technical difficulties.

Q4b. Upload the completed detailed document below:

Q5. In thinking about the individuals in your department, approximately how much of your department's time is spent on capital projects or supporting capital projects IN EXCESS of amounts directly charged to capital work orders? (Please enter a percentage from 0 - 100%)

Q6. In thinking through how you typically spend your time between capital versus expense activities, would you say your time as the Department Head mirrors that of the individuals in your department OR is it different than the individuals in your department?

- ○ The time I spend on capital vs. expense activities is the SAME as that of the individuals in my department
- ○ The time I spend on capital vs. expense activities is DIFFERENT than that of the individuals in my department

Q6a. If the time you spend on capital versus expense activities is DIFFERENT than that of the individuals in your department, please provide an estimate of your indirect capitalizable time (in EXCESS of the amounts that are directly charged to capital work orders) and the basis for your determination of this split:

Q7a. Please list out the general activities your department performs that represent capital projects or support capital projects. Refer to the "Capitalizable Activities" listing included in the training for common examples of capitalizable activities within each department.

Q7b. Please list out the general activities your department performs that represent expense-type activities or support expense-related projects:

Q8. Is there a portion of time that your department spends on capitalizable activities, but there is no reasonable basis for you to estimate the percentage split between capitalizable and expense-type activities?

- Yes
- No

Q8a. If your department spends time on both capitalizable and expense-type activities, but there is no reasonable basis for you to estimate the percentage split, what would be an appropriate metric to allocate that time? (Please be as specific as possible, and document why the metric you have described is a good basis for estimating the split between capitalizable and expense-type activities)

Q9. Is the work your department performed thus far during the year and during the upcoming weeks representative of the work performed throughout the year?

- Yes
- No

Q9a. If you answered "No" above, please explain how the work performed by your department during the study week would be different if it was reflective of a full year's worth of activities. If you answered "Yes" above, enter "N/A".

Q10. By signing or typing my name below, I confirm the above percentages and information is accurate to the best of my knowledge.

SIGN HERE

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. Liberty Utilities Time Study Form - West Region

The purpose of the time study is to determine the appropriate amount of time spent by employees, incremental to amounts directly charged to capital work orders, in support of capital projects that should be capitalized as indirect overhead of capital projects for the West Region.

To do that you are asked to fill out the following form with a detailed breakdown of the hours you worked during the study period (March 8, 2021 to March 19, 2021). You are asked to identify the time that you have spent each day during the study week on the activities described below:

- **Time Bucket #1: Hours spent on Capital Project tasks related to Liberty Utilities and directly charged to the Capital Project.** *This category represents the hours you spent on capital work orders that is already directly charged to the capital project or work order.*
- **Time Bucket #2: Hours spent on Capital Project tasks related to Liberty Utilities NOT directly charged to the Capital Project.** *This category represents the hours you spent on a construction project that is NOT already directly charged to the project, but represents activities related to construction or are incremental activities performed in support of construction. Refer here for a list of such activities (not all-inclusive):* Examples of capitalizable activities
- **Time Bucket #3: Non-Capital Project tasks related to Liberty Utilities.** *This category represents hours spent on expense and O&M-type activities.*
- **Time Bucket #4: Hours spent on activities, a portion of which relates to capital projects, but I do not have a supportable basis to estimate it.** *Note: this is expected to be in rare cases.*
- **Time Bucket #5: Non-productive time** *(e.g. PTO, Vacation, Holiday or general Training Hours)*

Reminder: note that this survey is an individual effort. If you have any questions or concerns, please reach out to the Liberty Project Team (Jill Schwartz or Beverly Hines) or PwC project managers Dara Fang (dara.x.fang@pwc.com) or Mark Panza (mark.r.panza@pwc.com).

Thank you for your continued participation and cooperation in this time study!

Q1. Employee Name

Q2. Enter today's date and indicate whether this is your morning or afternoon time entry.

Date

Morning or Afternoon Entry

Q3. Please enter your department:

Department

Q4. Thinking on your tasks performed today, how many hours did you spend in each of the following areas? *(Please enter your time in half-hour increments. Note that your time must add up to **at least 8 hours** between your morning and afternoon time entries)*

Time Bucket #1: Directly charged capital time	0
Time Bucket #2: Capital time NOT directly charged	0
Time Bucket #3: Non-capital, expense and O&M time	0
Time Bucket #4: Time on both capital and expense activities where the split is not determinable	0
Time Bucket #5: Non-productive time (Vacation, PTO, Holiday, General Training)	0
Total	0

Q4a. Please describe the activities you performed related to **Time Bucket #2** (time spent on capital activities that is **not** directly charged to capital work orders).

Q4b. Please describe the activities you performed today related to **Time Bucket #3** (time spent on expense or O&M related activities):

Q4c. Please describe the activities you performed today related to **Time Bucket #4** (time spent on both capital and expense activities where the split is not determinable):

Q5. Is the amount of time you spent today representative of the average work performed throughout the year?

- Yes
- No

Q5a. Please explain how your work performed today or during the study week would be different if it was reflective of a full year's worth of activities.

Q6. By signing my name below, I certify that the above hours and information is true to the best of my knowledge.

SIGN HERE

clear

EXHIBIT JS-DT5

Exhibit JS-DT5

Arizona Rate Cases Involving Allocated Costs from Affiliated Transactions

1. *Liberty Utilities (Black Mountain Sewer) Corp.*, Docket No. SW-02361A-05-0657, Decision No. 69164 (December 5, 2006) **Pre-CAM**
2. *Liberty Utilities (Gold Canyon Sewer) Corp.*, Docket No. SW-02519A-06-0015, Decision No. 69664 (June 28, 2007) **Pre-CAM**
3. *Liberty Utilities (Black Mountain Sewer) Corp.*, Docket No. SW-02361A-08-0609, Decision No. 71865 (September 1, 2010) **Pre-CAM**
4. *Liberty Utilities (Litchfield Park Water & Sewer) Corp.*, Docket No. SW-01428A-09-0103, *et al.*, Decision No. 72026 (December 10, 2010) **SETTLED**
5. *Liberty Utilities (Rio Rico Water & Sewer) Corp.*, Docket No. WS-02676A-09-0257, Decision No. 72059 (January 6, 2011) **SETTLED**
6. *Liberty Utilities (Bella Vista Water) Corp.*, Docket No. W-02465A-09-0411, *et al.*, Decision No. 72251 (April 7, 2011) **SETTLED**
7. *Liberty Utilities (Rio Rico Water & Sewer) Corp.*, Docket No. WS-02676A-12-0196, Decision No. 73996 (July 30, 2013) **SETTLED**
8. *Liberty Utilities (Litchfield Park Water & Sewer) Corp.*, Docket No. SW-01428A-13-0042, Decision No. 74437 (April 18, 2014) **SETTLED**
9. *Liberty Utilities (Black Mountain Sewer) Corp.*, Docket No. SW-02361A-15-0206, *et al.*, Decision No. 75510 (April 22, 2016) **SETTLED**
10. *Liberty Utilities (Bella Vista Water) Corp. and Liberty Utilities (Rio Rico Water & Sewer) Corp.*, Docket No. W-02465A-15-0367, *et al.*, Decision No. 75809 (November 21, 2016) **SETTLED**
11. *Liberty Utilities (Entrada Del Oro Sewer) Corp.*, Docket No. SW-04316A-16-0085, *et al.*, Decision No. 76019 (March 22, 2017) **SETTLED**
12. *Liberty Utilities (Litchfield Park Water & Sewer) Corp.*, Docket No. SW-01428A-17-0058, *et al.*, Decision No. 76799 (August 15, 2018) **SETTLED**
13. *Liberty Utilities (Black Mountain Sewer) Corp.*, Docket No. SW-02361A-19-0139, Decision No. 78017 (May 18, 2021) **SETTLED**

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Attorneys for Liberty Utilities (Entrada Del Oro Sewer) Corp.

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANTS AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON.	DOCKET NO: SW-04316A -21-

DIRECT TESTIMONY

OF

MATTHEW GARLICK

September 30, 2021

TABLE OF CONTENTS

I. INTRODUCTION AND QUALIFICATIONS.

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Matthew Garlick. My business address is 14920 W. Camelback Road, Litchfield Park, Arizona 85340.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Liberty Utilities Service Corp. ("LUSC") as President of each of Liberty's regulated utilities in Arizona and Texas, including the applicant Liberty Utilities (Entrada Del Oro Sewer) Corp. ("Liberty EDO"). I have been President for Liberty in Arizona and Texas since June 1, 2015.[1] I will use "Liberty" to refer to all of the many Liberty Utilities' subsidiaries in this testimony.

Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS PRESIDENT OF LIBERTY'S ARIZONA AND TEXAS UTILITIES.

A. My responsibilities include supervising the operations and administration of the Arizona and Texas utilities, including their financial and operating results, capital and operating cost budgeting. I also oversee customer and engineering services, environmental, health and safety, accounting/finance, human resources, and conservation planning.

Q. WHAT OTHER POSITIONS HAVE YOU HELD WITH LIBERTY?

A. I was hired in January 2000 as a Technical Services Supervisor for Litchfield Park Service Company, now known as Liberty Utilities (Litchfield Park Water & Sewer) Corp. In November 2009, I was named Business Manager of Liberty Litchfield Park, and was responsible for overseeing the utility operations for what was at that time

[1] Liberty Utilities owns and operates eight regulated utilities in Arizona. Along with Liberty EDO, Liberty Utilities owns and operates Liberty Utilities (Gold Canyon Sewer) Corp. ("Liberty Gold Canyon") , Liberty Utilities (Beardsley Water) Corp., Liberty Utilities (Cordes Lakes Water) Corp., Liberty Utilities (Bella Vista Water) Corp. ("Liberty Bella Vista"), Liberty Utilities (Black Mountain Sewer) Corp., Liberty Utilities (Litchfield Park Water & Sewer) Corp. ("Liberty Litchfield Park"), and Liberty Utilities (Rio Rico Water & Sewer) Corp.

approximately 30,000 utility customers. In March 2012, I became Director of Operations, and assumed responsibility for the operations of Liberty's water and wastewater utilities in Arizona, Texas, Missouri, and Illinois. That was my last position before becoming President of our utilities in Arizona and Texas.

Q. PLEASE DESCRIBE YOUR EDUCATION AND EMPLOYMENT EXPERIENCE PRIOR TO LIBERTY?

A. I earned a Bachelor of Science degree in Earth Science from Northern Arizona University. Before joining Liberty Litchfield Park, I was a Senior Project Geologist for roughly 15 years with an environmental engineering firm called Environmental Science and Engineering. My role was to direct and support other project scientists in daily work activities on various State of Arizona Water Quality Assurance Revolving Fund (WQARF) groundwater remedial projects.

Q. DO YOU HOLD ANY CERTIFICATIONS?

A. Yes. I hold Operator Certifications (Grade IV – Wastewater Collection, Water Treatment, Wastewater Treatment, and Grade III in Water Distribution) in Arizona. I also hold a backflow specialist certification. Additionally, I belong to several professional organizations such as the American Water Works Association, and American Backflow Prevention Association, and I am a board member for the Water Utilities Association of Arizona.

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

A. I'm providing this direct testimony on behalf of Liberty EDO and in a separate yet associated filing, on behalf of Liberty Gold Canyon. Liberty Gold Canyon is concurrently filing for new rates. Throughout my testimony, I may refer to Liberty EDO and Liberty Gold Canyon separately or collectively as "Applicants." Both utilities are requesting that Liberty EDO be merged into Liberty Gold Canyon and that Liberty Gold Canyon thereafter operate as one utility with two systems and

Certificate of Convenience and Necessity ("CC&N") areas. This requested consolidation will be the primary purpose of my direct testimony in both rate cases and therefore most of my direct testimony is materially the same in support of both applications. The rate case manager for these rate cases, Jill Schwartz, provides an overview of the two applications and the materials being filed in support of the requested consolidation in her direct testimony filed in both dockets.

Q. THANK YOU MR. GARLICK. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE ARIZONA CORPORATION COMMISSION ("COMMISSION") OR ANY OTHER PUBLIC UTILITY COMMISSION?

A. Yes, I have provided written and hearing testimony in all of Liberty's rate cases in Arizona and Texas since I became President, including the last rate case for Liberty EDO (Consolidated Docket Nos. SW-04316A-16-0078 and SW-04316A-16-0085).

II. SUMMARY OF DIRECT TESTIMONY.

Q. WILL YOU PLEASE SUMMARIZE WHY LIBERTY BELIEVES THE APPLICANTS SHOULD BE CONSOLIDATED?

A. Sure. Liberty Gold Canyon and Liberty EDO are in the same local area and are operated with the same Liberty personnel. With only 370 connections (365 billed customers), Liberty EDO is very small - roughly one-fifteenth the size of Liberty Gold Canyon.[2] Good utility and business practices support operating one wastewater utility in that area, not two. When Liberty EDO was acquired, Liberty always intended that it would be consolidated with Liberty Gold Canyon at some point. That time is now.

[2] According to the Direct Testimony of Eric Burkett filed in the Liberty Gold Canyon docket ("Burkett GC DT"), Liberty Gold Canyon has approximately 5,830 billed customers, of which 5,782 are residential connections. Burkett GC DT at 2:17-21.

Q. IF CONSOLIDATION IS APPROVED, WILL THERE BE ONE SET OF RATES FOR APPLICANTS?

A. Yes, that is what we are proposing. In Ms. Schwartz' direct testimony as well as in the direct testimony by Thomas J. Bourassa, we have provided an explanation of the requested rates for Applicants on both a stand-alone basis and for Liberty Gold Canyon (Consolidated).[3]

Q. WILL CONSOLIDATION OF THE RATES BENEFIT ALL CUSTOMERS?

A. Yes. We believe that the small initial subsidy to be absorbed by the Liberty Gold Canyon customers is far outweighed by the overall benefits of consolidation as I discuss in more detail below.

III. CONSOLIDATION OF LIBERTY GOLD CANYON AND LIBERTY EDO.

A. Background.

Q. WHEN WERE THE LAST RATES CASES FOR LIBERTY GOLD CANYON AND LIBERTY EDO?

A. Liberty Gold Canyon's last general rate case was initially decided in June 2007[4] and modified in November and December 2008,[5] based on a test year ending October 31, 2005. Liberty EDO's last rate case was decided in March 2017,[6] based on a test year ending October 31, 2015.

Q. HOW LONG HAS LIBERTY OWNED LIBERTY GOLD CANYON AND LIBERTY EDO?

A. Liberty acquired the stock of Gold Canyon Sewer Company in 2001. It was the second utility acquisition by Liberty in the U.S. The stock of Entrada Del Oro Sewer

[3] Direct Testimony of Thomas J. Bourassa (Liberty Gold Canyon) at 64-71; Direct Testimony of Jill Schwartz at 6-9.

[4] Decision No. 69664 (June 28, 2007).

[5] Decision Nos. 70624 (November 19, 2008) and 70662 (December 23, 2008).

[6] Decision No. 76019 (March 22, 2017).

Company was acquired by Liberty from the utility's individual shareholders in 2008. Thereafter, the utility was renamed Liberty EDO.

Q. WHAT IS THE APPROXIMATE DISTANCE BETWEEN LIBERTY GOLD CANYON AND THE ENTRADA DEL ORO SUBDIVISIONS?

A. Using public roadways, these subdivisions are approximately eight miles apart.

Q. ARE THERE ANY OTHER SUBDIVISIONS OR SEWER UTILITY PROVIDERS LOCATED BETWEEN LIBERTY EDO AND LIBERTY GOLD CANYON?

A. No.

Q. GIVEN THAT LIBERTY GOLD CANYON WAS SO CLOSE WHY DIDN'T IT SIMPLY EXTEND SERVICE TO THAT COMMUNITY IN THE FIRST PLACE?

A. I was not directly involved with Liberty Gold Canyon back in that time period but from what I understand, it was just matter of bad timing. Liberty Gold Canyon was dealing with the treatment capacity and disposal concerns inherited from the prior owner of the Gold Canyon system and the developer of the Entrada Del Oro subdivision did not want to wait until those issues could be resolved. Instead, the developer formed a new sewer utility and obtained a CC&N from the Commission in 2005.[7] By 2009, when Liberty Gold Canyon had refurbished its treatment plant and resolved its odor and disposal concerns, and Liberty Gold Canyon's last rate case was over, Liberty had acquired Entrada Del Oro Sewer Company separately.

Q. SOUNDS LIKE LIBERTY ALWAYS PLANNED TO SEEK CONSOLIDATION OF THE TWO ENTITIES INTO LIBERTY GOLD CANYON?

[7] Decision No. 68306 (November 15, 2005).

A. Yes, it was always intended that Liberty EDO be consolidated with Liberty Gold Canyon given their close proximity and the small size of Liberty EDO in comparison to Liberty Gold Canyon. Again, it is simply good business and good utility practice to merge a small wastewater utility into a closely situated neighboring wastewater utility that is already 15 times larger and owned and operated by the same people.

Q. THEN, WHY NOW?

A. There are several reasons why it is an appropriate time to consolidate the utilities. First, the Liberty Gold Canyon application seeking approval of rate and tariff updates is the first general rate case for Liberty Gold Canyon since Liberty EDO was acquired. Also, the timing of this application satisfies a filing deadline established by a Commission order issued in Docket No. SW-02519A-19-0022.[8] Additionally, it was appropriate to wait to seek consolidation of these utilities until a five-year rate phase-in agreed to in Liberty EDO's last rate case was completed.[9] Each of these reasons factored into the decision that it was time to seek consolidation.

B. <u>Proposed Consolidation of the Applicants</u>.

Q. SPECIFICALLY, AS IT RELATES TO THE CONSOLIDATION, EXACTLY WHAT IS LIBERTY PROPOSING?

A. We are proposing that Liberty EDO be merged into Liberty Gold Canyon, meaning that all of Liberty EDO's assets and plant would be owned by Liberty Gold Canyon and all of Liberty EDO's customers would become customers of Liberty Gold Canyon under the former Liberty EDO CC&N which would be transferred to Liberty Gold Canyon. Because we are requesting that Liberty EDO be folded completely

[8] Decision No. 77404 (September 11, 2019) as amended by Decision No. 77920 (April 1, 2021).

[9] *See* Comprehensive Settlement Agreement attached as Exhibit A to Decision No. 76019.

into Liberty Gold Canyon, there would be one set of tariffs for all of the resulting Liberty Gold Canyon (Consolidated)'s more than 6,200 total customers.[10]

Q. MR. GARLICK, WHAT IS THE DIFFERENCE BETWEEN A SYSTEM AND A COMPANY OR UTILITY?

A. By "system," I mean a group of utility facilities categorized by the Arizona Department of Environmental Quality (ADEQ) (and/or the counties) as public utility systems for either water or wastewater. Right now, Liberty Gold Canyon is a single-system wastewater utility. However, if consolidation is approved as requested, Liberty Gold Canyon (Consolidated) would own and operate two public wastewater systems - the Liberty Gold Canyon system and the Liberty EDO system.

Q. ARE THE APPLICANTS' SYSTEMS PHYSICALLY INTERCONNECTED?

A. Physically, no. But the Applicants are operated by the same local personnel and share common administration and management as well as common support services like financial, accounting, and regulatory support.

Q. DO THE APPLICANTS HAVE SHARED LOCAL FIELD OFFICES?

A. Yes, everyone that works locally to operate Liberty Gold Canyon and Liberty EDO already works out of the offices located at Liberty Gold Canyon's plant. Also, our customer service office provides services to our customers from the same office location for both Liberty EDO and Liberty Gold Canyon customers.

C. <u>Benefits of Consolidation</u>.

Q. MR. GARLICK, HOW WILL THE CURRENT CUSTOMERS OF BOTH UTILITIES BENEFIT FROM THE PROPOSED CONSOLIDATION?

A. It is beneficial to all customers to consolidate the customer bases for ratemaking because it is desirable to have as large a customer base as possible across which costs

[10] On a stand-alone basis, Liberty Gold Canyon had approximately 5,830 customers (7,990 connections) as of the close of December 2020. Likewise, Liberty EDO had approximately 365 customers (370 connections) at the close of December 2020.

may be spread. That is not to say that the current Liberty EDO customers aren't the immediate beneficiaries. As a stand-alone utility, Liberty EDO shares the utility's costs and expenses across its approximate 365 customers. After consolidation, the Liberty EDO customers will naturally pay much lower rates than they do under the current system. We are estimating that if approved, consolidation will save Liberty EDO customers nearly $60 per month or more than $715 annually.

But then, over time, consolidation benefits both Liberty Gold Canyon and Liberty EDO and their customers. They will share efficiencies gained in the reduction of administrative costs associated with the expenses of Commission filings (to include compliance and rate case expenses). Similarly, Commission Staff, the Residential Utility Consumer Office ("RUCO") and other community stakeholders will benefit as the consolidation of the utilities reduces the number of regulatory filings and in return reduces stakeholder time and resources expended on review and response.

Q. HOW EXACTLY WILL CONSOLIDATION IMPACT THE CURRENT LIBERTY GOLD CANYON CUSTOMERS?

A. The efficiencies of consolidation and its benefits will shift from time-to-time between the two utilities based on the circumstances impacting each facility at any given time. That said, the Liberty Gold Canyon customers are expected to receive a rate increase of approximately $3 per month due to the merger of Liberty EDO into Liberty Gold Canyon, an estimated $36 annually.

Q. WHAT WOULD YOU SAY TO THE CURRENT CUSTOMERS OF LIBERTY GOLD CANYON WHO MAY OBJECT TO THE PROPOSED CONSOLIDATION?

A. I would say it bears repeating that everyone benefits from enlarging the customer base (including Liberty which must balance the need for costly investment with

customer affordability with every dollar spent). By consolidating, the customers will pay a small price now for the long-term benefits experienced by larger customer bases. Another benefit to the current and future consolidations would be fewer rate cases. The long-term cost of necessary infrastructure investment is going to be substantial, and one way or another that cost will have to be absorbed by customers through rates. We cannot raise money for these investments if we cannot charge rates that generate returns that investors view as reasonable. Consolidation is the obvious tool to address the future infrastructure needs by spreading out the cost of investments to larger customer bases. By approving Liberty EDO's consolidation into Liberty Gold Canyon in this case, the Commission would be establishing a good first step for future potential consolidation of our utilities. We will continue to take such steps where it allows us to better share operating and capital costs among our many customers.

Q. THANK YOU, MR. GARLICK. DO EITHER OF THE APPLICANTS HAVE ROOM FOR FURTHER GROWTH?

A. Yes, we project Liberty EDO to grow to by approximately 600 connections in the next decade when factoring in current developments and projected grown rates. Adding an additional 600 connections in the Liberty EDO system will benefit the current customers of Liberty Gold Canyon by further spreading the operating and capital costs across an even broader customer base. Similarly, assuming the current community growth rates continue into the near future as expected for the Liberty Gold Canyon customer area, we project an additional 370 homes (connections) to be added to the system in the next few years if that growth materializes.

Q. IS THIS REQUEST FOR CONSOLIDATION A UNIQUE SITUATION OR DOES LIBERTY PLAN FURTHER CONSOLIDATIONS IN ARIZONA IN THE FUTURE?

A. This request is not unique. We currently own and operate eight water and wastewater utilities in Arizona ranging from Class A to Class D. We believe it makes sense to consider merging our utilities into fewer consolidated entities – much like we recently accomplished when Liberty Bella Vista bought the assets of the Sulger Water Company No. 2 system. At present, we are working on plans to further consolidate various systems and hope to present applications to the Commission in the next few years. Ultimately, Liberty believes it would be more efficient to operate one or two water utilities and one or two sewer utilities in Arizona rather than the several separate utilities we currently own and operate.

Q. TO THE BEST OF YOUR KNOWLEDGE, DOES THE COMMISSION HAVE ANY SORT OF POLICY CONCERNING CONSOLIDATION?

A. I am aware that the Commission does have a policy related to the acquisition and consolidation of small financially troubled water and wastewater utilities, but we are not suggesting that the proposed consolidation here is because Liberty EDO is "troubled." Today, Liberty EDO can pay for needed infrastructure investment and operating expenses, but that still leaves the question of whether customers will be able to afford rates that fairly recover the necessary cost of safe, reliable and compliant utility service over the long-term.

In considering this request, a fact that should not be overlooked is that while the Entrada Del Oro subdivision is located close to the Gold Canyon community, both communities are at the far, eastern edge of the Phoenix metro area, across the county line, and isolated from the larger, regional utilities. This means that aside from the current proposed consolidation, neither utility has any other foreseeable options for immediate growth and cost sharing options. One reasonable way to mitigate this risk is to combine like utilities and customer bases with others to permit the sharing of the costs of providing safe and reliable wastewater utility services.

Q. CAN LIBERTY PROVIDE ANY PRIOR EXAMPLES OF SIMILAR OR COMPARABLE CONSOLIDATIONS APPROVED BY THE COMMISSION?

A. Since we came to Arizona, there have been a couple of consolidations of smaller systems into larger systems within the Liberty group. The first began more than 15 years ago when Liberty acquired the former McLain water systems in southern Arizona. At the time, there were seven separate water systems that we first consolidated into two new entities, Northern Sunrise Water Company ("Northern Sunrise") and Southern Sunrise Water Company ("Southern Sunrise).[11] In the next step, Northern Sunrise and Southern Sunrise were folded into Liberty Bella Vista.[12] After that, all of Liberty Bella Vista's customers paid the same rates. As briefly mentioned above, more recently Liberty Bella Vista acquired the assets Sulger Water Company No. 2 and upon receipt of the Commission's approval that entity was consolidated into Liberty Bella Vista.[13] As of December 2020, Liberty Bella Vista owned and now operates three separate public water utility systems serving more than 10,500 customers under one Commission approved tariff of rates and charges.

We are also familiar with the Commission's recent decision with respect to EPCOR Water Arizona, Inc. ("EPCOR") in which several separate non-interconnected sewer systems were consolidated. Liberty joined with Global Water Resources, Inc., another public utility holding company with multiple utilities and systems in Arizona, to file an Amicus Brief in support of the Commission in the appeal brought by a group of EPCOR's customers.[14] In essence, Liberty believes that consolidation is an important industry and regulatory tool for mitigating the

[11] *Northern Sunrise and Southern Sunrise*, Decision No. 68826 (June 29, 2006).
[12] *Liberty Bella Vista, Northern Sunrise, and Southern Sunrise*, Decision No. 72251 (April 7, 2011).
[13] *Liberty Bella Vista and Sulger*, Decision No. 77741 (October 2, 2020).
[14] *Sun City HomeOwners Association v. Ariz. Corp. Commission*, Case No. CV-20-0047-PR.

impact of substantial infrastructure investment on customers' rates and that the Commission has the discretion to approve consolidation if it is in the public interest.

Q. IS LIBERTY CONCERNED THAT IF THE COMMISSION WERE OVERTURNED ON APPEAL IN EPCOR'S CASE, THE RESULT COULD NEGATIVELY IMPACT A DECISION TO APPROVE LIBERTY'S REQUEST TO ESTABLISH LIBERTY GOLD CANYON (CONSOLIDATED)?

A. No, we do not believe so. The facts here are much narrower as we are talking about two small companies near one another who are already sharing ownership, management and operations. If the Commission doesn't have discretion to grant this requested consolidation, then it is hard to see how any consolidation could ever be approved.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

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BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANTS AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON.	DOCKET NO: SW-04316A-21-

DIRECT TESTIMONY

OF

ERIC G. BURKETT

September 30, 2021

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I. INTRODUCTION.

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Eric G. Burkett. My business address is 14920 W. Camelback Road, Litchfield Park, AZ 85340.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Liberty Utilities Service Corp. as the Senior Operations Manager responsible for the operations of Liberty Utilities (Entrada Del Oro Sewer) Corp. ("Liberty EDO"), Liberty Utilities (Gold Canyon Sewer) Corp. ("Liberty Gold Canyon"), Liberty Utilities (Black Mountain Sewer) Corp., and Liberty Utilities (Cordes Lakes Water Company).

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

A. I am providing this testimony on behalf of Liberty EDO.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I have nearly 17 years of experience in the drinking water and wastewater industry. In August 2019, I joined Liberty Utilities as Senior Operations Manager. Prior to joining Liberty Utilities, I was a Manager of Water Operations at WhiteWater, Inc. with progressive roles and increasing responsibilities for 13 years. I am a current and active member of Arizona's Water/Wastewater Agency Response Network ("AzWARN") Committee. I also have a Bachelor of Science in Criminal Justice degree from the University of Massachusetts Lowell.

Q. DO YOU HOLD ANY CERTIFICATIONS?

A. Yes. I currently hold the following certifications in the State of Arizona: Grade III - Water Treatment and Distribution, Grade IV - Wastewater Treatment, and Grade II Collections.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION OR ANY OTHER REGULATORY AGENCY?

A. No, this will be my first time testifying.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to provide an overview of Liberty EDO's current operations and the capital investments that have been undertaken to ensure continued safe and reliable service for customers since the last rate case test year in 2015.

II. DESCRIPTION OF LIBERTY EDO PLANT AND OPERATIONS.

A. General Description of System.

Q. PLEASE PROVIDE AN OVERVIEW OF LIBERTY EDO.

A. Liberty EDO's sewer service area is in the southeast portion of the Phoenix metropolitan area, east of Liberty Gold Canyon and across the county line in Pinal County, Arizona. As of December 2020, Liberty EDO provides wastewater collection and treatment service to 365 customers. Because some customers have more than one connection, Liberty EDO is currently collecting, treating and disposing of wastewater service from 370 connections.

Q. PLEASE DESCRIBE THE ASSETS USED IN OPERATING THE LIBERTY EDO SEWER SYSTEM.

A. The EDO service area covers approximately 0.7 square miles (or 452 acres) in land area and includes a wastewater collection system with one influent lift station. Also, within that service area, Liberty EDO owns and operates approximately 3.3 miles of sewer mains (17,605 feet), 1.1 miles of force mains (6,000 feet), 70 manholes (standard and drop) and seven two-way cleanouts. Sewer flows are collected and sent to the Liberty EDO Wastewater Treatment Plant ("WWTP") for treatment. The Liberty EDO WWTP utilizes an activated sludge process, a secondary clarifier,

tertiary filtration and ultraviolet disinfection to remove suspended solids, organics and nitrogen from the waste stream and produce Class A+ Effluent. The Liberty EDO WWTP meets or exceeds the Arizona Department of Environmental Quality ("ADEQ") regulatory discharge requirements. We use various facilities in operating the Liberty EDO wastewater system, including the solids screener, treatment tanks, sludge storage, mechanical equipment, pumps, influent lift station, collection lines, forced mains, and manholes.

Q. WHAT IS LIBERTY EDO'S COMPLIANCE STATUS?

A. Liberty EDO is in compliance and good standing according to the rules and regulations of ADEQ, Pinal County, and the Commission based on the most current information available.

B. <u>Plant Improvements Since Last Rate Case</u>.

Q. HAS LIBERTY EDO MADE ANY SIGNIFICANT IMPROVEMENTS SINCE THE LAST RATE CASE IN 2015?

A. Yes, since the last rate case in 2015, Liberty EDO has invested $903,557 on capital improvements and upgrades to its system. Exhibit EB-DT1 summarizes the investments made by Liberty EDO since its last rate case and categorized by account.

Q. CAN YOU BRIEFLY DESCRIBE THE CAPITAL INVESTMENTS MADE BY LIBERTY EDO SINCE THE LAST RATE CASE?

A. As I stated in my introduction, I joined Liberty in 2019 and was not directly involved with any of the investments made in the Liberty EDO system prior to that time. However, I can testify that the improvements included the replacement of the WWTP's failed check valves and pumps on a lift station, the replacement of failed timers required to operate equalization flow ("EQ") series pumps and ultra-violet ("UV") systems, the replacement of soft starters on blowers, the replacement of the Flygt MiniCAS sensors on the mixers, the replacement of air lines for dissolved

oxygen delivery, and the replacement of backflow devices.

Q. CAN YOU DESCRIBE IN MORE DETAIL THE CAPITAL IMPROVEMENTS MADE SINCE YOU HAVE BEEN MANAGING THE LIBERTY EDO SYSTEM?

A. Yes. In 2020 and 2021, Liberty EDO made the following improvements primarily revolved around necessary upgrades and improvements to pumping equipment, communications equipment, treatment and disposal equipment, plant sewers and structures and improvements:

- **Pumping Equipment** – Lift station replacements and upgrades were made to address influent pump failures, clogging issues, and deteriorating rails.
- **Communications Equipment** – Lift station instrumentation and communication pertaining to supervisory control and data acquisition (SCADA) upgrades for the Liberty EDO treatment systems necessary to reduce the risks associated with volumes and flows for the wastewater treatment system mitigating potential issues for operations and downtime for emergencies. Additional investments were made which will allow Liberty EDO to inventory the system, identify future needs, prioritize future projects, and provide a framework for decisions.
- **Treatment & Disposal Equipment** – Replacement of 120 Drum filter panel and 50 spray nozzles utilized for backwashing the filters due to current assets reaching the end of useful lives. The drum panels replacements are essential for proper treatment and to meet reporting requirements per Arizona Pollutant Discharge Elimination System (AZPDES) and Aquifer Protection Permits. In addition, Liberty EDO upgraded the UV system and replaced failed and failing components on both UV disinfection trains, which will provide disinfection redundancy, and installed diffusers, air lifts, mixers, and other

equipment in the second train.

- **Plant Sewers** – Investments include upgrades for design of the second train and improvements of the existing train, bid support, and construction support necessary to establish the reliability and redundancy to accommodate increased flows from further expansion and growth in the service area.

Q. THANK YOU, MR. BURKETT. ONE LAST QUESTION – WILL THE REQUESTED CONSOLIDATION OF LIBERTY GOLD CANYON AND LIBERTY EDO HAVE ANY ADVERSE IMPACTS ON THE OPERATIONS OF EITHER UTILITY?

A. No. Nothing would be different in my testimony if Liberty Gold Canyon were one utility with two systems as the plant and facilities are not moving or changing. As such, not much will change at the operations level. My staff and I already run both systems from the same location we will continue to occupy if consolidation is granted. If there are any changes, they will involve some changes in reporting internally and externally as we will have one utility not two, but those changes are more administrative, and they are beneficial. The way I see it there is no reason to have two forms or two utilities when one will do as well or better.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

EXHIBIT EB-DT1

Line No.	NARUC	Account Description	[A] Gross Utility Plant as of 10/31/2015	[B] Plant Additions 11/1/2015 - 12/31/2020	[C] Plant Additions Post-Test Year	[D] Gross Utility Plant Current Rate Case	[E] = [D] - [A] Increase / (Decrease)
1	351	Organization	$ 37,898	$ -	$ -	$ 37,898	$ -
2	352	Franchise	799	-	-	799	-
3	353	Land	400,000	-	5,565	405,565	5,565
4	354	Structures & Improvements	550,401	7,769	47,724	605,894	55,492
5	355	Power Generation	124,916	-	-	124,916	-
6	360	Collection Sewer Forced	7,141	-	-	7,141	-
7	361	Collection Sewers Gravity	480,710	-	-	480,710	-
8	363	Customer Services	122,760	-	-	122,760	-
9	364	Flow Measuring Devices	3,845	7,135	-	10,980	7,135
10	365	Flow Measuring Installations	2,457	10,401	-	12,858	10,401
11	370	Receiving Wells	26,226	-	-	26,226	-
12	371	Pumping Equipment	153,187	20,515	56,097	229,799	76,612
13	375	Reuse Trans. and Dist. System	126,541	-	-	126,541	-
14	380	Treatment & Disposal Equipment	1,357,743	76,563	478,250	1,912,555	554,812
15	381	Plant Sewers	27,752	-	128,205	155,957	128,205
16	382	Outfall Sewer Lines	5,541	-	0	5,541	-
17	390	Office Furniture & Equipment	1,747	-	-	1,747	-
18	390.1	Computers and Software	12,188	-	13	12,200	13
19	393	Tools, Shop And Garage Equip	5,348	2,881	-	8,229	2,881
20	394	Laboratory Equip	5,947	1,042	-	6,990	1,042
21	396	Communication Equip	-	-	36,729	36,729	36,729
22	398	Other Tangible Plant	-	-	24,669	24,669	24,669
23		**Total Gross Utility Plant**	**$ 3,453,148**	**$ 126,306**	**$ 777,251**	**$ 4,356,706**	**$ 903,557**

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IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANTS AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON.	DOCKET NO: SW-04316A-21-

DIRECT TESTIMONY

OF

MANUEL CIFUENTES, JR.

September 30, 2021

TABLE OF CONTENTS

I. INTRODUCTION AND PURPOSE OF TESTIMONY.

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Manuel Cifuentes Jr. My business address is 14920 W Camelback Rd, Litchfield Park, Arizona 85340.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Liberty Utilities Service Corp. ("LUSC") as a Senior Analyst, Rates and Regulatory Affairs for Arizona and Texas.

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

A. I am testifying on behalf of Liberty Utilities (Entrada Del Oro Sewer) Corp. ("Liberty EDO").

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I received a Bachelor of Science in Public Accountancy from the City University of New York at Brooklyn College in 2006. I am a Certified Public Accountant licensed in New York, and I am a Chartered Global Management Accountant. Prior to joining Liberty, I was a Utility Rate Case Consultant supporting CenterPoint Energy, an energy company engaged in the natural gas and electric businesses from 2020 to 2021 where I participated in two general rate cases. Prior to that employment, I was a Senior Accounting Manager at Brightstar, a global wireless telecommunications company from 2019 to 2020, and a Manager, Regulatory Reporting at Southern Company Gas, a company engaged in the natural gas industry, from 2016 to 2019 where I participated in seven general rate cases. I also held various progressive accounting roles within the financial services industry, primarily responsible for statutory financial & regulatory reporting and U.S. generally accepted accounting principles ("U.S. GAAP") reporting. From 1999 to 2003, I served as a Sergeant on active duty in the United States Army.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION OR ANY OTHER REGULATORY AGENCY?

A. No, this will be my first time testifying.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS PROCEEDING?

A. The purpose of my direct testimony is to address Liberty EDO's overall revenue requirement including rate base and income statement (revenue and operating expenses) and the corresponding adjustments recommended to be made to the test year in order to establish rates for Liberty EDO. In addition, my testimony addresses recommended changes to Liberty EDO's tariff of rates and charges. In this testimony, I address Liberty EDO's revenue requirement and tariffs on a stand-alone basis, which are attached to Liberty EDO's application. However, Liberty is also requesting that Liberty EDO be merged with Liberty Utilities (Gold Canyon Sewer) Corp. ("Liberty Gold Canyon") as explained in Matthew Garlick's direct testimony in this rate case. Jill Schwartz addresses the revenue requirement and associated schedules in her direct testimony for the two entities should the consolidation be approved as requested.

Q. ARE YOU SPONSORING ANY SCHEDULES WITH YOUR TESTIMONY?

A. Yes. I am specifically sponsoring the following schedules in the Liberty EDO Revenue Requirement Model:

- **A Schedules** (Revenue Increase and Financial Summary),
- **B Schedules** (Rate Base),
- **C Schedules** (Income Statement),
- **E Schedules** (Historical Financial Results),
- **F Schedules** (Projected Financial Results).

In his testimony, Thomas J. Bourassa will support and sponsor **Schedule B-2, page 8** (Deferred Income Tax), **Schedule B-2, page 9 (**Excess Accumulated Deferred Income Tax**) Schedule B-5** (Lead/Lag Study – Working Cash Requirement), the **D Schedules** (Cost of Capital and Capital Structure Summary), and the **H Schedules** (Rate Design).

Q. WERE THESE SCHEDULES PREPARED BY YOU OR UNDER YOUR SUPERVISION?

A. Yes, they were.

Q. WAS THE INFORMATION CONTAINED IN THE SCHEDULES OBTAINED OR DERIVED FROM THE BOOKS AND RECORDS OF LIBERTY EDO?

A. Yes, the information contained in the schedules I am sponsoring was obtained or derived from the books and records of Liberty EDO for the twelve months ended December 31, 2020 with proposed adjustments for known and measurable changes to the test year.

II. REVENUE REQUIREMENT MODEL, RATE BASE AND INCOME STATEMENT SCHEDULES.

Q. WHEN WERE LIBERTY EDO'S CURRENT RATES SET?

A. The current rates were authorized in Decision No. 76019 (dated March 22, 2017). This is the first rate case for Liberty EDO since that decision.

Q. PLEASE SUMMARIZE LIBERTY EDO'S REQUEST.

A. Liberty EDO's Fair Value Rate Base ("FVRB") is $1,716,795 and it is seeking total revenues of $496,422, which is an increase of $20,105 or 4.22% over the adjusted and annualized test year revenues of $476,317.

A. <u>Summary Schedules</u>.

Q. PLEASE DESCRIBE THE A SCHEDULES.

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

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

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

Schedule A-4 contains the plant construction and plant-in-service ("PIS") for the test year and prior years. The projected plant additions are also shown on this schedule.

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

B. <u>Rate Base Schedules</u>.

Q. PLEASE DESCRIBE THE RATE BASE SCHEDULES, LABELED AS THE B SCHEDULES.

A. Schedule B-2, page 1 is a summary of the proposed test year-end adjusted rate base which reflects all of the Liberty EDO's proforma rate base adjustments. The details of the adjustments identified in Schedule B-2 will be further discussed in my testimony below.

Q. PLEASE DISCUSS SCHEDULES B-3 AND B-4.

A. Liberty EDO did not include Schedule B-3 and B-4 in this filing and is requesting that its OCRB be used as its FVRB.

Q. WHAT IS THE PROPOSED RATE BASE?

A. As shown on Schedule B-2, Liberty EDO's proposed rate base is $1,716,795. It is comprised of the test year rate base as adjusted pursuant to Schedule B-2 which shows the proforma adjustments to the original cost rate base ("OCRB") (as detailed on Schedule B-2, page 2 through 9).

1. PIS and Accumulated Depreciation ("A/D").

Q. PLEASE DISCUSS THE PIS ADJUSTMENTS.

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

Adjustment A of B-2, adjustment number 1, increases PIS by $653,874 for post-test year plant ("PTYP"). Specifically, Liberty EDO has $653,874 of PTYP, which includes $449,500 for Treatment & Disposal Equipment, $128,205 for Plant Sewers, $44,675 for Structures & Improvements, $24,669 for Other Tangible Plant, $5,565 for Land, and $1,248 for Pumping Equipment. The details of the PTYP improvements are discussed in the testimony of Eric Burkett.[1]

Q. THANK YOU. PLEASE CONTINUE WITH YOUR DISCUSSION OF YOUR B-2 SCHEDULE.

A. Adjustment B of B-2, adjustment number 1, decreases PIS by $128,772 for PTYP retirements.

[1] Direct Testimony of Eric Burkett (Liberty EDO) at 4:2 – 5:5.

Adjustment C of B-2, adjustment number 1, increases PIS by $123,377 for test year plant adjustments.

Q. WHY DID LIBERTY EDO WAIT TO RECORD THE PLANT IF IT WAS ALREADY IN SERVICE?

A. Sometimes plant items are finished and ready to use in service of customers before all the final invoices are in our possession and the actual final cost of a project (or plant item) is known. Although the plant was used and useful during the test year, the costs continued to be recorded as CWIP until all costs were final and certain.

Q. BUT ISN'T THIS RESULT ALSO PTYP?

A. We do not believe so. Unlike the PTYP subject to Adjustment A discussed earlier, these plant items were placed in service prior to December 31, 2020, the end of the test year. If a plant item is used and useful and serving customers before the end of the test year then, by definition, it is not PTYP.

Q. OKAY, THANK YOU AGAIN. PLEASE CONTINUE WITH YOUR DISCUSSION OF YOUR B-2 SCHEDULE.

A. Adjustment D of B-2, adjustment number 1, increases PIS by $50,855 for allocated corporate plant and the new office building in Litchfield Park, Arizona.

Adjustment E of the B-2, adjustment number 1, increases PIS by $31,487 for prior case plant adjustments.

Adjustment F of B-2, adjustment number 1 adjusts PIS by $(16) to reflect the reconciliation of the reconstruction of Liberty EDO's PIS reflected on the Schedule B-2, pages 3.7 to 3.23.

Q. PLEASE DISCUSS THE ACCUMULATED DEPRECIATION ("A/D") ADJUSTMENTS.

A. B-2 adjustment number 2, as shown on Schedule B-2, page 2, adjust A/D. There are

six adjustments represented in Adjustment 1. These are shown on Schedule B-2, page 3, and are labeled as adjustments "A," "B," "C," "D," "E" and "F."

Adjustment A of B-2, adjustment number 2 increases A/D (using half-year convention) by $16,499 for PTYP proposed in Adjustment "A" of B-2 adjustment number 1. I would note that this adjustment has been made pursuant to the historic practice of reflecting adjustments of this nature with half-year of depreciation.

Adjustment B of B-2, adjustment number 2, decreases A/D by $128,772 for PTYP retirements.

Adjustment C of B-2, adjustment number 2, increases A/D by $6,034 for test year plant adjustments.

Adjustment D of B-2, adjustment number 2, increases A/D by $2,452 for allocated corporate plant.

Adjustment E of B-2, adjustment number 2, increases A/D by $1,122 for prior case plant adjustments.

Adjustment F of B-2, adjustment number 2, adjusts A/D by $93,493 to reflect the reconciliation of the reconstruction for Liberty EDO's A/D reflected on the Schedule B-2 plant reconstruction schedule, pages 3.7 to 3.23, to recorded general ledger amounts.

Q. DO THE PIS AND A/D SHOWN ON SCHEDULE B-2 REFLECT THE LAST COMMISSION RATE ORDER FOR LIBERTY EDO?

A. Yes, Liberty EDO's reconstruction of the PIS and A/D balances started with the PIS and A/D balance approved in the last rate case. Reconciliation to the starting balances for PIS and A/D are shown on the B-2 plant reconstruction schedule, page 3.7. Plant additions and retirements since the end of the last test year have been added to and deducted from total plant shown on the B-2 reconstruction schedule, pages 3.7 to 3.23. Pages 3.7 to 3.23 of the schedule also show the details for the A/D

from the end of the last test year through the end of the test year using the half-year convention for depreciation.

2. Contributions-in-Aid of Construction ("CIAC").

Q. PLEASE DISCUSS THE CIAC ADJUSTMENTS.

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

Q. DO THE CIAC AND A.A. BALANCES SHOWN ON SCHEDULE B-2 REFLECT THE LAST COMMISSION RATE ORDER FOR LIBERTY EDO?

A. Yes. Additional CIAC recorded since the end of the last year has been added to CIAC and is shown on Schedule B-2, pages 5.1 to 5.3. Computed amortization for each year, based upon the annual composite depreciation rate for plant, has been added to A.A. and is also shown on Schedule B-2, page 5.1.

3. Advances-in-Aid of Construction ("AIAC").

Q. PLEASE DISCUSS THE AIAC ADJUSTMENT.

A. There were no adjustments made for AIAC made during the test year or post-test year. The balance of AIAC at the end of the test year was zero.

4. Accumulated Deferred Income Tax ("ADIT").

Q. PLEASE DISCUSS THE ADIT ADJUSTMENT.

A. Adjustment number 6, shown on Schedule B-2, page 2, reflects the computed deferred income taxes at the end of the test year. This adjustment is sponsored by Mr. Bourassa who discusses that issue in further detail in his direct testimony.[2]

…

…

[2] Direct Testimony of Thomas J. Bourassa (Liberty EDO) ("Bourassa EDO DT") at 3:23 – 4:6.

5. Excess Accumulated Deferred Income Tax ("EADIT").

Q. PLEASE DISCUSS THE EADIT ADJUSTMENT.

A. Adjustment number 6, shown on Schedule B-2, page 2, reflects the computed excess accumulated deferred income taxes at the end of 2017. This adjustment is also sponsored by Mr. Bourassa who discusses that issue in further detail in his direct testimony.[3]

6. Working Capital.

Q. PLEASE DISCUSS THE WORKING CAPITAL ADJUSTMENT IN SCHEDULE B-5.

A. Schedule B-5 details the cash working capital allowance. Liberty EDO is proposing a negative working capital of $10,766 based upon a lead-lag study. The lead-lag study was prepared and supported by our consultant Mr. Bourassa and is explained in greater detail within his testimony.

C. <u>Income Statement Schedules</u>.

Q. PLEASE DESCRIBE THE C SCHEDULES (INCOME STATEMENT).

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

Adjustment 1 annualizes depreciation and amortization expense. The proposed depreciation rate for each component of utility plant is shown on Schedule C-2, page 1. The depreciation rates approved in the last rate case were plant account specific and Liberty EDO is using the same previously approved depreciation rates again in this filing.

[3] Bourassa EDO DT at 4:7-12.

Liberty EDO's proposed depreciation and amortization also reflects amortization of CIAC at the composite depreciation rate of depreciable plant, amortization of EADIT based upon the weighted average remaining life of depreciable plant at the end of 2017.

Adjustment 2 increases the property tax expense based on proposed revenues using the Arizona Department of Revenue's valuation method. The property tax rate is reflective of 2020 property tax rates. The details of the computation are shown on Schedule C-2, page 3.

Adjustment 3 annualizes revenues to the year-end number of connections. The annualization of revenues is based on the year-end number of connections during the test year compared to the actual number of connections during each month of the test year. In this filing, the average revenues per connection by month were computed for the test year and then multiplied by the increase (or decrease) in number of connections for each month of the test year. Thus, the total of the monthly revenue change comprises the revenue annualization. This adjustment also reflects changes in purchased power expense, sludge removal expense, and chemicals expense related to the additional gallons treated from the revenue annualization.

Adjustments 4 reduces Contractual Services – Management for corporate allocations associated with the corporate headquarters building in Oakville, Ontario.

Adjustment 5 decreases the bad debt expense. The proposed bad debt expense reflects a bad debt expense rate based upon an historical 3-year average. The details of the calculation are presented on Schedule C-2, page 4.

Adjustment 6 reduces the test year amount of building rent expense previously incurred for the former Avondale office. Liberty now owns the new office building located in Litchfield Park and no longer incurs this rental expense.

Adjustment 7 adjusts interest expense to reflect interest synchronization with rate base.

Adjustment 8 reflects income taxes based upon Liberty EDO's adjusted test year revenue and expense.

D. <u>Financial Statement Schedules</u>.

Q. PLEASE DESCRIBE THE E AND F SCHEDULES.

A. The E Schedules are based on Liberty EDO's actual operating results, as reported in annual reports filed with the Commission. The E-1 Schedule contains the comparative balance sheet data the years 2018, 2019, and 2020 ending on December 31.

Schedule E-2, page 1, contains the income statement for the years 2018, 2019, and 2020 ending on December 31.

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

Schedule E-4 provides the changes in stockholder equity.

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

Schedule E-7 contains operating statistics for the years ended 2018, 2019, and 2020 ending on December 31.

Schedule E-8 contains the taxes charged to operations.

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

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

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

Schedule F-3 shows projected construction requirements for 2021, 2022, and 2023.

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

III. TARIFF REVISIONS.

Q. PLEASE DESCRIBE ANY PROPOSED REVISIONS TO LIBERTY EDO'S TARIFF OF RATES AND CHARGES.

A. As I have mentioned, Liberty is proposing to consolidate Liberty EDO and Liberty Gold Canyon. If approved, the result will be only one utility with one tariff of rates and charges. Specifically, both companies will utilize the Liberty Gold Canyon tariffs. In the interim and on a stand-alone basis, Liberty EDO is proposing certain changes to the current tariff for Liberty EDO. These changes are designed to be consistent with the Commission's rules and regulations with an additional goal to prepare for the eventual standardization of the tariffs for all Liberty entities in Arizona to the greatest extent possible.

Q. PLEASE DISCUSS THE PROPOSED TARIFF CHANGES FOR LIBERTY EDO.

A. The most significant change would be to implement a Wastewater Hook Up Fee ("HUF") Tariff, which Liberty EDO does not currently have. In his direct testimony for Liberty EDO, David Heighway explains that HUFs are generally used to fund facilities that support the entire wastewater system (e.g., treatment capacity, sludge and effluent disposal, lift stations, force mains, and transportation mains) by

providing a zero-cost source of capital for a portion of the cost of such facilities.[4] Also, we are proposing to adopt and implement a new pretreatment tariff for Liberty EDO as also discussed in Mr. Heighway's direct testimony.[5]

Q. WHAT HUF AMOUNTS ARE LIBERTY EDO PROPOSING ON A STAND-ALONE BASIS?

A. Liberty EDO proposes a standalone HUF of $1,100 based on a standard flow of 270 gallons per day (gpd) per Equivalent Resident Unit ("ERU").[6]

Q. ANY OTHER CHANGES IN THE TARIFF?

A. We also are proposing a new Customer Assistance Tariff ("CAT") for Liberty EDO. The CAT includes Low-Income, Deployed Services Member, and Disabled Veteran programs. These programs are intended to alleviate financial hardships customers may be experiencing paying their utility bills and are consistent with CATs approved for other Liberty utilities and other Arizona utilities.

Q. HOW WILL THE CAT BE IMPLEMENTED?

A. Customers will be eligible to apply for relief on a first come, first served basis with a limit of 35 customers in total allowed to participate in CAT programs. Customers submit applications and Liberty EDO will then determine eligibility. Liberty EDO would file an annual report detailing the number of participants from the previous calendar year, the total amount of credits provided by the program and the total of any program administrative costs.

[4] Direct Testimony of David Heighway (Liberty EDO) ("Heighway EDO DT") at 3:3-10.

[5] Heighway EDO DT at 4-7.

[6] Heighway EDO DT at 3:11-15. Mr. Heighway also addressed the standalone HUF for Liberty Gold Canyon and the combined HUF for Liberty Gold Canyon and Liberty EDO as one consolidated entity. Direct Testimony of David Heighway (Liberty Gold Canyon) at 13-14.

Q. HOW WILL LIBERTY EDO RECOVER THE COSTS OF IMPLEMENTING THE CAT PROGRAMS, INCLUDING ANY ASSOCIATED LOST REVENUE?

A. Through the establishment of a monthly CAT surcharge on all non-participating customers. Liberty EDO would account for direct costs associated with the programs separately from other operating costs. The monthly surcharge would be calculated each year based on the active number of customer connections as of December 31 of the prior year. Additionally, Liberty EDO is proposing to file an annual notice of the surcharge along with a report on the CAT with the Commission on or before January 31 and for the surcharge to be implemented in February of each year with the recovery period ending in January of the following year.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

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BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANTS AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON.	DOCKET NO: SW-04316A -21-

DIRECT TESTIMONY

OF

DAVID HEIGHWAY, P.E.

September 30, 2021

TABLE OF CONTENTS

I. <u>INTRODUCTION AND QUALIFICATIONS</u>.

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is David Heighway. My business address is 14920 W. Camelback Road, Litchfield Park, Arizona 85340.

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

A. I am providing this direct testimony on behalf of Liberty Utilities (Entrada Del Oro Sewer) Corp. ("Liberty EDO").

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Liberty Utilities Service Corp. as Director of Engineering for our water and wastewater utilities in Arizona and Texas.

Q. ARE YOU A LICENSED PROFESSIONAL ENGINEER?

A. Yes, I am a registered professional engineer in Arizona, Indiana, and Illinois.

Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS DIRECTOR OF ENGINEERING.

A. As Director of Engineering for our utilities in Arizona and Texas, I am responsible for providing engineering and development services for our eleven regulated water and wastewater utilities in Arizona and Texas. My responsibilities include engineering, development and planning for facilities and capital projects for our Arizona and Texas utilities, including all of the utility infrastructure, lift stations, mains, treatment facilities, booster pumps and all items associated with operation of our water and wastewater utilities. I work with our Engineering, Operations, Finance/Accounting and Executive teams to manage, identify, plan, design, and construct improvements for our Arizona and Texas utilities.

Q. PLEASE DESCRIBE YOUR EDUCATION AND WORK EXPERIENCE PRIOR TO LIBERTY UTILITIES.

A. I have a Bachelor of Science degree in Civil Engineering from Rose-Hulman Institute of Technology and have been in the water and wastewater engineering field since 1989. Prior to my joining Liberty, from 2006 to 2017, I worked for Engineering & Geologic Water & Wastewater Services, LLC, dba Fluid Solutions, a consulting engineering firm in Phoenix, Arizona, as a Project Engineer. Prior to that, I worked for several engineering firms in Indianapolis, Indiana, from 1996-2006. My water experience started as a staff engineer for Consumers Illinois Water Company (now Aqua Illinois) from 1989 to 2006. My CV is attached as Exhibit DH-DT1.

Q. HAVE YOU TESTIFIED BEFORE THIS OR ANY OTHER COMMISSION?

A. Yes, I have testified in hearings before the Arizona Corporation Commission ("Commission") in various Certificate of Convenience and Necessity ("CC&N") proceedings for our Arizona utilities. More recently, I provided expert engineering testimony in the Liberty Utilities (Black Mountain Sewer) Corp. ("Liberty Black Mountain") rate case.[1]

II. <u>PURPOSE OF TESTIMONY</u>.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY HERE?

A. To provide support for Liberty EDO's request to establish a new Off-Site Facilities Hook Up Fee ("HUF") tariff. A copy of the proposed HUF tariff is included in Attachment 2 to the Application. Liberty EDO does not currently have a HUF tariff in place and is proposing that it be authorized to adopt and implement a HUF tariff in this case. Also, in my testimony below, I introduce and support a pretreatment

[1] Docket No. SW-02361A-19-0139.

tariff for Liberty EDO.

III. WASTEWATER HUF TARIFF.

Q. WHAT IS THE PURPOSE OF THE HUF TARIFF?

A. Generally speaking, the amount collected under a HUF tariff is intended to provide a zero-cost source of capital for a portion of the cost of off-site facilities, such as wastewater treatment capacity plant, sludge and effluent disposal, lift stations, force mains, and transportation mains and related facilities. A HUF equitably apportions the costs of constructing these additional off-site facilities among all new service laterals. HUF tariffs help growth pay for itself rather than the shareholders and then customers funding 100 percent of that investment cost.

Q. WHAT AMOUNT IS LIBERTY EDO PROPOSING FOR THE HUF CHARGE?

A. We are seeking approval for a HUF charge of $1,100 based on the Equivalent Residential Unit ("ERU") of 270 gallons per day ("gpd"). The standard flow per ERU of 270 gpd is based on engineering calculations. We recently proposed a similar change for Liberty Utilities (Litchfield Park Water & Sewer) Corp.'s ("Liberty Litchfield Park") HUF.[2] Finally, we are proposing that the HUF be set at $775 per ERU for active adult communities, based on an ERU factor of 190 gpd per unit.

Q. HOW DOES IMPLEMENTING A HUF TARIFF BENEFIT LIBERTY EDO AND ITS CUSTOMERS?

A. As discussed above, a HUF tariff will allow Liberty EDO to use contributions from new applicants for service to mitigate the impacts such development would have on Liberty EDO's wastewater collection and treatment systems. In other words, current

[2] *See* Notice of Filing Revised Offsite Facilities Hook-Up Fee Tariff and Consent to 90-Day Suspension, filed June 28, 2021 in Docket No. SW-01428A-21-0223 (matter pending).

customers and Liberty EDO will benefit from a more equitable apportionment of capital funding for off-site facilities than is currently occurring without a HUF. Additionally, establishing a HUF tariff for Liberty EDO updates Liberty EDO's tariffs to reflect the standard tariffs in place for Liberty's other wastewater utilities providing service to customers in Arizona.

Q. HAS THE COMMISSION APPROVED SIMILAR HUF TARIFFS FOR OTHER LIBERTY WASTEWATER UTILITIES IN ARIZONA?

A. Yes, we have approved HUF tariffs for three other wastewater utilities in Arizona – Liberty Black Mountain, Liberty Litchfield Park and Liberty Utilities (Gold Canyon Sewer) Corp. ("Liberty Gold Canyon").

Q. WHAT IF THE COMMISSION APPROVES THE PROPOSED CONSOLIDATION OF LIBERTY EDO WITH LIBERTY GOLD CANYON, MR. HEIGHWAY?

A. Liberty EDO will not need a new HUF tariff and Liberty Gold Canyon's HUF would apply.

IV. <u>PROPOSED PRETREATMENT TARIFF</u>.

Q. WHAT IS LIBERTY EDO PROPOSING FOR A PRETREATMENT TARIFF?

A. I am introducing and requesting approval of Industrial Pretreatment Program Standard Operating Procedures and related requirements for Liberty EDO as reflected in the pretreatment tariff included in Attachment 2 to the Application. These pretreatment standard operating procedures are necessary to monitor and prevent discharges of toxic and other harmful pollutants into Liberty EDO's wastewater system. The proposed prohibitions and requirements contained in the pretreatment program will protect the Liberty EDO Wastewater Treatment Facility and receiving waters from contaminates categorized as General Organic

Contaminates ("GOC"), Volatile Organic Contaminates ("VOC") and Synthetic Organic Contaminates ("SOC"). The restricting of levels of certain pollutants will generally protect the biologic treatment system from those contaminates responsible for inhibiting or contaminating the biologic mass responsible for treating the incoming sewage, as well as protecting the receiving waters associated with treated water discharges.

Q. ARE PRETREATMENT TARIFFS COMMON?

A. They are for Liberty. We have or are proposing to use pretreatment tariffs to manage what our wastewater customers discharge into our wastewater collection and treatment systems throughout Arizona. Our proposed pretreatment program and tariffs for Liberty EDO are modeled after and based on our approved pretreatment tariffs for Liberty Black Mountain and Liberty Litchfield Park and are designed to impact only those Significant Users that might discharge wastes that would negatively impact our collection system and/or wastewater treatment process. Wastewater pretreatment programs and standards are common practice among municipal and other larger wastewater utility service providers. The proposed standard operating procedures are included as part of our proposed tariff attached to the Application as Attachment 2.

Q. WHO WILL BE SUBJECT TO THE PRETREATMENT TARIFF AND ASSOCIATED PROGRAM AND STANDARD OPERATING PROCEDURES?

A. The pretreatment program and standard operating procedures ("SOPs") will apply to qualifying industrial and commercial discharges or Industrial Users ("IUs"). The proposed SOPs set forth certain prohibitions regarding the types of waste IUs can discharge into Liberty EDO's wastewater system. For instance, explosive materials are prohibited, as are wastes with too high of a pH, too high a temperature, or

biological oxygen demand ("BOD") levels that would interfere with the system's flow rates. We have experienced various operational problems associated with these types of discharges for our other utilities, including Liberty Litchfield Park and Liberty Black Mountain. Those discharges in our other systems have impacted our operations and have required certain facility upgrades. We are proposing a pretreatment tariff for Liberty EDO here as a necessary, prudent and reasonable measure to prevent toxic and other substances from being discharged into the wastewater collection system. Because excessive BOD and ammonia loadings can lead to both operational and facility problems, it is critical to manage what flows go into Liberty EDO's wastewater system in the first place. We have successfully managed those types of occurrences through our pretreatment tariffs and programs for our other utilities.

Q. HOW WILL INDUSTRIAL AND COMMERCIAL DISCHARGERS ENSURE THAT THEY COMPLY WITH THE WASTEWATER PRETREATMENT STANDARDS?

A. In some cases, pretreatment of waste will be required. In other cases, there may be restrictions on when certain discharges can take place. IUs will also be required to seek individual discharge permits or agreements setting forth conditions specific to that business. Our proposed pretreatment tariff and associated procedures expressly govern how dischargers will be monitored and held responsible for compliance with our pretreatment standards.

Q. HOW WILL LIBERTY EDO ENFORCE THE PRETREATMENT STANDARDS?

A. We will conduct compliance monitoring in accordance with Section 7 of the SOPs. Pursuant to Section 7, we will issue notices of violation as necessary and proceed to require compliance through orders to cease and desist, fines, and eventually,

termination of the connection if needed to stop the improper discharge. In extreme situations, the standards also include provisions for seeking civil and criminal relief in court if necessary.

Q. WHAT IF THE COMMISSION APPROVES THE PROPOSED CONSOLIDATION OF LIBERTY EDO WITH LIBERTY GOLD CANYON?

A. Liberty Gold Canyon's EDO system will be subject to Liberty Gold Canyon's pretreatment standards.

Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?

A. Yes.

EXHIBIT DH-DT1

DAVID A. HEIGHWAY, P.E.

Licensed Professional Engineer, States of Illinois, Indiana, and Arizona
B.S.C.E., Rose-Hulman Institute of Technology

Professional Experience

2017 to Present **Liberty Utilities, Litchfield Park, Arizona.**
Project Manager (August 2017 - March 2018); Engineering Manager (March 2018 - January 2019); Director, Engineering (January 2019 - present); Director, Operations [interim] (May 2020 – August 2020); Director, Engineering (September 2020-present)

- Plan, Manage, and Implement Capital Projects
- Comply with Procedures and compliance requirements
- Work with Regulatory Team for Rate Cases
- Lead Department restructuring
- Work with Developers on new infrastructure
- Improve team communication with other departments
- Negotiate Agreements with Regulatory Agencies, Developers, Contractors, Landowners, and Homeowner Associations
- Testify for CC&N expansion before the ACC
- Participate in special projects for operations and engineering
- Conduct Due Diligence on potential acquisitions
- Provide leadership to implement corporate policy

2006 to 2017 **Engineering & Geologic Water & Wastewater Services, dba Fluid Solutions, Phoenix, Arizona. Project Engineer**

- Produce Contract Document Plans and Specifications
- Prepare reports and Design projects
- Coordinate permitting
- Manage Design/Build Projects
- Negotiate consultant and client contracts

2005 to 2006 **Congdon Engineering Associates, Indianapolis, Indiana, Site Development and Civil Engineering Team Manager**

- Prepare proposals
- Supervise personnel
- Act as client liaison

2002 to 2005 **Clark Dietz, Inc., Indianapolis, Indiana**
Senior Engineer

- Develop Project Work Plans
- Supervise personnel in completion of projects
- Work with clients to assure project objectives met
- Market design services to existing and potential clients
- Establish contract fees
- Negotiate contract terms for projects
- Identify need for sub-consultants

- Review contractor bids
- Provide recommendations to clients
- Evaluate personnel needs and training requirements
- Recommend procedures to assist in office management
- Supervise design team across separate offices

1996 to 2002 **R.W. Armstrong & Associates, Inc., Indianapolis, IN**
(now CHA), **Sr. Project Manager**

- Supervise timely completion of projects
- Oversee personnel assigned to my design team
- Coordinate multiple design teams
- Develop Preliminary Engineering Reports
- Assist clients in obtaining financing for projects
- Determine facilities needs for expansion and improvement
- Analyze reports for compliance with standards
- Calculate capacity of existing gravity sewers
- Project future capacity for facilities
- Design drainage improvements for existing subdivisions
- Supervise the completion of technical specifications and plans
- Establish contract fees with clients
- Market the firm
- Develop Statements of Qualifications
- Represent the company in client interviews
- Maintain client relations

1989 to 1996 **Consumers Illinois Water Company, Staff Engineer**
(now AquaIllinois), **Danville, Illinois**

- Develop Capital Budgets and Long Range Plans
- Perform engineering inspections of Lake Vermilion dam
- Formulate Cross Connection Control Program
- Design and write technical specifications and plans
- Write "*Lake Vermilion Dam O&M Manual*"
- Guide conversion from pen and ink to computer aided drafting

Received PACE (Pride, Achievement, Commitment, Excellence) Award, 1995

1983 to 1989 **United States Navy, Machinist Mate 1st Class**

- Operate and Maintain Propulsion and Nuclear Mechanical Systems on Submarine
- Train QA Inspectors for Nuclear and SubSafe Systems

Received Good Conduct Medal, Navy Expedition Medal, Sea Service Award

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BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (ENTRADA DEL ORO SEWER) CORP., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANTS AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON.	DOCKET NO: SW-04361A-21-

DIRECT TESTIMONY

OF

THOMAS J. BOURASSA

September 30, 2021

TABLE OF CONTENTS

I. INTRODUCTION AND PURPOSE OF TESTIMONY.

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

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

Q. WHAT IS YOUR PROFESSION AND BACKGROUND?

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

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

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

In my private practice, I have prepared and/or assisted in the preparation of more than a hundred water and wastewater utility rate applications before the Arizona Corporation Commission ("Commission"). I have also testified in regulatory proceedings before public utility commissions in Texas, California, Montana, Arkansas, and Alaska. A copy of my regulatory work experience is attached as Exhibit TJB-DT1.

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

A. My direct testimony is being filed simultaneously in two new dockets on behalf of Liberty Utilities (Gold Canyon Sewer) Corp. ("Liberty Gold Canyon") and Liberty

Utilities (Entrada Del Oro Sewer) Corp. ("Liberty EDO") (collectively "Applicants"). Liberty Gold Canyon and Liberty EDO are both filing rate applications and the Applicants are requesting that they be consolidated into one entity which I will generally refer to as "Liberty Gold Canyon (Consolidated") in this testimony.

Q. ARE YOU SUBMITTING IDENTICAL TESTIMONY IN BOTH DOCKETS?

A. Not entirely. In some sections of my testimony, like cost of capital, the testimony is the same. However, because both Applicants have to file separate applications reflecting a "stand-alone" scenario, there are instances like rate design where my testimony differs. There is also no discussion of the cost of service study in my direct testimony for Liberty EDO because that entity only has one class of customer-residential.

Q. HAVE YOU ALSO PREPARED A PROPOSED RATE DESIGN FOR LIBERTY GOLD CANYON (CONSOLIDATED)?

A. Yes, and it is discussed in the Liberty Gold Canyon version of my direct testimony because Liberty Gold Canyon will be the surviving entity if the consolidation the Applicants are requesting is approved by the Commission.

Q. THANK YOU. WHAT ARE THE SUBJECT MATTERS ADDRESSED IN YOUR DIRECT TESTIMONY FOR THE APPLICANTS?

A. I will testify in support of the cost of capital, cost of service, rate design, the revenue annualization and the determination of accumulated deferred income taxes ("ADIT") and excess accumulated deferred income taxes ("EADIT") included in rate base. I will also testify in support of Applicants' request for approval of a Purchased Power Adjuster Mechanism ("PPAM") and a Property Tax Adjuster Mechanism ("PTAM").

Q. DO YOU BELIEVE THAT THE REQUESTED CONSOLIDATION SHOULD BE APPROVED, MR. BOURASSA?

A. Yes, without hesitation. Operating one utility in the same general area is always going to be better than operating two separate utilities, especially when one has less than 400 customers. In this instance, I am not aware of any factors that weigh against what the Applicants are proposing in these rate cases with respect to the creation of what is being referred to as Liberty Gold Canyon (Consolidated) for purposes of the rate applications.

II. MISCELLANEOUS.

A. Plant-in-Service ("PIS") and Accumulated Depreciation ("A/D") Reconstruction.

Q. ARE YOU SPONSORING THE SCHEDULE B-2 PIS AND A/D RECONSTRUCTION FOR LIBERTY EDO?

A. Yes. The PIS and A/D reconstruction is reflected on Schedule B-2, pages 3.7 to 3.23. Schedule B-2, page 3.7 reflects a reconciliation to the adopted balances in the prior rate case. The plant additions and retirements since the last case, as well as accumulated depreciation through the end of the test year, are shown on pages 3.8 to 3.23. A vintage procedure and half-year convention for depreciation was employed along with the use of the depreciation rates adopted for each plant account in the prior rate case.

B. Accumulated Deferred Income Taxes ("ADIT") and Excess Accumulated Deferred Income Taxes ("EADIT").

Q. DID YOU CALCULATE THE APPLICANTS' PROPOSED ADIT AND EADIT AMOUNTS?

A. Yes, and I am sponsoring schedules supporting the adjustments to ADIT and EADIT for the Applicants. Adjustment number 6, shown on Schedule B-2, page 2, reflects

the computed deferred income taxes at the end of the test year. The computation is based on the adjusted PIS, A/D, AIAC, and CIAC balances proposed by Liberty EDO and the adjusted tax basis of its assets using the effective tax rates computed on Schedule C-3, page 2. The detail of the ADIT computations is shown on Schedule B-2, pages 8.0 and 8.1. Liberty EDO's proposed ADIT on a stand-alone basis is a net asset of $5,387.

Adjustment number 6, shown on Schedule B-2, page 2, also reflects EADIT based upon computed deferred income taxes at the end 2017. EADIT is based upon the difference in accumulated deferred income taxes at the end of 2017 using the income tax rates enacted in the Tax Cuts and Jobs Act of 2017 ("TCJA") and the effective income tax rates in effect prior to the TCJA. Liberty EDO's proposed EADIT is a net asset of $39,354.

C. <u>Cash Working Capital ("CWC")</u>.

Q. DID YOU ALSO CONDUCT THE LEAD/LAG STUDY USED IN APPLICANTS' RATE FILINGS?

A. Yes, and I am sponsoring the CWC schedules. The details of the CWC computation are shown on Schedule B-5. Lead-lag studies support the proposed revenue lead/lag days and expense lead/lag days. Expenses shown in the schedule reflect the expense amounts at proposed rates. On a stand-alone basis, Liberty EDO's proposed CWC allowance is a negative $10,766.

III. <u>COST OF CAPITAL</u>.

A. <u>Introduction</u>.

Q. PLEASE DESCRIBE HOW THIS SECTION OF YOUR DIRECT TESTIMONY IS ORGANIZED.

A. In Subsection B, I summarize my findings on cost of capital. In Subsection C, I discuss the legal and economic bases underlying the requirement that rates, including

the return component, be just and reasonable. In Subsection D, I discuss the sample of six publicly traded water utilities in my sample group and provide a comparison to Liberty Gold Canyon (Consolidated). I then discuss recent developments in the water utility industry and the impact on investments. In Subsection E, I provide an overview of each of the methods Discounted Cash Flow ("DCF"), and Risk Premium (or "RP") (including the Capital Asset Pricing Model ("CAPM")) that I employ in my analysis. In Subsection F, I discuss the additional business risks faced by Liberty Gold Canyon (Consolidated), my comparative risk study, and my recommended risk premium. Finally, in Subsection G, I provide a summary of my findings and recommendations for a cost of equity for Liberty Gold Canyon (Consolidated).

Q. HAVE YOU ONLY CONSIDERED THE COST OF CAPITAL FOR THE PROPOSED NEW CONSOLIDATED ENTITY?

A. No, but I have used the proposed Liberty Gold Canyon (Consolidated) as a proxy entity for both Liberty Gold Canyon and Liberty EDO in my cost of equity analysis.

Q. DOES THAT MEAN BOTH APPLICANTS AND THE NEW PROPOSED CONSOLIDATED ENTITY HAVE THE SAME COST OF EQUITY?

A. For the purpose of my direct testimony on cost of equity in both rate cases, the answer is yes. In a strict sense, there would be differences between the cost of equity for either Liberty Gold Canyon or Liberty EDO on stand-alone basis. I am confident if I performed a separate risk premium analysis, Liberty EDO would require a higher risk premium given its size relative to Liberty Gold Canyon but that delta is not worth the rate case expense or possible debate. As for Liberty Gold Canyon relative to Liberty Gold Canyon (Consolidated), any difference would be immaterial. Finally, all three scenarios use the same cost of debt and have the same proposed capital structures. Therefore, to be efficient, my testimony for both Applicants relies on my analysis of the cost of equity for Liberty Gold Canyon (Consolidated).

Q. WHAT IF THE CONSOLIDATION WERE NOT IN PLAY?

A. I would recommend the same cost of capital for Liberty EDO and Liberty Gold Canyon as I am recommending in this testimony for Liberty Gold Canyon (Consolidated).

Q. THANK YOU FOR THAT EXPLANATION, MR. BOURASSA. HAVE YOU PREPARED ANY TABLES AND EXHIBITS TO ACCOMPANY YOUR COST OF CAPITAL TESTIMONY?

A. Yes. In addition to the D schedules, I have prepared 10 tables that support my cost of capital testimony. I am also sponsoring exhibits **TJB-DT1**, **TJB-DT2**, **TJB-DT3**, and **TJB-DT4**.

B. <u>Summary of Findings on Cost of Capital</u>.

Q. PLEASE BRIEFLY SUMMARIZE YOUR FINDINGS CONCERNING THE COST OF COMMON EQUITY.

A. I have determined that the cost of equity for the publicly traded water utilities in my sample group falls in the range of 8.9 percent to 9.7 percent with an average of 9.4 percent. After considering differences in financial risk and business risk between the Applicants and the publicly traded water utilities, I have determined the cost of equity for Applicants falls in the range of 9.7 percent to 10.5 percent with an average of 10.20 percent. As a result, I am recommending the adoption of a minimum ROE of 10.20 percent for Liberty Gold Canyon (Consolidated).

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

A. My recommendation is based on consideration of (i) cost of equity estimates using a DCF and two RP methods, one being the CAPM, using a sample group of publicly traded water utilities, (ii) my review of the economic conditions expected to prevail during the period that new rates will be in effect, (iii) my judgments about the

additional risks associated with relatively small utilities like Applicants that are not captured by the market data of publicly traded water utilities, (iv) the financial risk associated with the level of debt in Applicants' recommended capital structures, and (v) additional, specific business and operational risks faced by Applicants. The results of the market based DCF and RP methodologies were adjusted upward by 80 basis points to account for Applicants' higher than average business and investment risk compared to the proxy group.

Q. WHY DO YOU HAVE TO USE FINANCIAL MODELS AND PROXIES TO ESTIMATE A COST OF EQUITY FOR APPLICANTS?

A. Applicants' cost of equity cannot be estimated directly because their equity is not in the form of a publicly traded security with publicly available market data. When assessing market-based common equity cost rates of entities with similar but not necessarily identical risk for insight into a recommended common equity cost rate applicable to Applicants, the comparison with proxies is only a starting point. No proxy group with identical risk to Applicants exists, therefore, the proxy group results must be adjusted to reflect Applicants' unique, relative financial and/or business risks. I will discuss this in more detail later in this section of my direct testimony.

Q. WHAT IS THE RECOMMENDED CAPITAL STRUCTURE FOR LIBERTY GOLD CANYON (CONSOLIDATED) FOR RATE MAKING PURPOSES?

A. I am using a capital structure consisting of 46 percent debt and 54 percent equity for setting rates. Because the actual, test year capital structures are different than the 46 percent debt and 54 percent equity capital structure, both Applicants will be filing financing applications for approval of additional debt to achieve and maintain a capital structure of 46 percent debt and 54 percent equity.

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

A. This is a reasonably balanced capital structure given Applicants' access to debt and equity capital through the parent company, APUC. This capital structure was also used in the recent Liberty Utilities (Black Mountain Sewer) Corp. rate case without dispute.[1]

Q. WHAT IS THE PROPOSED COST OF DEBT?

A. The proposed cost of debt is 3.12 percent. This cost is based on a 15-year U.S. Treasury plus 160 basis points as will be proposed in the Applicants' financing applications. A recent spot rate for the 15-year treasury is 1.52 percent. As such, the proposed cost of debt at this stage of the proceeding is 3.12 percent (1.52% plus 1.60%). The actual interest rate may be higher or lower depending on the prevailing U.S. Treasury yields at the time the debt is issued but approval of this formula will be sought in the forthcoming finance applications. I understand that once the two rate applications are found sufficient, the Applicants will move to consolidate the two rate cases and the two financing applications so everything can, hopefully, result in one final decision by the Commission.[2]

Q. BASED ON THE PROPOSED CAPITAL STRUCTURE, COST OF DEBT, AND COST OF EQUITY, WHAT IS THE WEIGHTED AVERAGE COST OF CAPITAL YOU ARE RECOMMENDING FOR LIBERTY GOLD CANYON (CONSOLIDATED)?

A. The proposed weighted average cost of capital is 6.94 percent (46% x 3.12% + 54% x 10.20%).

[1] *Liberty Utilities (Black Mountain Sewer) Corp.*, Decision No. 78017 (May 18, 2021) at 55:2-16.

[2] Direct Testimony of Jill Schwartz at 7:20-26.

C. The Legal and Economic Foundations of a Fair and Reasonable Rate of Return.

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

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

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

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

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

In summary, under *Hope* and *Bluefield* the rate of return should be: (1) similar to the 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 RPs.[3] The Comparable Earnings standard focuses on earned returns on book equity based on an interpretation of the *Hope* decision that returns are defined as book rates of return on equity.[4]

Q. HAVE THESE CRITERIA BEEN APPLIED IN REGULATORY PROCEEDINGS?

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

With respect to the Capital Attraction standard, the cost of capital is based on the concept of opportunity cost, i.e., the prospective return to investors must be comparable to investments of similar risk. If a utility's return is less than the returns

[3] Morin, Roger A., *New Regulatory Finance*, (Vienna, Virginia, Public Utility Reports, Inc. 2006) ("Morin"), p. 21.
[4] *Id.*

on investments with similar risk, investors can and will invest elsewhere. As explained by Dr. Roger Morin in his book, *New Regulatory Finance*:

> The concept of cost of capital is firmly anchored in the opportunity cost notion of economics. The cost of a specific source of capital is basically determined by the riskiness of that investment in light of alternative opportunities and equals 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 investor investments of comparable risk are the same. If not, the investor will switch out of those investments yielding low returns at a given risk level in favor of those investments offering higher returns for the same degree of risk. This implies 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.[5]

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

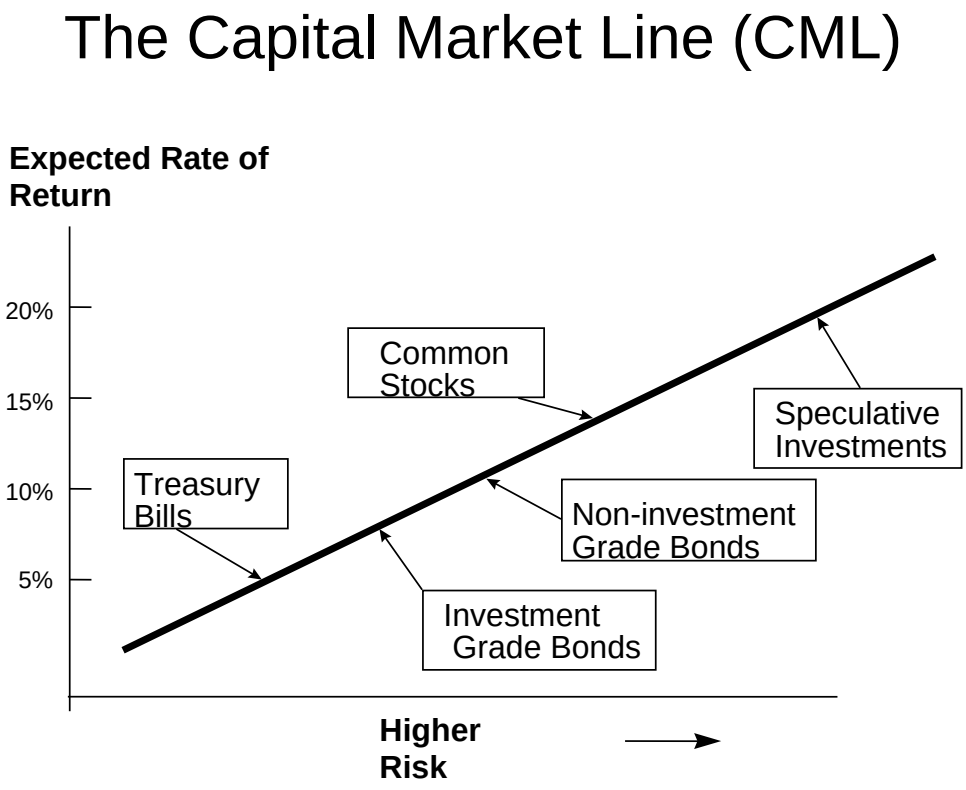
Q. HOW IS THE COST OF EQUITY TYPICALLY ANALYZED FROM A CAPITAL ATTRACTION OR MARKET-BASED PERSPECTIVE?

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

[5] Morin, pp. 21-22.

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

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



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 them for the possibility of loss of the expected annual income from such investment, or worse, the principal.

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

The capital markets reflect investor expectations and requirements each day through market prices. Prices for stocks and bonds change to reflect investor expectations and the attractiveness of one investment relative to others. Nevertheless, returns on common stocks are not directly observable in advance as compared to debt or preferred stocks with fixed payment terms. This means that these returns must be estimated from market data. As such, estimating the cost of equity capital should be a matter of informed judgment about the relative risk of the

entity in question and the expected rate of return characteristics of other alternative investments.

Q. MR. BOURASSA, DOES DETERMINING COST OF CAPITAL HAVE TO BE COMPLICATED?

A. Estimating an entity's cost of equity is inherently complex if there is no directly available market data. Short of cutting cards or throwing darts, determining the cost of equity requires an analysis of the factors influencing the cost of various types of capital, such as interest on long-term debt, dividends on preferred stock, and earnings on common equity. The data for such an analysis comes from highly competitive capital markets, where the firm raises funds by issuing common stock, selling bonds, and by borrowing (both long-term and short-term) from banks and other financial institutions. However, it is the job of the cost of capital expert witness to provide clear support for the conclusions reached and to explain their analysis in the most straightforward terms possible.

Q. THANK YOU. ARE THERE SPECIFIC FACTORS THAT IMPACT THE COST OF CAPITAL IN THE CAPITAL MARKETS?

A. Yes. In the capital markets, the cost of capital, whether the capital is in the form of debt or equity, is determined by two important factors:

1) The pure or real rate of interest, often called the risk-free rate of interest, and,

2) The uncertainty or risk premium (or the compensation the investor requires, over and above the real or pure rate of interest for subjecting his or her capital to additional risk).

The pure rate of interest essentially reflects both the time preference for and the productivity of capital. From the standpoint of the individual, it is the rate of interest required to induce the individual to forgo present consumption and offer the funds,

thus saved, to others for a specified length of time. Moreover, the pure rate of interest concept is based on the assumption that no uncertainty affects the investment undertaken by the individual, i.e., there is no doubt that the periodic interest payments will be made, and the principal returned at the end of the time period. In reality, investments without any risk do not exist. Every commitment of funds involves some degree of uncertainty. Turning to the second factor affecting the cost of capital, it is generally accepted that the higher the degree of uncertainty, the higher the cost of capital. Investors are regarded as risk averse and require that the rate of return increase as the risks and uncertainty associated with an investment increase.

Q. WILL YOU PROVIDE SOME PERSPECTIVE ON YOUR PREVIOUS DISCUSSION WITH RESPECT TO RETURNS ON COMMON STOCKS?

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

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

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

Q. WHAT ABOUT THE IMPACT OF RISK ON CAPITAL COSTS?

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

Business risk, the basic risk associated with any business undertaking, is the uncertainty associated with the enterprise's day-to-day operations. In essence, it is a function of the normal day-to-day business environment, both locally and

nationally. Business risks include the condition of the economy and capital markets, the state of labor markets, regional stability, government regulation, technological obsolescence, and other similar factors that may impact demand for the business' products or services and the cost of production.

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

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

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

Q. WHAT ARE THE DETERMINANTS OF THE REQUIRED RISK PREMIUM FROM EQUATION [1] ABOVE?

A. The risk premium can be disaggregated into five general components: (1) Interest Rate Risk; (2) Business Risk; (3) Regulatory Risk; (4) Financial Risk; and (5) Liquidity Risk.

Interest Rate Risk refers to the variability in return caused by subsequent changes in interest rates and stems from the inverse relationship between interest rates and asset prices. For example, bond prices fall when interest rates rise and vice versa.

Business risk is generally defined above. For utilities, business risk also includes the volatility of revenues due to abnormal weather conditions and the degree of operational leverage.

Regulatory risk refers to the quality and consistency of regulation applied to a given regulated utility. Regulatory jurisdictions are evaluated based on three major factors: (1) earnable return on equity, (2) regulatory quality, and (3) regulatory practices. Collectively, these three factors influence a utility's ability to earn its authorized return. The type of test year employed (historical or future), capital structure and rate base issues, and the length of regulatory lag are among the reasons a utility may or may not have a reasonable opportunity to earn its authorized return.

Financial risk is defined above.

Construction risk is an important component of financial risk. Construction risk is the risk of tying capital up in projects that are not earning returns, or not having sufficient capital to build the assets needed to keep generating returns. If an entity has a large construction budget relative to internally generated cash flows, it will require external financing, which will result in greater financial risk. It is essential that such entities have access to capital funds on reasonable terms and conditions. Utilities are more susceptible to construction risk for two reasons. First, water and wastewater utilities generally have high capital requirements to build plant to serve customers. Second, utilities have a mandated obligation to serve, reducing flexibility in both the timing and discretion of scheduling capital projects. This is compounded because utilities cannot generally wait for more favorable market conditions to raise the capital necessary to fund capital projects, and then the lag between when plant can be built and when rates can be approved to provide returns on and of that capital. It is imperative that the utility maintain access to needed capital on reasonable terms

and conditions. The return allowed on common equity will have a critical role in determining those terms and conditions.

Finally, Liquidity Risk refers to the ability to readily convert an investment into cash without sustaining a loss. Capital market theory generally assumes that investments are liquid and observations about risk and return are drawn from information about liquid investments. Non-publicly traded or privately held investments possess little to no liquidity.

Q. IS INVESTMENT RISK IMPACTED BY FIRM SIZE?

A. Yes. Investment risk bears a direct relationship to size and increases as firm size decreases. Investment liquidity may be a significant factor explaining this relationship. However, the illiquidity of smaller stocks does not capture the size effect completely. Size may be a proxy for one or more true unknown factors correlated with size.[6]

Q. HOW IS THE COST OF EQUITY TYPICALLY ANALYZED FROM A COMPARABLE EARNINGS OR BOOK EQUITY RETURN-BASED PERSPECTIVE?

A. The cost of equity is the rate of return derived from the book returns of comparable firms. To implement the approach, a group of firms of comparable risk to the subject utility is selected and the book equity return is computed for each entity. The allowed return for the subject utility is set equal to the average return on book value equity.[7] The rationale for this method rests on the premise that regulation is a surrogate for competition and that the profitability of non-regulated firms is set by the free forces of competition.[8] Typically, the group of firms is made up of non-regulated entities

[6] Rolf W. Banz, "The Relationship between Return and Market Value of Common Stocks," *Journal of Financial Economics*, March 1981, pp. 3-18.

[7] Morin, p. 381.

[8] *Id.*

because the book equity returns of regulated firms is not determined by competitive forces but rather the past decisions of regulators.[9]

Q. HAVE YOU CONDUCTED A COMPARABLE EARNINGS ANALYSIS?

A. Yes, but I did not include my Comparable Earnings (CE) analysis in my cost of equity estimation. Instead, I used it as a check on the reasonableness of my recommendations. My CE analysis consists of 4 perspectives. The first perspective includes all firms' comparable risk. The second perspective includes only non-regulated firms of comparable risk. The third perspective consists of regulated firms of comparable risk. The fourth perspective consists of the firms included in my water proxy group. The 10-year average results for the first three perspectives are 12.89 percent, 18.61 percent, and 9.81 percent. By comparison, the cost of equity for my water proxy group is 10.13 percent, I have attached my CE analysis as Exhibit TJB-DT2.

D. <u>Discussion of the Publicly Traded Utilities that Comprise the Proxy Group Used to Estimate the Cost of Equity</u>.

Q. DO YOU WISH TO FURTHER DISCUSS THE REASONS FOR USING A PROXY GROUP IN A COST OF CAPITAL ANALYSIS?

A. As I have discussed throughout this testimony so far, a fair rate of return for a specific utility is the return required by investors to hold assets with corresponding levels of risk. Market data for a sample of comparable firms like the proxy group provides insight into the investors' required return, and such data comports with the guidance from the Court's decisions in *Bluefield* and *Hope* I discussed earlier. The comparable earnings standard set forth in those decisions requires that the rate of return afforded to utilities be similar to the return for businesses with similar or

[9] Morin, p. 383.

comparable risks. It follows that a proxy group of entities with comparable risk is a reasonable starting point in a cost of capital analysis. We need a starting point because in Commission water and sewer rate cases the utilities are not publicly traded and there is no market information to determine the cost of equity. This necessitates the selection and use of proxy groups.

Q. WHICH ENTITIES COMPRISE YOUR PROXY GROUP AND HOW WERE THEY SELECTED?

A. There are six water utilities in my proxy group: American States Water ("AWR"), American Water Works ("AWK"), Aqua America ("WTR"), California Water Company ("CWT"), Middlesex Water ("MSEX"), and York Water Company ("YORW"). For the methods employed in my analysis, I used data on these sample entities from *Value Line Investment Survey*.

The six firms comprising the proxy group were selected by meeting the following criteria: (1) followed by the *Value Line Investment Survey*; (2) at least ten years of historical financial and market information; (3) a *Value Line* adjusted beta; (4) no cut or omitted common dividends during the five years ending 2017 or through the time of the preparation of this testimony; (5) operating revenues primarily from regulated operations; and (6) had not publicly announced as being involved in any current major merger or acquisition activity at the time I prepared this testimony.

Q. BUT YOU TESTIFIED EARLIER THAT THE ENTITIES IN YOUR SAMPLE ARE NOT DIRECTLY COMPARABLE TO THE APPLICANTS OR TO LIBERTY GOLD CANYON (CONSOLIDATED), CORRECT?

A. That is correct, however, these are utilities for which market data is available. All of them primarily provide water service (although some provide both water and wastewater services) and their primary source of revenues is from regulated services. These firms are also commonly used in regulatory proceedings where sample

companies are selected to measure the cost of equity. Therefore, at the risk of repeating myself, a proxy group analysis provides a *starting point* for developing the cost of equity for an entity like Liberty Gold Canyon (Consolidated). I am not testifying that the proxies carry the same risk or are otherwise perfectly comparable to Applicants or to Liberty Gold Canyon (Consolidated).

Q. THANK YOU, MR. BOURASSA. DO YOU HAVE A GENERAL DESCRIPTION OF THE SIX WATER UTILITIES IN YOUR PROXY GROUP?

A. Yes. Table 2 lists the percentages of regulated revenues, operating revenues, net plant, number of customers or population served, *Value Line* Financial strength, *Value Line* betas, market capitalization, and market size category for the six water utilities. Comparative data for Liberty Gold Canyon (Consolidated) (where available) is also shown in Table 2. The proxy group consists of Low-Cap to Large-Cap firms with market capitalizations ranging from about $620 million to $30 billion with an average of approximately $8.3 billion.[10] Operating revenues range from about $53 million to about $3.8 billion with an average exceeding $1.11 billion. Net plant ranges from $344 million to nearly $20 billion with an average of about $5.8 billion. Most of the firms in the proxy group operate in multiple jurisdictions.

Q. HOW DOES LIBERTY GOLD CANYON (CONSOLIDATED) ACTUALLY COMPARE TO THE UTILITIES IN YOUR PROXY GROUP?

A. On average, the utilities in the proxy group are much larger and, according to the empirical financial data, they are less risky than Liberty Gold Canyon (Consolidated)

[10] Based upon 2019 market data from the Center for Research in Security Prices: Micro-Cap companies are Decile 9-10 with market capitalization less than $515.6 million; Low-Cap companies are Decile 6-8 with market capitalization over $515.6 million but less than $2,685.9 million; Mid-Cap companies are Decile 3-5 companies with market capitalization of over $2,385.9 million but less than $13,100.2 million; and, Large-Cap companies are Decile 1-2 companies and have market capitalization of over $13,100.2 million.

with far fewer customers, far less revenues, far less net plant and a relatively small and limited service territories. At the end of the test year, Liberty Gold Canyon (Consolidated) had approximately 6,200 combined wastewater connections as compared to the average of the proxy group of 876,000 connections. Liberty Gold Canyon (Consolidated) combined revenues totaled approximately $4.8 million, and net plant-in-service (as proposed) is approximately $17.3 million. The average revenues of my water proxy group is nearly 232 times greater than Liberty Gold Canyon (Consolidated) combined, and those entities have on average nearly 333 times Gold Canyon (Consolidated) combined net plant.

Q. DOESN'T APUC, THE ULTIMATE PARENT OF APPLICANTS, MEET YOUR CRITERIA FOR A PROXY COMPANY?

A. No. APUC is the investor. Including APUC in the proxy group would violate a basic tenant of the cost of capital. It is the investment itself, not the investor that is analyzed. Furthermore, APUC itself does not have the same investment risk as the proxy group because (1) it is also heavily invested in gas and electric utilities; and (2) it also has considerable unregulated business interests as well as other regulation businesses such as gas and electric. As such, I do not believe APUC meets the criteria for inclusion in the proxy group.

Q. THANK YOU. ARE THERE OTHER RISK FACTORS THAT DISTINGUISH LIBERTY GOLD CANYON (CONSOLIDATED) FROM THE LARGER WATER UTILITIES IN YOUR PROXY GROUP?

A. Yes. First, water and wastewater utilities are capital intensive and typically have large construction budgets. Firms with large construction budgets face greater construction risk, a form of financial risk I discussed earlier. The size of a utility's capital budget relative to the size of the utility itself often increases construction risk. Large utilities are better able to fund their capital budgets from their earnings, cash

flows, and short-term borrowings. For smaller utilities, the ability to fund their capital budgets from earnings, cash flows, and short-term debt is difficult, if not impossible, and must rely on additional outside capital.

Q. EXCUSE ME, BUT DOESN'T LIBERTY TOUT ACCESS TO CAPITAL THROUGH APUC AS ONE OF THE BENEFITS OF ITS SHARED SERVICES STRUCTURE AND ALLOCATION MODEL?

A. Yes. Access to capital is a clear advantage compared to a utility that does not have consistent access to reasonably priced capital whether it be in the form of debt or equity. All the utilities in my proxy group have such access to capital. So, capital access risk is baked into my analysis of the water proxy group and Liberty Gold Canyon (Consolidated) including my analysis of the differences in investment risk between Liberty Cold Canyon (Consolidated) and the water proxy group. Therefore, access to capital does not change my equity risk premium recommendation for Liberty Gold Canyon (Consolidated).

Q. THANK YOU. PLEASE CONTINUE WITH YOUR TESTIMONY COMPARING APPLICANTS AND THE PROXY GROUP FIRMS.

A. Second, smaller entities are simply less able to cope with significant events that impact sales, revenues and earnings. For example, the loss of revenues from a few larger customers or from trends in the reduction of usage by customers through conservation or the makeup of the customer base would have a greater effect on a small entity than on a much larger entity with a larger customer base.

Third, there are several other factors, including the differences in regulatory environments, differences in the type of test year used for rate making, and differences in the available regulatory mechanisms for recovery of costs outside of a rate case. The large water utilities in my proxy group are generally not subject to the adverse impacts of an unfavorable regulatory environment of one jurisdiction.

These differences between the water proxy group and Liberty Gold Canyon (Consolidated) impact the ability of a smaller utility to earn its authorized return. Whatever the cause, an inadequate opportunity to earn the revenues authorized in a general rate case leads to a greater variability of earnings for entities like Applicants when compared to the proxy group. This volatility means greater risk, and the greater risk requires higher returns to maintain and support credit, whether it comes in the form of low-cost debt capital or equity with expectations of returns that are realistically achievable.

Q. ARE THERE QUANTITATIVE MEASURES THAT CAN BE USED TO HELP IDENTIFY DIFFERENCES IN BUSINESS RISK?

A. Yes, there are multiple fundamental accounting-based business risk measures that can be used to assess the relative differences between firms. Those include: (1) the co-efficient of variance of ROE; (2) the co-efficient of variance of operating income; (3) the co-efficient of variance of operating margin; and (4) Operating Leverage. The first three reflect the distributions of earnings. These are meaningful when measured against the distribution of earnings of alternative investments, like the water utilities in my proxy group. The fourth business risk measure reflects the impact of sales fluctuations and the impact of fixed operating costs on earnings.

The co-efficient of variance of ROE can be quantified using the following equation:

[2] Co-efficient of Variance of ROE = Standard Deviation of ROE/Mean of ROE

The co-efficient of variance of operating income can be quantified using a relatively simple equation:

[3] Co-efficient of Variance of Operating Income = Standard Deviation of Operating Income/Mean of Operating Income

The co-efficient of variance of operating margin can be quantified using the following equation:

[4] Co-efficient of Variance of Operating Margin = Standard Deviation of Operating Margin/Mean of Operating Margin

The Operating Leverage formula is expressed as:

[5] Operating Leverage = Percentage Change in Operating Income/Percentage Change in Sales

Using the business risk measures expressed in equations [2], [3], and [4], the greater the co-efficient of variation or Operating Leverage, the greater the risk to investors of not receiving expected returns.[11] Below are the computed co-efficient of variation for ROE, Operating Income and Operating Margin, as well as Operating Leverage using the five most recent years of historical data for the water proxy group and Liberty Gold Canyon (Consolidated):

Company	**Business Risk Co-efficient of variance of ROE**	**Business Risk Co-efficient of variance of Operating Income**	**Business Risk Co-efficient of variance of Operating Margin**	**Operating Leverage**
Water Proxy Group	0.1415	0.1154	0.0911	4.61
Liberty GC (Cons.)	0.5463	0.1966	0.2091	32.85
Relative Risk of Liberty GC (Cons.) to Water Proxy Group	3.86	1.70	2.30	7.12

These metrics show that Liberty Gold Canyon (Consolidated) is 1.5 to 7 times riskier than the average water proxy group companies.

[11] Tuller, Lawrence W., *The Small Business Valuation* (Avon, MA: Adams Media Corporation, 1994), p. 89.

Q. CAN METRICS LIKE YOU DESCRIBED 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.[12] This information can be used to develop implied betas for Liberty Gold Canyon (Consolidated) for use in the CAPM. By comparing the results of the CAPM for the water proxy group with the CAPM for Liberty Gold Canyon (Consolidated) using the implied betas, informed risk premiums can be developed. As one would expect, the implied beta for Liberty Gold Canyon (Consolidated) is higher than the beta of the proxy group. A risk premium of 80 to 110 basis points over the cost of equity of the proxy group is indicated for Liberty Gold Canyon (Consolidated).[13] I will discuss the indicated risk premiums and implied betas in more detail in the risk premium section of this direct testimony.

Q. WHAT ABOUT LIQUIDITY RISK?

A. A rational investor would not regard an investment in Applicants, on a stand-alone or combined basis as Liberty Gold Canyon (Consolidated), as having the same level of risk as Aqua America (WTR) or even the smaller Middlesex Water (MSEX) because of the previously mentioned small size characteristics and the fact that an investment in them is relatively illiquid compared to the publicly traded water utilities. An investor in a publicly traded stock can sell stock in a very short period of time if dissatisfied with the returns. An investor in a privately held stock does not

[12] Duff & Phelps, LLC. *2020 Valuation Handbook; Guide to Cost of Capital*. Hoboken, NJ: John Wiley and Sons, 2020 ("*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 2020 Valuation Handbook – U.S. Guide to Cost of Capital ("Duff & Phelps 2020 Valuation Handbook").*

[13] 80 to 110 basis points as indicated in Exhibit TJB-DT4.

have this ability to sell quickly. Consequently, investors will require a greater risk premium, often called liquidity risk premium. Because of these differences in risk, the results produced by the DCF and RP methodologies utilizing data for the sample utilities often understate the appropriate ROE for a small, regulated water utility such as Liberty Gold Canyon (Consolidated).

Q. IS THERE A RELATIONSHIP BETWEEN A UTILITY'S CAPITAL STRUCTURE AND ITS COST OF CAPITAL?

A. Yes. When an entity engages in debt financing, it exposes itself to greater risk. As debt grows relative to the total capital structure, the risk increases in a geometric fashion as compared to the linear percentage increase in the debt ratio itself. This risk is illustrated by considering the effect of leverage on net earnings. For example, as leverage increases, the equity ratio falls creating two adverse effects. First, equity earnings decline rapidly and may even disappear. Second, the "cushion" of equity protection for debt falls. A decline in the protection afforded debt holders, or the possibility of a serious decline in debt protection, will act to increase the cost of debt financing. Therefore, one may conclude that each new financing, whether through debt or equity, impacts the marginal cost of future financing by any alternative method.

For an entity already perceived as being over-leveraged, this additional borrowing would cause the marginal costs of both equity and debt to increase. On the other hand, if the same entity instead successfully employed equity funding, this could reduce the real marginal cost of additional borrowing, even if the equity issuance occurred at a higher unit cost than an equivalent amount of debt.

…

…

Q. HOW DO THE CAPITAL STRUCTURES OF THE SAMPLE WATER UTILITIES COMPARE TO THE PROPOSED CAPITAL STRUCTURE FOR LIBERTY GOLD CANYON (CONSOLIDATED)?

A. Table 3 shows the proposed capital structure contains 54 percent equity and 46 percent debt compared to the average of the water utility sample of approximately 50.6 percent equity and 49.4 percent debt. Because the capital structures are similar, it would be inappropriate to make a financial risk adjustment to the cost of equity.

Q. DO RECENT DEVELOPMENTS IN THE WATER AND WASTEWATER UTILITY INDUSTRY IMPACT INVESTMENTS AND THE DETERMINATION OF THE COST OF EQUITY?

A. Yes. Overall, the water and wastewater utility industry continues to confront an increasing need for infrastructure upgrades and replacement to address aging infrastructure. *Value Line Investment Survey* (July 9, 2021) notes that,

> As a result, the industry has been involved in a large construction program aimed at modernizing and upgrading both distribution and wastewater systems. To finance the building programs, most in the group have had to rely on external funds. This has led to most of these companies having just average balance sheets.
>
> Fortunately, water utilities have been allowed to recoup their capital invested in upgrading their assets. Even though rate payers bills have increased, regulators have mostly understood that the expenditures have been necessary. It cannot be underestimated how important this constructive relationship has been. If it becomes contentious, that would be very bad news for the Industry's earnings.

Value Line Investment Survey also cautions that with the recent uptick in inflation, investors should at least be aware of the consequences of rising costs and a utility's ability to recover increases in a timely manner as there is often a delay, or lag, between when a utility would incur the higher costs and when regulators would approve rate relief. This lag can be particularly problematic for utilities under

historic test year regulation with limited pro forma adjustments and no use of forward-looking investment in infrastructure in setting fair value rate bases.

E. <u>Overview of the DCF and RP Methods</u>.

1. Introduction.

Q. PLEASE EXPLAIN THE GENERAL APPROACHES TO ESTIMATING THE COST OF CAPITAL.

A. There are two broad approaches:

1) identify comparable-risk sample companies and estimate the cost of capital directly, or
2) find the location on the CML and estimate the relative risk of the entity, which jointly determines the cost of capital.

The DCF method falls into the first approach. It is a direct method but uses only a subset of the total capital market evidence. The DCF rests on the premise that the fundamental value of an asset (i.e., its stock) is its ability to generate future cash flows to the owner of that asset. The DCF is simply the sum of a stock's expected dividend yield and the expected long-term growth rate. Dividend yields are readily available, but long-term growth estimates are not. I will explain the DCF in greater detail later.

The RP methods fall into the second approach. An equity risk premium is established by determining the relationship between the cost of equity and an interest rate over time. The CAPM method falls into the category of RP methods. To implement, it is generally assumed that the past correlation will continue. The RP generally uses a small subset of the capital market evidence, whereas the CAPM uses information on all securities. I will explain the two RP methods in more detail later. For now, the RP methods reflect a risk-return relationship often depicted graphically as the CML.

Each of these methods measures investor expectations. In the final analysis, ROE estimates are subjective and should be based on sound, informed judgment supported by competent evidence. I have applied one version of the DCF and three versions of the RP methods (including the CAPM). I believe these methods provide the foundation for evaluating the fair cost of equity capital for the publicly traded water utilities in my proxy group. I then add a risk premium to the results of these models for the proxy group to account for the differences in risk (business, regulatory, liquidity, size) between the proxy group and Liberty Cold Canyon (Consolidated).

2. 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] $P_0 = CF_1/(1+k) + CF_2/(1+k)^2 + \ldots. + CF_n/(1+k)^n$

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] $P_0 = CF_1/(1+k) + CF_2/(1+k)^2 + \ldots + P_t/(1+k)^t$

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] $k = CF_1/P_0 + g$

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 expect that same rate of return (k) every year and that market price grows at the same rate as dividends. As already discussed, this has not been historically true for the water utilities in the proxy group as shown by the data in Table 4.

Q. ARE THERE ANY CONCERNS ABOUT APPLYING THE DCF MODEL TO UTILITY STOCKS?

A. Yes, there are several reasons why caution must be used when applying the DCF model to utility stocks. First, as discussed above, non-publicly traded companies do not have a stock market price. Using the stock prices from a proxy group assumes that the stock of Liberty Gold Canyon (Consolidated) would be similarly priced and has a dividend yield similar to the publicly traded water companies. Second, the stock price and dividend yield components may be unduly influenced by structural changes in the industry, such as mergers and acquisitions which influence investor expectations. Third, the DCF model is based on several assumptions that may not be realistic given the current capital market environment. The traditional DCF model assumes that the market price per share ("MPPS"), book value per share ("BVPS), earnings per share ("EPS"), and dividends per share ("DPS"), all grow at the same rate. This has not been historically true for the sample water utilities. For example,

Table 4 shows than over the past 5 years the average MPPS growth has significantly exceeded the average BVPS, EPS, and DPS.

The DCF model's applicability under current market conditions is of particular concern. The Federal Reserve's bond buying programs have kept longer-term bond yields low and interest rates are expected to rise, but in the meantime, and because bond yields are still very low, investors have been "chasing yields" and driving up the stock prices of companies that pay dividends, like utilities. Over the past several years, Value Line has taken note of these fundamental changes surrounding water utility stocks including stock prices reaching all-time highs and dividend yields reaching all-time lows.[14] I would note that recently, some Fed officials have publicly stated that it is time for the central bank to start reversing the easy money policies put in place to support the economy after the coronavirus pandemic hit the U.S. in March 2020.[15] The Wall Street Journal article notes "Inflation has soared since April amid supply-chain bottlenecks and other obstacles related to reopening the economy. Even if some of those factors reverse, strong demand, a recovering labor market and stable inflation expectations mean the central bank no longer needs to buy assets to provide stimulus."[16]

The *Value Line* Investment Survey (April 10, 2020) for the Water Utility Industry noted:

> Utility stocks typically underperformed during bull markets and outperformed in bear markets. Over the past five years, however, many in this group posted higher total returns than the S&P 500 Index. We attribute this to two factors: the scarcity of stocks in this sector, and the low interest rate environment. For example, only two of these equities have a market capitalization of over $5 billion. Professional money

[14] *See* Value Line Investment Survey October 16, 2016, January 13, 2017, January 12, 2018, and April 12, 2019.

[15] "Two Fed Officials Call for End to Bond-Buying Program," Wall Street Journal, August. 11, 2021.

[16] *Id.*

> managers looking to diversify their holdings in the utility segment (electric, gas, and water) have very few options here. Therefore, a premium has to be paid to own these stocks. Furthermore, since these equities are often seen as alternative to bonds by income-investors, near-zero interest rates make them look more attractive to fixed-income accounts.

While dividend yields for the proxy group companies have been at all-time lows, 3, 5, and 10-year compound annual total returns for the proxy group are 16.81 percent, 15.03 percent, and 12.14 percent, respectively, from advances in stock prices and reinvestment of dividends.[17] These returns are significantly higher than my DCF estimate of the cost of equity of just 8.9 percent, which is a source of my concern in the application of the DCF at this time. The expected equity returns suggested by the market based DCF model do not line up with recent experience in the markets. As Dr. Morin notes:

> To the extent that increases (decreases) in relative market valuation are anticipated by investors, especially myopic investors with short-term investment horizons, the standard DCF model will understate (overstate) the cost of equity. [18]

Another way of stating this point is that the DCF model does not account for the ebb and flow of investor sentiments over the course of the business cycle. The problem was particularly acute in the mid 1990's and mid 2000's where investors, faced with very low returns on short-term fixed-income securities and an uncertain market outlook, sought higher yields offered by utility stocks in a so-called flight to quality, boosting utility stock price and lowering the dividend yield.[19] The circumstances then are not so different from what have occurred more recently.

[17] *Value Line Investment Analyzer* weekly data from July 21, 2020.
[18] Morin, p. 433.
[19] Morin, pp. 21-22.

Q. DO YOU HAVE ANY FURTHER CONCERNS WITH THE DCF?

A. Yes. Fourth, the application of the DCF model produces estimates of the cost of equity that are consistent with investor expectations *only* when the market price of a stock and the stock's book value are approximately the same. The DCF model will understate the cost of equity when the market-to-book ratio exceeds 1.0 and, conversely, the model will overstate the cost of equity when the market-to-book ratio is less than 1.0. The reason for this is that the market-derived return produced by the DCF is often applied to book value rate base by regulators.

Fifth, the assumption of a constant growth rate may be unrealistic, and there may be difficulty in finding an adequate proxy for the growth rate. Historical growth rates can be downward biased because of the impact of anemic historical growth rates in earnings, mergers and acquisitions, restructuring, unfavorable regulatory decisions, and even abnormal weather patterns. Conversely, historical growth rates can be upwardly biased as well, particularly under the current market conditions I discussed previously.

Q. WHAT DATA HAVE YOU USED TO COMPUTE THE EXPECTED DIVIDEND YIELD (D_1/P_0) IN YOUR DCF MODEL?

A. First, I computed a current dividend yield (D_0/P_0). The time value of money should be considered when determining dividend yields. This adjustment is required because the basic model assumes dividends are paid once a year, but investors actually receive dividend payments on a quarterly basis. Prices paid for the stock (P0) would reflect the anticipated payment and potential re-investment of quarterly dividends. To approximate the time value of money and the payment of quarterly dividends, I computed expected dividend yield (D_1/P_0) as the current dividend yield (D_0/P_0) times one plus the growth rate (g) divided by 2. I used the spot price for each of the stocks of the water utilities in the sample group as reported by the *Value Line*

Investment Analyzer for June 14, 2019 for P_0. The current dividend (CF_0) is the current indicated dividend as reported by Value Line. In my tables, the current dividend yield is denoted as (D_0/P_0), where D_0 is the current dividend and P_0 is the spot stock price. (D_1/P_0) is used to denote the expected dividend yield in the tables.

Q. WHAT MEASURES OF GROWTH ("g") HAVE YOU USED?

A. My estimates of growth are based upon analysts' estimates of growth. For my forecast growth estimate, I have used the growth forecasts from *Value Line, Zacks 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.[20] Additionally, 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 considered all relevant historical information on an entity, as well as other more recent information.[21] To the extent

[20] 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.

[21] Gordon, Gordon, and Gould, p.54.

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 8.9 percent. For Liberty Gold Canyon (Consolidated) my estimate is 9.7 percent as shown in Table 1.

3. Explanation of the RP and Its Inputs.

Q. PLEASE EXPLAIN THE RP METHODOLOGY FOR ESTIMATING THE COST OF EQUITY.

A. The RP method is sometimes referred to as the "bond yield plus risk premium method." The general approach is to determine the spread between the return on debt and the return on equity and then add this spread to the current debt yield to derive an estimate of the cost of equity. To implement the RP, it is assumed that the past relationship will continue. The RP is widely used by analysts and investors.[22]

The RPM formula provides a formal risk-return relationship and is stated as:

(9) $k = K_d +$ bond-equity spread

where k is the expected return on equity and K_d is the cost of debt or debt yield.

Q. PLEASE TURN TO YOUR RISK PREMIUM EQUITY COST ESTIMATES. HOW MANY RP ANALYSES HAVE YOU PERFORMED?

A. I performed one risk premium analysis (not including the CAPM). My analysis is

[22] Morin, p. 108.

presented in Table 8. For the period 1991 to 2020 (30 years), I subtract average annual long-term U.S. Treasury yields from total returns of the S&P 500 Utility Index to determine the annual risk premium for each year. The average risk premium over the period is adjusted to reflect the estimated impact on the risk premium due to the difference between the average interest rate over the period and the current forecast estimate for interest rates. This adjustment is necessary because the risk premium varies inversely with interest rates. I discuss this relationship later in my testimony (at pages 48 and 49). That said, the adjusted risk premium is then added to the average expected long-term U.S. Treasury yield (2022-2024) of 2.7 percent from Table 7 to estimate the cost of equity.

Q. WHAT IS THE RESULT OF YOUR FIRST APPROACH?

A. Table 8 shows that the indicated cost of equity based upon the S&P 500 utility index is 9.6 percent. My RP estimate for Liberty Gold Canyon (Consolidated) is 10.4 percent.

Q. SHOULD STUDIES OF HISTORICAL RISK PREMIUMS RELY ON ARITHMETIC AVERAGE RETURNS OR ON GEOMETRIC AVERAGE RETURNS?

A. I believe arithmetic average returns are appropriate for forecasting and estimating the cost of capital over long periods of time. As various finance experts have explained, an arithmetic mean is the correct approach to use in estimating the cost of capital, particularly for a risk premium model.[23] As Dr. Morin states:

> Because valuation is forward-looking, the appropriate average is the one that most accurately approximates the expected future rate of return. *The best estimate of the expected returns over a future holding period is the arithmetic average. Only*

[23] Zvi Bode, Alex Kane, Alan J. Marcus, *Investments* (McGraw-Hill 6th ed., 2005) ("Bode"), pp. 864 – 865; Richard A. Brealey, Stewart C. Myers, Frankin Allen, *Principles of Corporate Finance* (McGraw-Hill 11th ed.) ("Brealey"), pp. 162 – 163.

> *arithmetic means are correct for forecasting purposes and for estimating the cost of capital.* There is no theoretical or empirical justification for the use of geometric rates of return as a measure of the appropriate discount rate in computing the cost of capital or in computing present values.[24]

The consensus among these experts makes sense. Only arithmetic mean return rates and yields should be used for cost of capital purposes because ex-post (historical) total returns and equity risk premiums differ in size and direction over time, providing insight into the variance and standard deviation of returns. The geometric mean of ex-post (after the fact) equity risk premiums provides no insight into the potential variance of future returns because the geometric mean relates the change over many periods to a constant rate of change, rather than the year-to-year fluctuations, or variance, which are critical to risk analysis. In short, the conclusion of these financial experts is that while the geometric mean is useful in comparing what happened in the past, it should not be used to determine estimates of expected future returns or market risk premiums.

Q. TURNING TO THE CAPM, PLEASE EXPLAIN THE CAPM METHODOLOGY FOR ESTIMATING THE COST OF EQUITY.

A. Like all RP methods, the CAPM is the sum of a risk-free rate plus a risk premium. Like the RP, it quantifies the additional return required by investors for bearing incremental risk. The CAPM was developed by William Sharpe and John Lintner in the mid-1960s and is a common topic in college finance textbooks. The CAPM provides a formal risk-return relationship premised on the idea that only market risk matters, as measured by beta. The traditional version of CAPM is represented by the formula:

$$[10] \quad k = R_f + \beta(R_m - R_f)$$

[24] Morin, pp. 116-117 (emphasis added).

where k is the expected return, R_f is the risk-free rate (or zero beta asset), R_m is the market return, (R_m-R_f) is the market risk premium, and β is beta.

Q. WHAT IS BETA AND WHAT DOES IT MEASURE?

A. Beta is a measure of the relative risk of a security in relation to the market. In other words, it is a measure of the sensitivity of a security to the whole market. This sensitivity is also known as systematic risk. It is estimated by regressing a security's excess returns against a market portfolio's excess returns. The slope of the regression line is the beta.

Beta for the market is 1.0. A security with a beta greater than 1.0 is considered riskier than the market. A security with a beta less than 1.0 is considered less risky than the market.

Q. ARE THERE ANY CONCERNS ABOUT APPLYING THE CAPM MODEL TO UTILITY STOCKS?

A. Yes. I have concerns with using this model in most periods because mechanical application of the model may produce unreasonable results. The traditional CAPM only captures a single measure of systematic risk as measured by beta, but there are other forms of systematic risk priced by the market such as company size. A size premium is necessary because the empirical evidence indicates that beta alone does not measure the risk of smaller companies.[25] Moreover, there are computational problems surrounding beta since it depends on the return data, the time period used, its duration, the choice of the market index, and whether annual, monthly, or weekly return figures are used. Betas are estimated with error. Based on empirical evidence,

[25] *Duff & Phelps 2020 Valuation Handbook*, Chapter 2, p. 7.

high betas will tend to have a positive error (risk is overestimated) and low betas will have a negative error (risk is underestimated).[26]

Q. ARE THERE ALTERNATIVES TO THE TRADITIONAL CAPM?

A. Yes, alternative versions of the CAPM have been developed that provide more robust explanations of returns required by investors. A version of the CAPM called the Empirical CAPM or ECAPM was developed to recognize that estimations of R_f are higher than the return on long-term Treasuries. Dr. Roger Morin discusses ECAPM at pages 189-191 of his book, *New Regulatory Finance*. The ECPAM is represented as follows:

$$[11] \quad k = R_f + .25(R_m - R_f) + .75\beta(R_m - R_f)$$

The ECAPM was developed from the empirical findings that show the slope of the CML is flatter and the risk-free rate is at a higher point than predicted by the pure CAPM. The ECAPM has been shown to do a better job at predicting market returns.

Duff & Phelps also suggests a version of the CAPM in which a size premium is included.[27] This modified CAPM or (MCAPM) is represented as follows:

$$[12] \quad k = R_f + \beta(R_m - R_f) + RP_s$$

where k is the expected return, R_f is the risk-free rate (or zero beta asset), R_m is the market return, $(R_m - R_f)$ is the market risk premium, β is beta, and RP_s is the size premium. Both the ECAPM and MCAPM recognize that the pure CAPM is incomplete and does not fully account for the higher returns that are needed on smaller company stocks. In other words, the higher risks associated with smaller firms are not fully accounted for by beta.[28]

[26] Fama, Eugene F. and Kenneth R. French, "The Capital Asset Pricing Model: Theory and Evidence," *Journal of Economic Perspectives*, Summer 2004, pp. 25-46.

[27] *Duff & Phelps 2020 Valuation Handbook*, Chapter 2, p. 14.

[28] Morningstar, *Ibbotson SBBI 2013 Valuation Yearbook* ("*Morningstar"*), pp. 85-88.

Q. IS FIRM SIZE A UNIQUE RISK?

A. No, firm size is a systematic risk factor and is an adjustment to the pure CAPM.[29] Putting aside the empirical financial data, the need for a risk premium for size makes sense. Entity size is a significant element of business risk for which investors expect to be compensated through greater returns. As discussed earlier, smaller companies are simply less able to cope with significant events that impact sales, revenues, and earnings. For example, smaller companies face more risk exposure to business cycles and economic conditions, both nationally and locally. Additionally, the loss of revenues from a few larger customers would have a greater effect on a small entity than on a much larger entity with a larger, more diverse, customer base. Moreover, smaller companies are generally less diverse in their operations and have less financial flexibility.

Q. DID YOU EMPLOY EITHER OF THESE ALTERNATIVE CAPM METHODS (EQUATIONS 11 AND 12) AS PART OF YOUR ANALYSIS?

A. Yes, I employed all three versions of the CAPM to estimate the cost of equity for the proxy group, which does somewhat mitigate my concerns about the traditional CAPM.

Q. WHAT IS THE RISK- FREE RATE (R_f)?

A. It is the return on an investment with no risk. The U.S. Treasury rate serves as the basis for the risk-free rate because the yields are directly observable in the market and are backed by the U.S. government. Practically speaking, short-term rates are volatile, fluctuate widely and are subject to more random disturbances than long-term rates. In short, long-term Treasury rates are preferred for these reasons and

[29] Pratt, Shannon P. and Roger J. Grabowski, *Cost of Capital: Applications and Examples* (John Wiley and Sons, 4th Ed. 2010), p. 56.

because long-term rates are more appropriately matched to securities with an indefinite life or long-term investment horizon.

Q. WHAT DO YOU USE AS THE RISK-FREE RATE (R_f)?

A. I used the average of the expected long-term U.S. Treasury rate for 2022-2024 as the basis for the risk-free rate. Since the cost of capital is an opportunity cost and is prospective it necessarily requires the use of a forward-looking bond yield. In recent years, interest rates have dropped to very low levels when compared to interest rates for similar securities in the past. From 1999 to 2007, the annual average yield for long-term Treasury bonds was 5.24 percent, ranging from a low of 4.84 percent in 2007 to a high of 5.94 percent in 2000. In 2008, and during the recent recession, that annual average dropped to 4.24 percent and dropped further in 2012 to 2.9 percent.

The drop in long-term Treasury rates has been largely attributed to the market intervention by the Federal Reserve through its quantitative easing programs (bond buying programs). Long-term Treasury rates for 2013 and 2014 averaged 3.45 percent and 3.34 percent, respectively. More recently, for 2018, 2019, and 2020 long-term Treasury rates have averaged 3.11 percent, 2.56 percent, and 1.56 percent respectively. Interest rates remain at historically low levels but are expected to slowly rise from current levels.[30] There has been an up-tick in yields in 2020 since the end of 2020. The average yield on 30-year U.S. Treasury bonds for the quarter ended June 30, 2021 was 2.26 percent, about 60 basis points higher than the December 2020 average monthly yield.

Q. WHY DO YOU USE LONG-TERM U.S. TREASURY YIELDS?

A. The yields on long-term Treasury bonds more closely match the perpetual nature of common stock investments.[31] In addition, short-term rates are more volatile,

[30] Blue Chip Financial Forecast, Vol. 40, No. 8, August 3, 2021.

[31] Morin, p. 112.

fluctuate widely and are subject to more random disturbances than long-term rates. Long-term Treasury rates are more appropriately matched to securities with an indefinite life or long-term investment horizon.

Q. WHAT DO YOU ADOPT AS THE RETURN FOR THE RISK-FREE RATE?

A. I used long-term expected Treasury bond rates as the measure of the risk-free return for use with CAPM cost of equity estimates from two sources: the *Blue Chip Financial Forecasts* and the *Value Line Quarterly Forecast*.[32] The appropriate choice for the risk-free rate is the *expected* return for long-term Treasury securities.[33] Thus, when determining an estimate of the risk-free rate, it is appropriate to adopt a return that is no less than the expected return on the long-term Treasury bond rate. Models to determine the cost of capital are prospective in nature, which require expectational inputs, such as forecasted interest rates.[34] The CAPM, ECAPM, and MCAPM estimates are based on average expected yields of the long-term Treasury rates for 2022-2024 (from *Blue Chip Financial Forecasts* and *Value Line Quarterly Forecasts*), the average of which is 2.7 percent.[35] 30-year U.S. treasury bond yields for the quarter ending June 30, 2021 averaged 2.26 percent.

Q. WHAT DID YOU USE AS THE PROXY OF THE BETA IN YOUR CAPM MODELS?

A. For the CAPM and ECAPM, I used the average beta of the sample water utility companies. These betas were obtained from *Value Line Investment Analyzer* (weekly data as of July 21, 2021). *Value Line* is the source for estimated betas that

[32] *See* Table 9.
[33] *Duff & Phelps*, Chapter 3, p. 1.
[34] Morin, p 172.
[35] *See* Table 7.

I regularly employ. The average *Value Line* beta for my water proxy group as shown on Table 2 is 0.78.

For the MCAPM, I used sum beta. Sum beta is an alternative method of computing betas and helps more fully capture the lagged effect of co-movement in an entity's returns with returns on the market. Since *Duff & Phelps* size premiums are derived using sum beta, I used sum beta to be internally consistent with the size risk premiums for the water proxy group derived from the *Duff & Phelps* 2020 Size Study. I computed the sum beta over a 261-week period (5-years) ending July 26, 2021 and used the S&P 500 composite as the market index. Weekly data over a 5-year period is the same period used to estimate beta by *Value Line*. The average sum beta for the water proxy group is 0.86.

I should note that because neither of the Applicants (nor Liberty Gold Canyon (Consolidated)) is publicly traded no betas are available. In my expert opinion based upon the market data and available studies, if any of the Applicants or Liberty Gold Canyon (Consolidated) were publicly traded they would have a higher *Value Line* beta and sum beta than the proxy group companies. *Morningstar* reports that when betas (a measure of market risk) are properly estimated, betas are greater for small firms than for larger firms.[36] *Morningstar* also finds that even after accounting for differences in beta risk, small firms require an additional risk premium over and above the added risk premium indicated by differences in beta risk.

Q. PLEASE EXPLAIN THE MARKET RISK PREMIUM.

A. The market-risk premium (R_m-R_f) is the return an investor expects to receive as compensation for market risk. It is the expected market return minus the risk-free

[36] *Morningstar*, Chapter 7.

rate. Approaches for estimating the market risk premium can be historical or prospective.

Since expected returns are not directly observable, historical realized returns are often used as a proxy for expected returns on the basis that the historical market risk premium follows what is known in statistics as a "random walk." If the historical risk premium does follow the random walk, then one should expect the risk premium to remain at its historical mean. Based on this, the best estimate of the future market risk premium is the historical mean. *Duff & Phelps* provides historical market returns for various asset classes from various historical time periods. This publication also provides market risk premiums over U.S. Treasury bonds, which makes it an excellent source for historical market risk premiums.

Current market risk premium estimation approaches necessarily require examining the returns expected from common equities and bonds. One method employs application of the DCF model to a representative market index such as the *Value Line* 1700 stocks. The expected return from the DCF is measured for multiple time periods and then subtracted from the prevailing risk-free rate for each period to arrive at market risk premium for each period. The market risk premium that is subsequently employed in the CAPM is the average market risk premium of the overall period.

Q. HOW DID YOU ESTIMATE THE MARKET RISK PREMIUMS FOR USE IN THE CAPM MODELS?

A. For the traditional CAPM and ECAPM, I averaged two market risk premium estimates: an average of an historical market risk premium (1926-2019) and a current market risk premium. For the MCAPM, I used an historical market risk premium (1963-2019) and a current market risk premium.

For the historical market risk premiums, I used the *Duff & Phelps* measure of the average premium of the market over long-term treasury securities from 1926 through 2019 and 1963 through 2019, both of which use the S&P 500 market index (which is considered a large-cap index). The average historical market risk premium over long-term treasury securities is 7.15 percent for the 1926 to 2019 period and 5.47 percent for the 1963 through 2019 period.

For the current market risk premium, I derived a market risk premium by first using the DCF model to compute an expected market return for each of the past 12 months using *Value Line's* projections of the average dividend yield for the dividend yield in the DCF and an average of the median EPS, DPS and BVPS growth on the *Value Line* 1700 stocks. I then subtracted the historical monthly average 30-year Treasury yield for each month from the expected market returns to arrive at the expected market risk premiums. Finally, I averaged the computed market risk premiums to determine the current market risk premium for the last 12 months, 9 months, 6 months, and 3 months. The data and computations are shown on Table 9. Estimates of the current market risk premium have ranged from 7.65 percent to 9.09 percent over the past 12 months. My recommended market risk premium is based on the recent 3-month average estimate of 8.08 percent well below the mid-point of the range of the past 12-months of 8.37 percent.

Q. WHY USE TWO DIFFERENT HISTORICAL RISK PREMIUM ESTIMATES?

A. I have typically used an historical market risk premium in my CAPM and ECAPM. I concur with *Morningstar* which recommends the use of a historical market risk premium based upon the longest period practicable.[37] *Duff & Phelps* Risk Premium

[37] *Morningstar*, p. 59.

Report size and risk premia are calculated over the time horizon 1963 – 2019, so I used the historical market risk premium for this time period for the MCAPM.

Q. WHY IS IT NECESSARY TO USE A CURRENT MARKET RISK PREMIUM?

A. Because long-term historical interest rates used to estimate market risk premiums are much higher than current interest rates. As a result, risk premiums are higher today than the average long-term historical risk premium. This occurs because risk premiums vary inversely with interest rates, particularly for interest rate sensitive utility stocks. Dr. Morin found this inverse relationship between risk premiums and interest rates and reported it in chapter 4 of his 2006 book, *New Regulatory Finance*. He stated a risk premium technique that can be used to determine the cost of equity "consists of examining the risk premiums implied in returns on equity allowed by regulatory commissions for utilities over some past period relative to the contemporaneous level of the long-term Treasury bond yield."[38] Professor Morin reports the following statistical relationship between risk premiums (RPm) and long-term Treasury bond yields (Yield) for the period 1987 to 2005 for electric utilities:

$$RPm = 8.2049 - 0.4833 \times Yield, \text{ with } R^2 = .81.$$

The slope was found to be statistically significantly less than zero (i.e., the t-statistic was - 8.4). In his analysis, annual averages of allowed equity returns reported by Regulatory Research Associates were adopted as the proxies for equity costs. This risk premium method is presented by Dr. Morin in Section 4.5 of his book.

Q. HAVE OTHERS FOUND AN INVERSE RELATIONSHIP BETWEEN RISK PREMIUMS AND INTEREST RATES?

A. Yes. Harris and Marston, "Estimating Shareholders Risk Premia Using Analysts'

[38] Morin, p. 123.

Growth Rates," *Financial Management*, Summer 1992 found an inverse relationship. Harris found that for every 100 basis point change in government bond yields, the equity risk premium changes by about 51 basis points in the opposite direction.[39]

Q. HOW DID YOU ESTIMATE THE SIZE PREMIUM FOR THE WATER PROXY GROUP FOR USE IN THE MCAPM?

A. *Duff & Phelps's* Size Study sorts publicly traded firms by eight measures of size, breaking down the NYSE universe of companies into 25 size-ranked portfolios.[40] The Size Study provides two ways to match an entity's size (or risk) characteristics to the appropriate size (or risk) premium – a guideline portfolio method and a regression equation method. I used the regression equation method to find the CAPM size risk premium for each of the publicly traded utilities in the proxy group for six measures of size (market value of equity, book equity, market value of invested capital, 5-year average of net income, total assets, and earnings before interest, taxes, depreciation and amortization).[41] I determined the average size premium of all size measures for the proxy group (3.83%) and then adjusted the average size premium to reflect the lower risk of the proxy group compared to the firms that make up the respective size-ranked portfolios. This comparative risk study uses the fundamental measures of company risk (operating margin, coefficient of variation in operating income, and coefficient of variation in return on book equity) to gauge how alike or different the proxy group is compared to the companies that

[39] Morin, p. 129.

[40] The size measures include: 1) Market Capitalization; 2) Book Value of Equity; 3) 5-year Average Net 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 2020 Valuation Handbook*, Chapter 7, p. 6.

[41] *Duff & Phelps Cost of Capital Navigator*, 2020 Supplementary Size Study data and 2020 Supplementary Data Regression Equations.

make up the size-ranked portfolios in the Size Study. In the instant case, the estimated reduction in risk is -0.98 percent.[42] Thus, the market risk premium for size for the proxy group is 2.85 percent (3.83% - 0.98%).[43]

Q. WHAT ARE THE RESULTS OF YOUR CAPM METHODS?

A. In Table 10, the traditional CAPM produces an indicated cost of equity of 8.60 percent. The ECAPM produces an indicated cost of equity of 9.10 percent. The MCAPM produces an indicated cost of equity of 11.4 percent. The average of these three methods is 9.7 percent.

F. <u>Recommended Risk Premium for Liberty Gold Canyon (Consolidated)</u>.

Q. PLEASE DISCUSS THE PRIMARY FACTORS YOU CONSIDERED IN FORUMULATING YOUR RECOMMENDED RISK PREMIUM FOR LIBERTY GOLD CANYON (CONSOLIDATED).

A. As I testified earlier, Liberty Gold Canyon (Consolidated) is not directly comparable to the large, publicly traded water utilities in my proxy group. The lack of diversification, limited revenue and cash flow, relatively small customer base, lack of investment liquidity, and earnings volatility, increase the risk faced by smaller water and wastewater utilities like the Applicants on a stand-alone or as Liberty Gold Canyon (Consolidated) on a consolidated basis relative to the risk associated with the proxy group.

Q. PLEASE DISCUSS SIZE RISK FOR SMALL UTILITY COMPANIES.

A. Investment risk increases as the firm size decreases, all else remaining constant. There is a great deal of empirical evidence that the firm size phenomenon exists. Morningstar's *Ibbotson SBBI 2013 Valuation Yearbook* (Chapter 7) reports that smaller firms have experienced market higher returns that are not fully explainable

[42] *See* Exhibit TJB-DT3, page 5.

[43] *See* Exhibit TJB-DT3, page 2.

by their higher betas, and that beta is inversely related to firm size. In other words, smaller firms not only have higher betas, but also higher market returns than larger ones. Even after accounting for differences in beta risk, small companies require an additional risk premium over and above the added risk premium indicated by differences in beta risk. Dr. Zepp also reported evidence that the stocks of small water or wastewater utilities are riskier than the stocks of larger utilities in the water utilities sample.[44] Additionally, the CPUC published a study that showed smaller water utilities are more risky than larger ones.[45] Based on the evidence, I believe investors require higher returns on small company stocks than on large company stocks.

Q. DID YOU PREPARE A COMPARATIVE RISK STUDY TO SUPPORT DEVELOPMENT OF A RISK PREMIUM FOR LIBERTY GOLD CANYON (CONSOLIDATED)?

A. Yes. The risk study I prepared is attached as Exhibit TJB-DT4. To conduct my comparative risk study, I started by computing the 5-year historical operating margin, coefficient of variation of operating margin, and coefficient of variation of ROE for Liberty Gold Canyon (Consolidated). Operating margin is a measure of profitability. The co-efficient of variation of operating margin and ROE are measures of earnings variability. All three of these metrics are highly correlated with size and risk.

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[44] Zepp, Thomas M., "Utility Stocks and the Size Effect – Revisited," The Quarterly Review Economics and Finance, Vol. 43, Issue 3, Autumn 2003, pp. 578-582.

[45] Staff Report on Issues Related to Small Water Utilities, June 10, 1991 and CPUC Decision 92-03-093.

Q. ARE THESE THE METRICS FOR THE PROXY GROUP AND LIBERTY GOLD CANYON (CONSOLIDATED) THAT YOU PRESENTED EARLIER IN YOUR TESTIMONY?

A. Yes, on page 21.

Q. THANK YOU. PLEASE CONTINUE.

A. Next, I cross-referenced these metrics with data from *Duff & Phelps Cost of Capital Navigator* Supplementary Data Risk Study and identified the corresponding market portfolio beta for Liberty Gold Canyon (Consolidated) and for my proxy group.[46] I then computed the relative difference in betas between Liberty Gold Canyon (Consolidated) and the proxy group. Assuming that the relative difference in the market portfolio beta for all publicly traded companies is the same for publicly traded water utilities, I then computed an implied beta for Liberty Gold Canyon (Consolidated) using the difference in portfolio betas.[47] Finally, I used the CAPM methods to compute the indicated cost of equity for each utility and compared the results to the CAPM results for the water proxy group.[48] Based upon this analysis, I believe that the required risk premium for Liberty Gold Canyon (Consolidated) is in the range of 80 to 110 basis points with a midpoint of 95 basis points. It would be at least as much for Applicants on a stand-alone basis.

Q. ARE THERE ANY OTHER METHODS THAT PROVIDE USEFUL INFORMATION ABOUT THE RISK PREMIUM FOR THE APPLICANTS OR LIBERTY GOILD CANYON (CONSOLIDATED)?

A. Yes. Based upon my analysis of the size risk premium for use in the MCAPM, I found that Liberty Gold Canyon (Consolidated)'s size premium over the water proxy

[46] *Duff & Phelps Cost of Capital Navigator*, Supplementary Data Risk Study. *See also* page 3 of Exhibit TJB-DT4.

[47] *See* page 3 of Exhibit TJB-DT4.

[48] *See* page 4 of Exhibit TJB-DT4.

group is as much as 349 basis points.[49] I would make the same comment immediately above concerning Applicants on a stand-alone basis or as Liberty Gold Canyon (Consolidated).

Q. WHAT RISK PREMIUM OVER THE WATER PROXY GROUP DO YOU RECOMMEND FOR LIBERTY GOLD CANYON (CONSOLIDATED)?

A. I recommend a minimum risk premium of 80 basis points which is below mid-point of the range derived from my risk study of 80 to 110 basis points.

G. <u>Summary and Conclusions on Cost of Capital</u>.

Q. MR. BOURASSA WOULD YOU PLEASE PROVIDE A SUMMARY OF YOUR RECOMMENDATIONS BASED UPON YOUR COST OF CAPITAL ANALYSIS?

A. Yes. I recommend that the Commission adopt the three-step method I presented above to determine the ROE for Liberty Gold Canyon (Consolidated). In the first step, an average of cost of equity for a sample of six water utilities is determined with the DCF model and RP models. In the second step, a risk premium for Liberty Gold Canyon (Consolidated) is determined to reflect its higher risks. Quantitative evidence based on differences in Liberty Gold Canyon (Consolidated)'s business risk metrics compared to the benchmark proxy group justifies a risk premium in the range of 80 to 110 basis points. I chose 80 basis points as my recommended risk premium to be conservative. In the third step, equity costs from step one and the risk premiums from step two are combined to determine the fair ROE for Liberty Gold Canyon (Consolidated) of 10.20 percent. Therefore, I recommend that the Commission adopt an ROE for Liberty Gold Canyon (Consolidated) of no less than 10.20 percent.

[49] *See* Exhibit TJB-DT3, page 2, line 24.

Q. PLEASE SUMMARIZE THE EQUITY COST ESTIMATES YOU MADE IN STEP ONE.

A. I made four equity cost estimates for the proxy group, which are summarized in Table 1. Where data was available the equity cost estimates were based on data for the six water utilities listed in Table 2. The first equity cost estimates were derived with the DCF model. Using the DCF model to estimate growth, the estimated equity cost for the proxy group is 8.9 percent. Next, I determined the indicated cost of equity using two risk premium methods, including three versions of the CAPM. The RP approach is based on average risk premium over long-term U.S. Treasuries over an historical 30-year period using the S&P 500 Utility Index. This approach shows a cost of equity for the proxy group of 9.6 percent. I also established a range of CAPM estimates using long horizon estimates of the market risk premium as well as a current of the market risk premium which produced a cost of equity for the water proxy group of 8.60 percent to 11.4 percent with an average of 9.7 percent. I gave the DCF and RP estimates equal weight to establish a cost of equity for the water proxy group of 9.4 percent.

Q. PLEASE SUMMARIZE YOUR ESTIMATE OF THE RISK PREMIUM YOU DETERMINED IN STEP 2.

A. I prepared a comparative risk study of commonly used business risk metrics and data from *Duff & Phelps Cost of Capital Navigator* 2020 Supplementary Data Risk Study. I also examined differences in the size premium between Liberty Gold Canyon (Consolidated) and the proxy group based upon the *Duff & Phelps Cost of Capital Navigator* 2020 Supplementary Data Size Study and Risk Study. Based upon this analysis, I conclude that an appropriate risk premium for Liberty Gold Canyon (Consolidated) is in the range of 80 to 110 basis points. Based on my consideration of that analysis, I recommend a risk premium for Liberty Gold Canyon

(Consolidated) of no less than 80 basis points at this time. This resulted in my direct testimony recommended ROE of 10.20 percent.

Q. GIVEN THE RESULTS OF YOUR EQUITY COST ANALYSES, IS AN ROE OF 10.20 PERCENT FOR LIBERTY GOLD CANYON (CONSOLIDATED) REASONABLE?

A. I believe so. In step 1, I estimated the benchmark cost of equity for the sample of six publicly traded water utilities, which falls in the range of 8.9 percent to 9.7 percent with an average of 9.4 percent. In step 2, I determined a conservative estimate of the risk premium required by Liberty Gold Canyon (Consolidated) is 80 basis points which is at the low end of my range of risk premium estimates. Combining the results of step 1 and step 2 indicates the minimum cost of equity for Liberty Gold Canyon (Consolidated) is 10.20 percent.

Q. JUST TO BE CLEAR AT THIS POINT IN YOUR TESTIMONY, WHAT IF THE COMMISSION DOES NOT APPROVE CONSOLIDATION OF THE TWO APPLICANTS INTO LIBERTY GOLD CANYON (CONSOLIDATED)?

A, I recommend a 10.20 percent ROE for Liberty Gold Canyon and for Liberty EDO.

Q. FINALLY, MR. BOURASSA, WHAT IF THINGS CHANGE SIGNIFICANTLY OVER THE COURSE OF THIS RATE PROCEEDING?

A. Because these rate cases will likely take at least a year from filing to be decided by the Commission, the economic conditions as well as many of the inputs in the financial models will almost certainly change as the case progresses. Typically, I update my cost of capital analysis at the rebuttal stage of the proceeding which will be roughly 6-8 months from filing, and I expect to do so again in this case.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY ON COST OF CAPITAL?

A. Yes.

IV. RATES AND RATE DESIGN.

A. Liberty EDO.

Q. WHAT ARE LIBERTY EDO'S PRESENT AND PROPOSED RATES FOR WASTEWATER SERVICE?

A. The present and proposed rates are set forth on Liberty EDO's Schedule H-3, pages 1 through 3.

Q. THANK YOU. IS LIBERTY EDO PROPOSING SIGNIFICANT CHANGES TO THE RATE DESIGN IF IT REMAINS A SEPARATE ENTITY?

A. No. Liberty EDO only has one class of customer (Residential) currently. Liberty EDO continues to propose a monthly flat rate for residential service if the Commission denies the requested consolidation. For the other sewer services (Commercial and School), Liberty EDO does not propose any changes.

Q. WHAT WILL THE RESIDENTIAL CUSTOMER MONTHLY BILL BE UNDER THE NEW STAND-ALONE RATES?

A. As shown on Liberty EDO Schedule H-2, page 1, the monthly bill under proposed rates for a residential customer is $112.64 – a $4.64 increase over the present monthly bill of $108.00 or a 4.3 percent increase.

Q. DOES THIS INCLUDE THE RATE CASE EXPENSE SURCHARGE?

A. No. The $4.80 rate case expense surcharge is in addition to the $112.64 monthly rate. When taken together, a residential customer will pay $117.44 ($112.64 plus $4.80) – a $9.44 increase over the present monthly bill or a 8.74 percent increase.[50]

[50] *See* Direct Testimony of Jill Schwartz at 9:24-25.

Again, this assumes that the Commission does not approve the requested consolidation.

Q. ARE THERE ANY PROPOSED CHANGES TO THE LIBERTY EDO MISCELLANEOUS CHARGES?

A. No.

B. <u>Adjuster Mechanisms</u>.

Q. ARE APPLICANTS SEEKING APPROVAL OF ANY ADJUSTER MECHANISMS?

A. Yes, the Applicants are seeking approval of two adjuster mechanisms: (1) a purchased power adjuster mechanism ("PPAM"); and (2) a property tax adjuster mechanism ("PTAM"). If the consolidation is approved, Liberty Gold Canyon would be the entity with the adjuster mechanisms, if these proposed mechanisms are also approved by the Commission.

Q. THANK YOU. WOULD YOU PLEASE SUMMARIZE THE PPAM?

A. The PPAM allows for an increase or decrease of rates to address changes in purchased power costs resulting from changes in the rates charged by SRP, the electric utility provider. Such changes in SRP's rates would only trigger a change in the rate following order of the SRP Board. The rates SRP charges are beyond Applicants' control.

Q. IS PURCHASED POWER A SIGNIFICANT EXPENSE?

A. Yes, but I do not believe adjusters should be limited to substantial expenses. The loss of any operating income, especially to small utilities like the Applicants, is bad for the utility's financial health. Since adjusters like these are narrowly tailored to address expenses outside the utility's control and because they work both ways, I do not see a rate making or an equitable reason not to authorize these sorts of mechanisms.

Q. HOW DOES THE PPAM ACTUALLY WORK?

A. Under the PPAM, the increases or decreases in power costs will be allocated on a per customer connection basis based on Equivalent Residential Units ("ERUs") and billed as a separate line item on the customer bill. The PPAM Plan of Administration ("POA"), included with the proposed tariffs, outlines the implementation and filing requirements as well as how the surcharge will be computed. The form of the PPAM is consistent with the form of PPAM approved in Decision No. 76799 (August 15, 2018) for Liberty Utilities (Litchfield Park Water and Sewer) Corp. and in several other unaffiliated water and wastewater utility rate cases.[51]

Q. AND JUST TO BE CERTAIN, THE PPAM WOULD RESULT IN LOWER RATES IF SRP'S ELECTRIC RATES GO DOWN?

A. Yes, adjusters like the PPAM are fair because they work whether costs go up or down. This is likely one of the reasons that the Commission has approved and recognized purchased power and other similar adjusters for electric and gas utilities for many years.

Q. DOES THE PTAM WORK IN A SIMILAR MANNER?

A. Yes, the only difference is that the PTAM would allow rates to adjust, up or down, based on changes in the property tax rate and/or assessment ratios. Like the rates for power charged by SRP, these factors are outside of the utility's control. Also, like increases in purchased power, increases in property taxes, if unrecovered, will undermine the ability to earn authorized returns. The PTAM addresses this in a manner like the PPAM addresses changes in the rates for power.

[51] *E.g.*, *Arizona Water Company*, Decision No. 76598 (February 26, 2018); *Pima Utility Company*, Decision 76540 (January 3, 2018).

Q. IS THERE ALSO A PTAM POA?

A. Yes. The PTAM POA, included with the proposed tariffs, outlines implementation and filing requirements as well as how the surcharge will be computed.

Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY ON ALL SUBJECTS?

A. Yes.

TJB COC TABLES

Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.
Table 1
Summary of Results

Line No.		Indicated Cost of Equity for Proxy Group		Indicated Cost of Equity for Company[1]
1	DCF Constant Growth - Table 6	8.90%		9.70%
2	Risk Premium - Table 8	9.60%		10.40%
3	CAPM - Table 10	9.70%		10.50%
4	Average (rounded)	9.40%		10.20%
5	Cost of Equity Recommendation		10.20% [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 (Gold Canyon Sewer Consolidated), 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]	Sum Beta[4]	Market Capitalization[1]	Size Decile
1	American States Water	AWR	488.2	1,512	A+	A2	258,949	0.65	0.58	$ 3,148.7	Mid-Cap
2	American Water Works	AWK	3,777.0	19,710	A	A3	3,353,000	0.85	1.01	29,668.2	Large-Cap
3	Essential Utilities	WTRG	1,462.7	9,513	A+	NR	982,849	0.95	1.05	11,665.0	Mid-Cap
4	California Water	CWT	794.3	2,651	A+	NR	482,400	0.65	0.70	3,029.3	Mid-Cap
5	Middlesex	MSEX	141.6	797	A	NR	112,120	0.70	0.86	1,667.9	Low-Cap
6	York Water Company	YORW	53.9	344	A-	NR	67,000	0.85	0.96	619.7	Low-Cap
7	Average		$ 1,119.6	$ 5,754.3			876,053	0.78	0.86	$ 8,299.8	
8	Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.		$ 4.8	$ 17.3			2,210	Estimated 0.92	Estimated 1.02	N/A	

Notes:
[1] Value Line Analyzer Data (Weekly as of July 21, 2021)
[2] S&P and/or Moody's Website
[3] Most recent annual report or 10-K.
[4] See Testimony.

Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.
Table 3
Capital Structures

Line No.	Company	Symbol	Book Value[1] Long-Term Debt	Book Value[1] Common Equity	Market Value[1] Long-Term Debt	Market Value[1] Common Equity
1	American States Water	AWR	47.2%	52.8%	15.4%	84.6%
2	American Water Works	AWK	59.1%	40.9%	23.9%	76.1%
3	Essential Utilities	WTRG	54.0%	46.0%	32.1%	67.9%
4	California Water	CWT	45.9%	54.1%	20.5%	79.5%
5	Middlesex	MSEX	44.1%	55.9%	14.1%	85.9%
6	York Water Company	YORW	46.2%	53.8%	16.6%	83.4%
7	Average		49.4%	50.6%	20.4%	79.6%
8	Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.		46.0%	54.0%	N/A	N/A

[1] Value Line Analyzer Data (Weekly as of July 21, 2021)

Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.
Table 4
Comparisons of Past and Future Estimates of Growth

Line No.	Company	Symbol	[1] Stock Price[1]	[2] Book Value[2]	[3] EPS[2]	[4] DPS[2]	[5] Historical Average Growth Col. 1-4
			Five-year historical annual changes				
1	American States Water	AWR	13.64%	5.00%	5.50%	7.50%	7.91%
2	American Water Works	AWK	20.76%	4.50%	8.00%	11.50%	11.19%
3	Essential Utilities	WTRG	9.68%	11.50%	-1.50%	7.50%	6.79%
4	California Water	CWT	18.35%	5.00%	8.00%	4.00%	8.84%
5	Middlesex	MSEX	22.25%	8.00%	12.50%	5.00%	11.94%
6	York Water Company	YORW	13.32%	4.50%	5.50%	4.00%	6.83%
7	GROUP AVERAGE		16.33%	6.42%	6.33%	6.58%	8.92%
			Ten-year historical average annual changes				
	Company	Symbol	Stock Price[1]	Book Value[2]	EPS[2]	DPS[2]	Historical Average Growth Col. 1-4
8	American States Water	AWR	16.52%	5.50%	8.50%	9.00%	9.88%
9	American Water Works	AWK	19.76%	3.50%	11.00%	10.50%	11.19%
10	Essential Utilities	WTRG	10.15%	9.50%	7.50%	5.50%	8.16%
11	California Water	CWT	11.23%	5.00%	3.00%	5.00%	6.06%
12	Middlesex	MSEX	14.72%	5.50%	3.00%	9.00%	8.06%
13	York Water Company	YORW	10.42%	4.50%	3.50%	6.00%	6.11%
14	GROUP AVERAGE		13.80%	5.58%	6.08%	7.50%	8.24%

	Company	Symbol	[1] Value Line Projected Growth[2]	[2] Zack's Projected Growth[3]	[3] Yahoo Finance Growth[4]	[4] Average Projected Growth
15	American States Water	AWR	6.50%		5.30%	5.90%
16	American Water Works	AWK	8.00%	8.08%	8.60%	8.23%
17	Essential Utilities	WTRG	11.00%	6.22%	6.40%	7.87%
18	California Water	CWT	6.50%		11.70%	9.10%
19	Middlesex	MSEX	4.50%		2.70%	3.60%
20	York Water Company	YORW	6.50%		4.90%	5.70%
21	GROUP AVERAGE		7.17%	7.15%	6.60%	6.73%

Notes:
[1] Compound growth in stock prices ending December 31 through 2020. Data from Yahoo Finance website.
[2] Value Line Analyzer, weekly as of July 21, 2021.
[3] Zack's Investment Research website July 28, 2021.
[4] Yahoo Finance website July 28, 2021.

Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.
Table 5
Current Dividend Yields for Water Utility Sample Group

Line No.	Company	Symbol	[1] Stock Price (P_0)[1]	[2] 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	87.22	1.28	1.47%	1.60%
2	American Water Works	AWK	170.20	2.15	1.26%	1.56%
3	Essential Utilities	WTRG	49.57	0.97	1.96%	2.19%
4	California Water	CWT	61.49	0.85	1.38%	1.74%
5	Middlesex	MSEX	98.56	1.04	1.06%	1.59%
6	York Water Company	YORW	47.74	0.73	1.53%	1.61%
7	GROUP AVERAGE				1.44%	1.72%

Notes:

[1] Stock prices as of July 27, 2021. Indicated Dividend from Value Line Analyzer weekly as of July 21, 2021.

[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 (Gold Canyon Sewer Consolidated), 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=Div Yld + g (Cols 2+3)	Adjusted Indicated Cost of Equity (COE)[4] k=Div Yld + g (Cols 2+3)
1	American States Water	AWR	1.47%	1.51%	+	5.90%	=	7.41%	7.4%
2	American Water Works	AWK	1.26%	1.32%	+	8.23%	=	9.54%	9.5%
3	Essential Utilities	WTRG	1.96%	2.03%	+	7.87%	=	9.91%	9.9%
4	California Water	CWT	1.38%	1.45%	+	9.10%	=	10.55%	10.5%
5	Middlesex	MSEX	1.06%	1.07%	+	3.60%	=	4.67%	
6	York Water Company	YORW	1.53%	1.57%	+	5.70%	=	7.27%	7.3%
7	Average		1.44%	1.49%		6.73%		8.23%	
8	Adjusted Average[4]								8.9%

Notes:

[1] Spot Dividend Yield = D_0/P_0. Source Table 5.

[2] Expected Dividend Yield = $D_1/P_0 = D_0/P_0 * (1+g/2)$.

[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 5.7% . See Testimony.

Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.
Table 7
Forecasts of Long-Term Interest Rates

Line No.		2022	2023	2024	3-year Average
1	Long-term Treasury Rates				
2	Blue Chip Consensus Forecasts[1]	2.6%	2.9%	3.3%	
3	Value Line[2]	2.3%	2.3%	2.5%	
4	Average	2.5%	2.6%	2.9%	2.7%
5	Aaa Corporate Bonds				
6	Blue Chip Consensus Forecasts[1]	3.3%	3.7%	4.1%	
7	Value Line[2]	2.4%	2.8%	3.1%	
8	Average	2.9%	3.3%	3.6%	3.3%
9	Baa Corporate Bonds				
10	Blue Chip Consensus Forecasts[1]	4.3%	4.7%	5.1%	
11	Value Line[2]				
12	Average	4.3%	4.7%	5.1%	4.7%

Notes:
[1] Blue Chip consensus forecasts (June 2021).
[2] Value Line Selection and Opinion - Quarterly Forecasts (Feb. 26, 2021).

Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.
Risk Premium Analysis Based on Total Returns

Exhibit TJB-4
Table 8
Witness: Bourassa

Line No.		S&P Utility Index Total Return[1]	LT Treasury Bond Yield[2]	Risk Premium
1	1991	14.61%	8.14%	6.47%
2	1992	8.10%	7.67%	0.43%
3	1993	14.41%	6.59%	7.82%
4	1994	-7.94%	7.37%	-15.31%
5	1995	42.15%	6.88%	35.27%
6	1996	3.14%	6.71%	-3.57%
7	1997	24.69%	6.61%	18.08%
8	1998	14.82%	5.58%	9.24%
9	1999	-8.85%	5.87%	-14.72%
10	2000	59.70%	5.94%	53.76%
11	2001	-30.41%	5.49%	-35.90%
12	2002	-30.04%	5.43%	-35.47%
13	2003	26.11%	5.05%	21.06%
14	2004	24.22%	5.12%	19.10%
15	2005	16.79%	4.56%	12.23%
16	2006	20.95%	4.91%	16.04%
17	2007	19.36%	4.84%	14.52%
18	2008	-28.99%	4.28%	-33.27%
19	2009	11.91%	4.08%	7.83%
20	2010	5.46%	4.25%	1.21%
21	2011	19.91%	3.91%	16.00%
22	2012	1.29%	2.92%	-1.63%
23	2013	13.21%	3.45%	9.76%
24	2014	28.98%	3.34%	25.64%
25	2015	-4.85%	2.84%	-7.69%
26	2016	16.29%	2.59%	13.70%
27	2017	12.11%	2.90%	9.22%
28	2018	4.11%	3.11%	1.00%
29	2019	26.35%	2.58%	23.77%
30	2020	0.48%	1.56%	-1.08%
28	Average 1991 to 2020	10.6%	4.8%	5.8%
29		Expected Long-term Treasury Bond Rate[3]		2.7%
30		Estimate of Current Risk Premium[4]		6.9%
31		Projected Returns on Equity for Sample		9.6%

Notes:
[1] Computed Composite Proxy Group Total Returns.
[2] Average annual 30 Yr. U.S. Treasury Bond yields as reported by the Federal Reserve.
Proxy for yields from 2003-2005 are based upon 20-year U.S. Treasury yield.
[3] Forecast LT U.S. Treasury Rate. Source Table 7.
[4] As explained in testimony, adjustment assumes risk premiums change by 50% as much as interest rates.

Liberty Utilities (Gold Canyon Sewer Consolidated), 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 2020	2.81%	3.05%	+	8.67%	=	11.71%	-	2.22%	=	9.49%
2	Feb	3.20%	3.48%	+	8.67%	=	12.14%		1.97%	=	10.17%
3	Mar	4.74%	5.13%	+	8.17%	=	13.29%		1.46%	=	11.83%
4	Apr	3.38%	3.64%	+	7.67%	=	11.30%		1.27%	=	10.03%
5	May	3.15%	3.38%	+	7.50%	=	10.88%		1.38%	=	9.50%
6	Jun	3.16%	3.39%	+	7.17%	=	10.56%		1.49%	=	9.07%
7	July	2.99%	3.20%	+	7.00%	=	10.20%		1.31%	=	8.89%
8	Aug	2.95%	3.16%	+	7.00%	=	10.16%		1.36%	=	8.80%
9	Sep	2.97%	3.18%	+	7.17%	=	10.35%		1.42%	=	8.93%
10	Oct	3.10%	3.33%	+	7.33%	=	10.66%		1.57%	=	9.09%
11	Nov	2.59%	2.78%	+	7.33%	=	10.11%		1.62%	=	8.49%
12	Dec	2.55%	2.74%	+	7.50%	=	10.24%		1.67%	=	8.57%
13	Jan 2021	2.50%	2.68%	+	7.50%	=	10.18%		1.82%	=	8.36%
14	Feb	2.36%	2.53%	+	7.33%	=	9.86%		2.04%	=	7.82%
15	Mar	2.32%	2.49%	+	7.50%	=	9.99%		2.34%	=	7.65%
16	Apr	2.32%	2.49%	+	7.50%	=	9.99%		2.30%	=	7.69%
17	May	2.14%	2.32%	+	8.17%	=	10.49%		2.32%	=	8.17%
18	Jun	2.19%	2.37%	+	8.17%	=	10.54%		2.16%	=	8.38%
19	Recommended	2.22%	2.39%	+	7.94%	=	10.34%	-	2.26%	=	8.08%
20	Short-term Trends										
21	Recent Twelve Months Avg	2.58%	2.77%	+	7.46%	=	10.23%	-	1.83%	=	8.40%
22	Recent Nine Months Avg	2.45%	2.64%	+	7.59%	=	10.23%	-	1.98%	=	8.25%
23	Recent Six Months Avg	2.30%	2.48%	+	7.69%	=	10.18%	-	2.16%	=	8.01%
24	Recent Three Months Avg	2.22%	2.39%	+	7.94%	=	10.34%	-	2.26%	=	8.08%

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 (Gold Canyon Sewer Consolidated), Corp.
Table 10
Capital Asset Pricing Model (CAPM, ECAPM, and MCAPM)

Line No.		Rf^{1}	+ (	(beta[2]	x	RP_M^{4}	)			=	k
1	Traditional CAPM	2.7%	+ (	0.78	x	7.61%	)			=	8.60%
2											
3		Rf^{1}		RP_M^{3} x .25	+ (	(beta[2]	x	RP_M^{4}	) x .75		
4	Empirical CAPM (ECAPM)	2.7%	+	7.61%	x .25 + (	0.78	x	7.61%	) x .75	=	9.10%
5											
6		Rf^{1}	+ (	beta[3]	x	RP_M^{5}	) +	RP_s^{5}			
7	Modified CAPM (MCAPM)	2.7%	+ (	0.86	x	6.77%	) +	2.85%		=	11.40%
8											
9											
10	Average (rounded)										9.70%

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 (1926-2019)	7.15%	Source is Duff & Phelps 2020 CRSP Decile Size Study - Supplmentary Exhibits.
Current MRP	8.08%	Source is Table 9
Average MRP	7.61%	

[5] Estimate of MRP

Historical MRP (1963-2019)	5.47%	Source is Duff & Phelps 2020 CRSP Decile Size Study - Supplementary Exhibits.
Current MRP	8.08%	Source is Table 9
Average MRP	6.77%	

[6] Average proxy group adjusted size risk premium based upon Duff & Phelps Size Study data and Risk Study data.
See Exhibit TJB-COC-RB-2

EXHIBIT TJB-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	CPA - Self Employed 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. 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. Litigation support services.
1992-1995	Employed by High-Tech Institute, Phoenix, Arizona as Controller and C.F.O.
1989-1992	Employed by Alta Technical School, a division of University of Phoenix as Division Controller.
1985-1989	Employed by M.L.R. Builders, Tampa and Pensacola, Florida as Operations/Accounting Manager
1982-1985	Employed by and part owner in Area Sand and Clay Company, Pensacola, Florida.

1981-1982	Employed by Purdue University, West Lafayette, Indiana as Teaching Assistant.

SUMMARY OF REGULATORY WORK EXPERIENCE AS SELF-EMPLOYED CONSULTANT

COMPANY/CLIENT	**FUNCTION**
Bensch Ranch Utilities, LLC. ACC Docket No. SW-04026A-21-0225	Permanent Rate Application –Water Prepared short-form schedules on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Cerbat Water Company ACC Docket No. W-02391A-21-0290	Permanent Rate Application –Water Prepared short-form schedules on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Liberty Utilities (Calpeco Electric, LLC) Corp. Pending A.21.____	Cost of Capital. Prepared Cost of Capital analysis and testimony. Assisted in tax depreciation projections and determination of projected accumulated deferred income taxes.
Double R Water Distributors, Inc. ACC Docket No. W-02821A-21-0047	Permanent Rate Application –Water Prepared short-form schedules on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Pine Meadows Utilities, LLC. ACC Docket No. SW-03962A-20-0079	Permanent Rate Application –Water Prepared short-form schedules on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Coronado Utilities, Inc. ACC Docket No. SW-04305A-20-0346	Permanent Rate Application – Wastewater Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
SaddleBrooke Utility Company ACC Docket No. SW-02849A-20-0262	Permanent Rate Application – Wastewater Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Pine Meadows Utilities ACC Docket No. SW-03926A-20-0079	Permanent Rate Application –Wastewater Prepared short-form schedules on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
EPCOR Arizona (Johnson Utilities)	Permanent Rate Application. Water and

COMPANY/CLIENT	FUNCTION
ACC Docket No. WS-02987A-20-0025	Wastewater. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design and Cost of Service.
Beardsley Water Company ACC Docket No. W-02074A-19-0312	Permanent Rate Application –Water Prepared short-form schedules on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Oak Creek Water Company No. 1 ACC Docket No. W-01392A-19-0216	Permanent Rate Application –Water Prepared short-form schedules on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Alliant Gas ACC Docket No. G-20889A-19-0200	Permanent Rate Application – Gas Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Cost of Service Study, Rate Design, and Cost of Capital.
Utility Source, LLC. ACC Docket No. WS-04235A-19-0232 ACC Docket No. WS-04235A-19-0233	Permanent Rate Application – Water and Wastewater. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Liberty Utilities (Black Mountain Sewer) Corp. ACC Docket No. SW-02361A-19-0139	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.
Pueblo Del Sol Water Company ACC Docket No. SW-02208A- 19-0140	Permanent Rate Application –Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
DS Water Company ACC Docket No. W-04049A-18-0142	Permanent Rate Application –Water Prepared short-form schedules on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.

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 Texas P.U.C. DOCKET NO. 46256	Develop wastewater rates based upon water usage.

COMPANY/CLIENT	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 Base, Plant, Income Statement, Revenue Requirement, and Rate Design.

COMPANY/CLIENT	FUNCTION
Oak Creek Water Company No. 1 ACC Docket No. W-01392A-16-0161	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.
Mountain Water Company Montana PUC Docket No. D2016.2.15	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.
Community Water of Green Valley ACC Docket No. W-02304A-15-0263	Permanent Rate Application – Water. Prepared schedules and testified on Rate

COMPANY/CLIENT	FUNCTION
	Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Sahuarita Water Company ACC Docket No. W-03718A-15-0213	Permanent Rate Application –Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Liberty Utilities (Black Mountain Sewer) Corp. ACC Docket No. SW-0236 1A- 15-0206 ACC Docket No. SW-0236 1A- 15-0207	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.
Tierra Buena Water Company ACC Docket No. W-02076A-15-013	Permanent Rate Application – Water. Assisted in preparation of short-form schedules.
Red Rock Utilities, LLC ACC Docket No. W-04245A-14-0295	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.
Quail Creek Water Company ACC Docket No. W-02514A-14-0370	Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Tonto Basin Water Company ACC Docket No. W-03515A-14-0310	Permanent Rate Application – Water. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.
Navajo Water ACC Docket No. W-03511A-14-304	Permanent Rate Application – Water. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.
Alaska Power Company Regulatory Commission of Alaska	Prepared schedules and testified on cost of capital.

COMPANY/CLIENT	FUNCTION
Docket No. U-14-002	
Anchorage Municipal Light & Power Regulatory Commission of Alaska Docket No. U-13-184	Prepared schedules and testified on cost of capital.
Liberty Utilities (Pine Bluff) Inc. Arkansas Public Service Commission Docket No. 14-020-U	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.
Abra Water Company ACC Docket No. W-01782A-14-0084	Permanent Rate Application – Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
EPCOR Water Arizona, Inc. ACC Docket No. W-01303A-14-0010	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.
Liberty Utilities (Midstates Natural Gas), Inc. Missouri Public Service Commission Case No. GR-2014-0152	Permanent Rate Application – Assist in preparing required rate application schedules for Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Hydro Resources, LLC. ACC Docket No. W-20770A-13-0313	Certificate of Convenience and Necessity – Water. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, and initial rates.
Little Park Water Company ACC Docket No. W-02192A-13-0336	Permanent Rate Application – Water. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.
Utility Source, LLC. ACC Docket No. WS-04235A-13-0331	Permanent Rate Application – Water and Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement,

COMPANY/CLIENT	FUNCTION
	Revenue Requirement, Rate Design, and Cost of Capital.
Payson Water Company ACC Docket No. W-03514A-13-0111 ACC Docket No. W-03514A-13-0142	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.
Goodman Water Company	Valuation
Verde Santa Fe Wastewater ACC Docket No. SW-03437A-13-0292	Permanent Rate Application – Wastewater. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Lago Del Oro Water Company ACC Docket No. W-01944A-13-0215	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.
Chaparral City Water Company ACC Docket No. W-02113A-13-0118	Permanent Rate Application – Prepared and testified on cost of service study.
Las Quintas Serenas Water Company ACC Docket No. W-01583A-13-0117	Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Southwest Environmental Utilities. Inc. ACC Docket No. WS-20878A-13-0065	Certificate of Convenience and Necessity – Water and Wastewater. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, and initial rates.
Litchfield park Service Company ACC Docket No. SW-01428A-13-0043 ACC Docket No. W-01428A-13-0042	Permanent Rate Application – Water and Wastewater. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, Cost of Service, and Cost of

COMPANY/CLIENT	FUNCTION
	Capital.
Beaver Dam Water Company ACC Docket No. WS-03067A-12-0232	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 Wastewater. 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 Wastewater. 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 Wastewater. 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, Revenue Requirement, and Rate Design.

COMPANY/CLIENT	FUNCTION
Goodman Water Company ACC Docket No. W-02500A-10-0382	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 Service, and Cost of Capital.

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	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 Wastewater. 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 Wastewater. 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	FUNCTION
ACC Docket No. W-01654A-08-0502	schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Far West Water and Sewer Company ACC Docket No. WS-03478A-08-0454	Permanent Rate Application. Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design and Cost of Capital.
Ridgeline Water Company, LLC ACC Docket No. W-20589A-08-0173	Certificate of Convenience and Necessity – Water. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, financing, and intitial rates.
Sacramento Utilities, Inc. ACC Docket No. SW-20576A-08-0067	Certificate of Convenience and Necessity – Wastewater. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, and financing.
Johnson Utilities ACC Docket No. WS-02987A-08-0180	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.
Orange Grove Water Company ACC Docket No. W-02237A-08-0455	Permanent Rate Application. Prepared schedules on Plant, Income Statement, Revenue Requirement, and Rate Design.
Far West Water and Sewer Company ACC Docket No. WS-03478A-07-0442	Financing Application. Prepare schedules to support application.
Oak Creek Water No.1 ACC Docket No. W-01392A-07-0679	Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
ICR Water Users Association Docket W-02824-07-0388	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	FUNCTION
ACC Docket No. W-02309A-07-0399	Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Sahuarita Water Company (Rancho Sahuarita Water Co.) ACC Docket No. W-03718A-07-0687	Extension Certificate of Convenience and Necessity – Water. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, and financing.
Utility Source, L.L.C. ACC Docket No. WS-04235A-06-0303	Permanent Rate Application- Water and Wastewater. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Tierra Buena Water Company	Valuation of Tierra Buena Water Company for estate purposes.
Goodman Water Company ACC Docket No. W-02500A-06-0281	Permanent Rate Application (Class C). Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, and Cost of Capital.
Links at Coyote Wash Utilities ACC Docket No. SW-04210A-06-0220	Certificate of Convenience and Necessity – Sewer. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, financing, and initial rate design.
New River Utilities ACC Docket No. W-0173A-06-0171	Extension Certificate of Convenience and Necessity – Water. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, and financing.
Johnson Utilities ACC Docket No. WS-02987A-04-0501 Docket WS-02987A-04-0177	Extension of Certificate of Convenience and Necessity – Sewer. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, financing, and initial rate design.
Bachmann Springs Utility ACC Docket No. WS-03953A-07-0073	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.

EXHIBIT TJB-DT2

Liberty Utilities (Black Mountain Sewer), Corp.
Comparable Earnings Analysis

Line No.	Company	Symbol	VL Industry	VL Beta	Status	VL Financial Strength	VL Current Dividend Yld	% Debt	10-year Mean Book ROE	CVROE	STDROE
1	ALLETE	ALE	UTILCENT	0.9	R	A	3.67	40.98	8.06%	0.05400	0.00435
2	Alliant Energy	LNT	UTILCENT	0.85	R	A	2.80	54.34	10.46%	0.05176	0.00541
3	Amer. Elec. Power	AEP	UTILCENT	0.75	R	A+	3.64	58.51	10.18%	0.06699	0.00682
4	Amer. States Water	AWR	WATER	0.65	R	A	1.70	47.24	12.41%	0.08285	0.01028
5	Ameren Corp.	AEE	UTILCENT	0.8	R	A	2.76	54.96	8.97%	0.10585	0.00949
6	Amphenol Corp.	APH	ELECTRNX	1	U	A	0.83	40.31	24.39%	0.08656	0.02111
7	AT&T Inc.	T	TELESERV	0.85	U	A	7.45	48.75	13.84%	0.06717	0.00929
8	Atmos Energy	ATO	GASDISTR	0.8	R	A+	2.70	40.02	9.19%	0.06452	0.00593
9	BCE Inc.	BCE	TELUTIL	0.9	U	B++	5.68	53.25	16.23%	0.11853	0.01924
10	California Water	CWT	WATER	0.65	R	B++	1.54	45.88	8.56%	0.11934	0.01022
11	Can. National Railway	CNI	RAILROAD	0.85	U	A	1.79	37.91	22.25%	0.07674	0.01708
12	Chesapeake Utilities	CPK	GASDISTR	0.8	R	A	1.64	42.18	10.87%	0.07957	0.00865
13	Consol. Edison	ED	UTILEAST	0.75	R	A+	4.30	51.96	8.53%	0.09302	0.00794
14	Donaldson Co.	DCI	MACHINE	1.15	U	A	1.35	38.48	26.72%	0.09227	0.02465
15	DTE Energy	DTE	UTILCENT	0.95	R	A	2.87	60.46	9.86%	0.09630	0.00950
16	Duke Energy	DUK	UTILEAST	0.85	R	A	3.82	53.70	6.88%	0.11793	0.00811
17	Eversource Energy	ES	UTILEAST	0.9	R	A	2.92	52.35	8.39%	0.11924	0.01001
18	Genuine Parts	GPC	AUTOPRTS	1.25	U	B++	2.52	43.99	21.79%	0.06768	0.01475
19	Hawaiian Elec.	HE	UTILWEST	0.8	R	A	3.23	46.53	9.35%	0.10817	0.01011
20	Hubbell Inc.	HUB/B	ELECEQ	1.2	U	A	2.02	40.97	19.24%	0.10736	0.02066
21	IDACORP Inc.	IDA	UTILWEST	0.85	R	A+	2.91	43.87	9.58%	0.02783	0.00267
22	Ingredion Inc.	INGR	FOODPROC	0.9	U	B++	2.95	37.20	17.94%	0.11417	0.02049
23	Kansas City South'n	KSU	RAILROAD	1.05	U	A	0.80	48.13	13.12%	0.12237	0.01605
24	Lithia Motors	LAD	RETAUTO	1.2	U	B++	0.38	43.69	19.54%	0.10622	0.02076
25	MGE Energy	MGEE	UTILCENT	0.75	R	A+	2.04	35.49	10.70%	0.08128	0.00870
26	NextEra Energy	NEE	UTILEAST	0.9	R	A+	2.03	53.46	11.42%	0.09699	0.01108
27	NorthWestern Corp.	NWE	UTILWEST	0.95	R	B++	4.04	52.85	8.96%	0.09333	0.00836
28	OGE Energy	OGE	UTILCENT	1.05	R	A	4.96	49.04	11.41%	0.10892	0.01242
29	Pinnacle West Capital	PNW	UTILWEST	0.9	R	A+	4.15	52.85	9.53%	0.04304	0.00410
30	Portland General	POR	UTILWEST	0.9	R	B++	3.62	53.57	8.06%	0.10533	0.00849
31	Roper Tech.	ROP	MACHINE	1	U	A+	0.46	46.38	13.23%	0.10026	0.01326
32	Sempra Energy	SRE	UTILWEST	0.95	R	A	3.46	48.22	9.71%	0.09113	0.00885
33	Sonoco Products	SON	PACKAGE	1	U	A	2.74	39.58	17.20%	0.09937	0.01709
34	Southern Co.	SO	UTILEAST	0.95	R	A	4.20	61.46	12.12%	0.05859	0.00710
35	Southwest Gas	SWX	GASDISTR	0.95	R	A	3.44	50.53	9.19%	0.07372	0.00677
36	UGI Corp.	UGI	GASDISTR	1	R	B++	3.03	59.17	12.08%	0.11213	0.01354
37	Universal Health `B'	UHS	MEDSERV	1.25	U	B+	0.52	35.81	15.40%	0.06099	0.00939
38	Walmart Inc.	WMT	RETAIL	0.55	U	A++	1.56	35.76	19.71%	0.09053	0.01784
39	Xcel Energy Inc.	XEL	UTILWEST	0.8	R	A+	2.82	57.41	10.13%	0.01482	0.00150
40	York Water Co. (The)	YORW	WATER	0.85	R	B+	1.58	46.31	10.48%	0.07521	0.00788
	All Firms										
	Average			0.91		A	2.77	47.59	12.89%	0.086302	0.011248
	Median			0.90		A	2.81	47.69	10.79%	0.091701	0.009494
	Unregulated Firms										
	Average			1.01		A	2.22	42.16	18.61%	0.093586	0.017261
	Median			1.00		A	1.68	40.64	18.59%	0.095819	0.017467
	Regulated Firms										
	Average			0.86		A	3.07	50.51	9.81%	0.082380	0.008011
	Median			0.85		A	2.98	52.16	9.65%	0.086990	0.008427
	Water Proxy Group										
	Average			0.78		B++	1.62	49.43	10.13%	0.133065	0.013399
	Median			0.78		B++	1.56	46.78	10.10%	0.121335	0.010643

Construction of Proxy Group for Comparable Earnings Analysis

Data from VL1700 firms on July 28, 2021 first filtered using the following criteria:

1. Dividend paying stocks
2. Debt between 35 and 65 percent
3. VL Financial Strenght B+ or above

These critieria narrowed the sample down to 334 companies

The average CVROE and average CVOM for the period 2010-2019 was then computed on this sample.
The following filterS were applied to the 334 companies:

1. CVROE <= average CVROE*.5
2. STDROE <= average STDROE*.5
3. Eliminate Regulated firms, Financial Services firms, and REITs

These critieria narrowed the sample down to 40 companies

EXHIBIT TJB-DT3

Liberty Utilities (Gold Canyon Sewer Consolidated), 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

			Measures of size (Millions)						
Line No.	Company	Symbol	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	$ 3,149	$ 642	$ 3,723	$ 73	$ 1,792	$ 159	$ 474
2	American Water Works	AWK	$ 29,668	$ 6,451	$ 39,001	$ 3,497	$ 1,792	$ 1,713	$ 3,610
3	Essential Utilities	WTRG	$ 11,665	$ 4,685	$ 17,173	$ 235	$ 13,750	$ 523	$ 890
4	California Water	CWT	$ 3,029	$ 921	$ 3,810	$ 68	$ 3,394	$ 229	$ 715
5	Middlesex	MSEX	$ 1,668	$ 347	$ 1,941	$ 30	$ 976	$ 68	$ 135
6	York Water Company	YORW	$ 620	$ 144	$ 743	$ 14	$ 407	$ 32	$ 52
7	Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.		N/A	$ 15.3	N/A	$ 0.7	$ 28.7	$ 2.4	$ 4.8

[1] From Value Line Investment Anlayzer data weekly as of July 21, 2021.

Net Income Data ($ millions)

	Company	Symbol	2020	2019	2018	2017	2016	Average
8	American States Water	AWR	$ 86.4	$ 84.3	$ 63.9	$ 69.4	$ 59.7	$ 72.7
9	American Water Works	AWK	$ 3,777.0	$ 3,610.0	$ 3,440.0	$ 3,357.0	$ 3,302.0	$ 3,497.2
10	Essential Utilities	WTRG	$ 284.9	$ 224.5	$ 192.0	$ 239.7	$ 234.2	$ 235.1
11	California Water	CWT	$ 96.8	$ 63.1	$ 65.6	$ 67.2	$ 48.7	$ 68.3
12	Middlesex	MSEX	$ 38.4	$ 33.9	$ 32.5	$ 22.8	$ 22.7	$ 30.1
13	York Water Company	YORW	$ 16.6	$ 14.4	$ 13.4	$ 13.0	$ 11.9	$ 13.8

			2020	2019	2018	2017	2016	Average
14	Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.		$ 1.0	$ 1.0	$ 0.3	$ (0.4)	$ 1.5	$ 0.7

Liberty Utilities (Gold Canyon Sewer Consolidated), 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.	EBITDA Data ($ millions) Company	Symbol	2020	2019	2018	2017	2016	Average
1	American States Water	AWR	$ 167	$ 169	$ 141	$ 176	$ 142	$ 159
2	American Water Works	AWK	$ 1,852	$ 1,752	$ 1,684	$ 1,736	$ 1,540	$ 1,713
3	Essential Utilities	WTRG	$ 700	$ 522	$ 470	$ 466	$ 459	$ 523
4	California Water	CWT	$ 305	$ 234	$ 240	$ 201	$ 165	$ 229
5	Middlesex	MSEX	$ 71	$ 67	$ 67	$ 66	$ 67	$ 68
6	York Water Company	YORW	$ 34	$ 33	$ 31	$ 30	$ 30	$ 32
7	Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.		$ 2.6	$ 2.4	$ 2.4	$ 2.5	$ 2.4	$ 2.4

	Regression Equation	MV Equity	Book Equity	MVIC	5 Yr Avg. Net Income	Total Assets	5 Yr Avg. EBITDA	Sales
8	Constant	10.822%	7.164%	10.421%	6.750%	8.596%	7.440%	8.794%
9	X Coefficient(s)	-2.128%	-1.203%	-1.934%	-1.424%	-1.437%	-1.446%	-1.459%

RP_s (levered)

	Company	Symbol	MV Equity	Book Equity	MVIC	5 Yr Avg. Net Income	Total Assets	5 Yr Avg. EBITDA	Sales	Average
10	American States Water	AWR	3.38%	3.79%	3.51%	4.10%	3.92%	4.26%	4.89%	3.98%
11	American Water Works	AWK	1.30%	2.58%	1.54%	1.70%	3.92%	2.76%	3.60%	2.49%
12	Essential Utilities	WTRG	2.17%	2.75%	2.23%	3.37%	2.65%	3.51%	4.49%	3.02%
13	California Water	CWT	3.41%	3.60%	3.50%	4.14%	3.52%	4.03%	4.63%	3.83%
14	Middlesex	MSEX	3.97%	4.11%	4.06%	4.64%	4.30%	4.79%	5.69%	4.51%
15	York Water Company	YORW	4.88%	4.57%	4.87%	5.13%	4.85%	5.27%	6.30%	5.12%
16	Average		3.18%	3.57%	3.29%	3.85%	3.86%	4.10%	4.93%	3.83% [A]
	Comparative Risk Study Risk Premium Adjustment									-0.98% [B]
17	Adjusted Risk Premium - Size (RP_S)									2.85% [C] = [A]-[B]
18										
19	Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.		N/A	5.74%	N/A	6.97%	6.50%	6.89%	7.80%	6.78% [D]
20	Comparative Risk Study Risk Premium Adjustment									-0.44% [E]
21	Adjusted Risk Premium - Size (RP_S)									6.34% [F] = [D]+[E]
22	Adjusted Risk Premium - Size (RP_S) for Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.									6.34% [F]
23	Adjusted Risk Premium - Size (RP_S) for Water Proxy Group									2.85% [G]
24	Indicated Risk Premium Over Proxy Group									3.49% [H] = [F]-[G]

Liberty Utilities (Gold Canyon Sewer Consolidated), 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
Step 1 - Identify the equivalent C exhibit for the B exhibits used to compute the size premium.
Step 2 - Indentify the fundamental risk characteristics of the companies of the equivalent portfolio in the C- exhibit.
Step 3 - Indentify the guideline portfolio in the D exhibit which has the most simliar fundamental risk characteristic found in Step 2 and find the smoothed average risk premium.
Step 4 - Indentify the guideline portfolio in the D exhibit which has the most simliar fundamental risk characteristic to the Company and find the smoothed average risk premium.
Step 5 - The diffence in smoothed average risk premiums is the maxmium indicated risk adjustment. The range of adjustments may be 0 or at the maximum depending on the circumstances.

			Measures of size (Millions)						
Line No.	Company	Symbol	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	$ 3,149	$ 642	$ 3,723	$ 73	$ 1,792	$ 159	$ 474
2	American Water Works	AWK	$ 29,668	$ 6,451	$ 39,001	$ 3,497	$ 1,792	$ 1,713	$ 3,610
3	Essential Utilities	WTRG	$ 11,665	$ 4,685	$ 17,173	$ 235	$ 13,750	$ 523	$ 890
4	California Water	CWT	$ 3,029	$ 921	$ 3,810	$ 68	$ 3,394	$ 229	$ 715
5	Middlesex	MSEX	$ 1,668	$ 347	$ 1,941	$ 30	$ 976	$ 68	$ 135
6	York Water Company	YORW	$ 620	$ 144	$ 743	$ 14	$ 407	$ 32	$ 52

	Equivalent C Exhibit Portfolio Operating Margin		MV Equity	Book Equity	MVIC	5 Yr Avg. Net Income	Total Assets	5 Yr Avg. EBITDA	Sales	
	Company	Symbol	(Table C-1)	(Table C-2)	(Table C-4)	(Table C-3)	(Table C-5)	(Table C-6)	(Table C-7)	
7	American States Water	AWR	10.88%	9.39%	10.36%	9.72%	9.63%	9.43%	9.06%	
8	American Water Works	AWK	13.43%	12.28%	13.04%	14.66%	9.63%	12.28%	9.83%	
9	Essential Utilities	WTRG	12.70%	12.08%	12.76%	11.49%	12.00%	11.14%	9.36%	
10	California Water	CWT	10.79%	10.13%	10.36%	9.65%	10.07%	9.90%	9.39%	
11	Middlesex	MSEX	9.41%	8.29%	9.18%	8.77%	8.60%	8.29%	8.62%	
12	York Water Company	YORW	7.99%	7.55%	7.90%	7.21%	7.97%	7.25%	8.62%	
13	Proxy Group Average		10.87%	9.95%	10.60%	10.25%	9.65%	9.71%	9.15%	10.03%
14	Smoothed Average Risk Premium based upon OM									10.56%

Liberty Utilities (Gold Canyon Sewer Consolidated), 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.	Equivalent C Exhibit Portfolio CV(Operating Margin) Company	Symbol	MV Equity (Table C-1)	Book Equity (Table C-2)	MVIC (Table C-4)	5 Yr Avg. Net Income (Table C-3)	Total Assets (Table C-5)	5 Yr Avg. EBITDA (Table C-6)	Sales (Table C-7)	
1	American States Water	AWR	17.18%	20.44%	18.35%	19.43%	19.26%	20.61%	27.07%	
2	American Water Works	AWK	12.48%	13.73%	12.18%	10.62%	19.26%	13.15%	17.05%	
3	Essential Utilities	WTRG	13.79%	14.34%	14.05%	14.95%	14.39%	15.78%	161.73%	
4	California Water	CWT	17.38%	18.62%	18.34%	19.80%	17.23%	18.56%	119.06%	
5	Middlesex	MSEX	21.62%	26.10%	21.51%	25.57%	24.26%	27.62%	41.03%	
6	York Water Company	YORW	28.01%	35.10%	28.50%	36.83%	30.60%	38.95%	41.03%	
7	Proxy Group Average		18.41%	21.39%	18.82%	21.20%	20.83%	22.45%	67.83%	27.28%
8	Smoothed Average Risk Premium based upon CV (OM)									11.24%

	Equivalent C Exhibit Portfolio CV(ROE) Company	Symbol	MV Equity (Table C-1)	Book Equity (Table C-2)	MVIC (Table C-4)	5 Yr Avg. Net Income (Table C-3)	Total Assets (Table C-5)	5 Yr Avg. EBITDA (Table C-6)	Sales (Table C-7)	
9	American States Water	AWR	27.20%	33.25%	29.40%	29.49%	31.18%	32.60%	41.58%	
10	American Water Works	AWK	23.21%	25.58%	23.19%	19.55%	31.18%	25.15%	27.69%	
11	Essential Utilities	WTRG	23.44%	26.22%	23.86%	24.33%	27.74%	27.11%	35.95%	
12	California Water	CWT	27.81%	30.23%	29.38%	30.77%	28.62%	30.00%	38.03%	
13	Middlesex	MSEX	33.08%	40.64%	35.09%	40.18%	38.22%	41.30%	56.15%	
14	York Water Company	YORW	43.86%	51.80%	43.38%	58.38%	44.44%	54.76%	56.15%	
15	Proxy Group Average		29.77%	34.62%	30.72%	33.78%	33.56%	35.15%	42.59%	34.31%
16	Smoothed Average Risk Premium based upon CV (ROE)									10.14%

Liberty Utilities (Gold Canyon Sewer Consolidated), 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.	**Estimate of Risk Premium Adjustment**					
1				5 -Year Historical		
2	Company	Symbol	OM	CV (OM)	CV(ROE)	
2	American States Water	AWR	26.54%	12.66%	8.16%	
3	American Water Works	AWK	33.60%	5.83%	12.23%	
3	Essential Utilities	WTRG	38.06%	11.66%	35.27%	
4	California Water	CWT	20.74%	17.43%	13.91%	
5	Middlesex	MSEX	38.45%	4.94%	11.12%	
6	York Water Company	YORW	48.78%	2.13%	4.21%	
13	Proxy Group Average		34.36%	9.11%	14.15%	
	Proxy Group Risk Differences					
						Average
14	Smoothed Average Risk Premium From Equivalent D Exhibit		7.16%	9.73%	9.20%	8.70%
15	Smoothed Average Risk Premium From Equivalent C Exhibit		10.56%	11.24%	10.14%	10.65%
16	**Indicated Risk Adjustment**		-3.41%	-1.51%	-0.93%	-1.95%
						Mid-point
17	Possible Risk Adjustment		0.00%	to	-1.95%	-0.98%
				5 -Year Historical		
			OM	CV (OM)	CV(ROE)	
18	Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.		27.26%	20.91%	54.63%	
						Average
19	Smoothed Average Risk Premium From Equivalent D Exhibit		7.80%	10.88%	10.63%	9.77%
20	Smoothed Average Risk Premium From Equivalent C Exhibit		10.56%	11.24%	10.14%	10.65%
21	Indicated Risk Adjustment		-2.77%	-0.37%	0.49%	-0.88%
						Mid-point
22	Possible Risk Adjustment		0.00%	to	-0.88%	-0.44%

EXHIBIT TJB-DT4

Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.
Comparative Risk Study

Line No.											
1	Operating Income EBIT ($ in millions)									Std	Co-efficient of variation
2			2020	2019	2018	2017	2016	2015	Average	Dev.	of Operating Income
3	Company[1]	Symbol									
4	American States Water	AWR	130.5	133.3	101.0	137.4	102.5	118.5	120.96	17.718	0.1465
5	American Water Works	AWK	1,248.0	1,170.0	1,139.0	1,244.0	1,070.0	1,075.0	1,174.20	74.888	0.0638
6	Essential Utilities	WTRG	443.4	365.6	323.2	329.0	325.6	321.1	357.34	51.136	0.1431
7	California Water	CWT	206.2	144.5	156.4	123.9	101.0	95.7	146.38	39.513	0.2699
8	Middlesex	MSEX	52.3	49.9	51.5	52.2	54.6	48.8	52.09	1.688	0.0324
9	York Water Company	YORW	25.6	25.0	23.7	23.6	24.0	23.8	24.38	0.891	0.0366
10	Proxy Group									30.9724	0.1154

		2020	2019	2018	2017	2016	2015	Average	Std Dev.	Co-efficient of variation of Operating Income
11	Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.	1.37	1.01	1.05	NM	1.51	1.57	1.24	0.243	0.1966
12	**Risk relative to the average risk of the proxy group**									**1.70**

13	Sales ($ in millions)								
		2020	2019	2018	2017	2016	2015	Average	
14	Company[1]	Symbol							
15	American States Water	AWR	488	474	437	441	436	459	455.12
16	American Water Works	AWK	3,777	3,610	3,440	3,357	3,302	3,159	3,497.20
17	Essential Utilities	WTRG	1,463	890	838	810	820	814	963.98
18	California Water	CWT	794	715	698	667	609	588	696.67
19	Middlesex	MSEX	142	135	138	131	133	126	135.59
20	York Water Company	YORW	54	52	48	49	48	47	50.01

		2020	2019	2018	2017	2016	2015	Average
21	Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.	4.83	4.58	4.44	4.49	4.34	4.52	4.53

22	Operating Margin (%)									Std	Co-efficient of variation
23	Company[1]	Symbol	2020	2019	2018	2017	2016	2015	Average	Dev.	of Operating Margin
24	American States Water	AWR	26.73%	28.14%	23.12%	31.20%	23.51%	25.84%	26.54%	0.0336	0.1266
25	American Water Works	AWK	33.04%	32.41%	33.11%	37.06%	32.40%	34.03%	33.60%	0.0196	0.0583
26	Essential Utilities	WTRG	30.32%	41.09%	38.56%	40.64%	39.71%	39.44%	38.06%	0.0444	0.1166
27	California Water	CWT	25.95%	20.22%	22.40%	18.57%	16.57%	16.26%	20.74%	0.0362	0.1743
28	Middlesex	MSEX	36.96%	37.07%	37.28%	39.91%	41.06%	38.73%	38.45%	0.0190	0.0494
29	York Water Company	YORW	47.59%	48.43%	48.84%	48.59%	50.44%	50.52%	48.78%	0.0104	0.0213
30	Proxy Group		33.43%	34.56%	33.89%	35.99%	33.95%	34.14%	34.36%	0.0272	0.0911

		2020	2019	2018	2017	2016	2015	Average	Std Dev.	Co-efficient of variation of Operating Margin
31	Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.	28.39%	22.09%	23.76%	NM	34.82%	34.77%	27.26%	0.0570	0.2091
32	**Risk relative to the average risk of the proxy group**									**2.30**

[1] Based on information from Value Line Investment Analyzer weekly ended July 21, 2021.

Line No.	Return on Equity (ROE)[1]		2020	2019	2018	2017	2016	2015	Average	Std Dev.	Co-efficient of variation of ROE
3	Company[1]	Symbol									
4	American States Water	AWR	13.5%	14.0%	11.4%	13.1%	12.1%	13.0%	12.82%	0.0105	0.0816
5	American Water Works	AWK	11.0%	10.1%	9.7%	7.9%	9.0%	9.4%	9.54%	0.0117	0.1223
6	Essential Utilities	WTRG	6.1%	5.8%	9.6%	12.2%	12.7%	11.7%	9.27%	0.0327	0.3527
7	California Water	CWT	10.5%	8.1%	9.0%	9.7%	7.4%	7.0%	8.93%	0.0124	0.1391
8	Middlesex	MSEX	11.1%	10.4%	13.0%	9.9%	10.3%	9.6%	10.94%	0.0122	0.1112
9	York Water Company	YORW	11.6%	10.7%	10.6%	10.9%	10.4%	11.5%	10.83%	0.0046	0.0421
10	Proxy Group		10.6%	9.9%	10.5%	10.6%	10.3%	10.4%	10.39%	0.0032	0.1415

		2020	2019	2018	2017	2016	2015	Average	Std Dev.	Co-efficient of variation of ROE
11	Company (tax adjusted)	6.65%	4.18%	NM	NM	1.98%	2.21%	4.27%	0.0233	0.5463
12	**Risk relative to the average risk of the proxy group**									**3.86**

[1] Based on information from Value Line Investment Analyzer weekly ended July 21, 2021.

1 Operating Leverage = Percent Change in Operating Income/Percent Change in Sales
2 (also a measure of business risk)
3

4	Company[1]	Symbol	2020	2019	2018	2017	2016	Average
5	American States Water	AWR	0.70	3.78	30.92	32.96	17.60	17.19
6	American Water Works	AWK	1.44	0.55	3.41	9.76	3.46	3.73
7	Essential Utilities	WTRG	0.33	2.13	0.50	0.82	1.36	1.03
8	California Water	CWT	3.83	3.26	5.60	2.40	3.20	3.66
9	Middlesex	MSEX	0.94	1.21	0.25	2.71	1.58	1.34
10	York Water Company	YORW	0.59	0.86	0.69	0.77	0.79	0.74
11	Average		1.30	1.96	6.89	8.24	4.67	4.61

		2020	2019	2018	2017	2016	Average
12	Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.	6.45	1.30	134.61	20.91	0.96	32.85
13	**Risk relative to the average risk of the proxy group**						**7.12**

[1] Based on information from Value Line Investment Analyzer weekly ended July 21, 2021.

Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.
Comparative Risk Study
Beta Estimate Using Duff and Phelps Risk Study Portfolio Information

A. Beta Estimates for Water Sample Group and Company`

Line No.		Portfolio	Operating Margin	Portfolio	CV (Operating Margin)[1]	Portfolio	CV (ROE)[1]	
1	Company	2	27.26%	3	20.91%	8	54.63%	
2	Proxy Group	1	34.36%	20	9.11%	23	14.15%	
			Portfolio Sum Beta[2]		Portfolio Sum Beta[3]		Portfolio Sum Beta[4]	Average
3	Company		0.84		1.24		1.23	
4	Proxy Group		0.89		1.00		0.90	
5	Percentage Difference		-5.6%		24.0%		36.7%	**18.3%**

B. Assume percentage difference is the same for water utilities as companies in general

		Value Line Beta	Sum Beta
6	Proxy Group[5]	0.78	0.86
7	Implied Beta for Company[6]	0.92	1.02

Notes:
[1] CV stands for Coefficient of Variation,
[2] Source is Duff & Phelps Cost of Capital Navigator 2020 Supplementary Data Risk Study, Companies Ranked by Operating Margin.
[3] Source is Duff & Phelps Cost of Capital Navigator 2020 Supplmentary Data Risk Study, Companies Ranked by CV (Operating Margin).
[4] Source is Duff & Phelps Cost of Capital Navigator 2020 Supplmentary Data Risk Study, Companies Ranked by CV (Operating Margin).
[5] Source is Table 2.
[6] Calculated by multiplying (1+ percentage difference in risk study betas) times average beta for the proxy group.

Liberty Utilities (Gold Canyon Sewer Consolidated), Corp.
Capital Asset Pricing Model (CAPM)

Line No.													CAPM Results From Table 11	Difference
1	Traditional CAPM	Rf^{1}	+ (	(beta[2]	x	RP_M^{4}	)				=	k		
		2.7%	+ (	0.92	x	7.61%	)				=	9.70%	8.60%	1.10%
2														
3		Rf^{1}		RP_M^{4} x .25	+ (	(beta[2]	x	RP_M^{4}	) x .75					
4	Empirical CAPM	2.7%	+	7.61%	x .25 + (	0.92	x	7.61%	) x .75		=	9.90%	9.10%	0.80%
5														
6		Rf^{1}	+ (	beta[3]	x	RP_M^{5}	) +	RPs^{6}						
7	Modified CAPM	2.7%	+ (	1.02	x	6.77%	) +	2.85%			=	12.40%	11.40%	1.00%
8														
9														
10	Average											10.70%	9.70%	1.00%

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 (1926-2019)	7.15%	Source is Duff & Phelps 2020 CRSP Decile Size Study - Supplmentary Exhibits.
Current MRP	8.08%	Source is Table 10
Average MRP	7.60%	

[5] Estimate of MRP

Historical MRP (1963-2019)	5.47%	Source is Duff & Phelps 2020 CRSP Decile Size Study - Supplmentary Exhibits.
Current MRP	8.08%	Source is Table 10
Average MRP	6.80%	

[6] Average proxy group adjusted size risk premium based upon Duff & Phelps Size Study data and Risk Study data. See

See Exhibit TJB-DT3

LIBERTY EDO SCHEDULES

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Computation Of Increase In Gross Revenue Requirements As Adjusted

Exhibit
Schedule A-1
Page 1
Witness: Cifuentes

Line No.	Revenue Requirement	Amount
1	Fair Value Rate Base	$ 1,716,795
2		
3	Adjusted Operating Income	104,400
4		
5	Current Rate of Return	6.08%
6		
7	Required Operating Income	$ 119,200
8		
9	Required Rate of Return on Fair Value Rate Base	6.94%
10		
11	Operating Income Deficiency	$ 14,800
12		
13	Gross Revenue Conversion Factor	1.3584
14		
15	Increase in Gross Revenue Requirement	$ 20,105
16		
17	Adjusted Test Year Revenues	$ 476,317
18	Increase in Gross Revenue Requirement	$ 20,105
19	Proposed Revenue Requirement	$ 496,422
20	% Increase	4.22%
21		

22	Customer	Present	Proposed	Dollar	Percent
23	Classification	Rates	Rates	Increase	Increase
24	Residential	$ 474,444	$ 494,845	$ 20,401	4.30%
25		$ -	$ -		
26	Revenue Annualization	$ 1,512	$ 1,577	$ 65	4.30%
27	**Subtotal**	$ 475,956	$ 496,422	$ 20,466	4.30%
28					
29	Miscellaneous Revenues	$ 670	$ 670	$ -	0.00%
30	Reconciling Amount	$ (309)	$ (670)	$ (361)	116.83%
31					
32	**Total of Water Revenues**	$ 476,317	$ 496,422	$ 20,105	4.22%
33					
34					
35	SUPPORTING SCHEDULES:				
36	B-1				
37	C-1				
38	C-3				
39	H-1				

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Summary Of Results Of Operations

Exhibit
Schedule A-2
Page 1
Witness: Cifuentes

Line No.	Description	Prior Years Ended December 31, 2018	Prior Years Ended December 31, 2019	Test Year Actual December 31, 2020	Test Year Adjusted December 31, 2020	Projected Year Present Rates December 31, 2021	Projected Year Proposed Rates December 31, 2021
1	Gross Revenues	$ 371,688	$ 402,912	$ 455,523	$ 476,317	$ 476,317	$ 496,422
2							
3	Revenue Deductions and	318,311	109,033	395,596	371,917	371,917	377,222
4	Operating Expenses						
5							
6	Operating Income	$ 53,377	$ 293,879	$ 59,927	$ 104,400	$ 104,400	$ 119,200
7							
8	Other Income and	(553)	(1,309)	(2,273)	(2,273)	(2,273)	(2,273)
9	Deductions						
10							
11	Interest Expense	(223)	(361)	(414)	(24,639)	(24,639)	(24,639)
12							
13	Net Income	$ 52,601	$ 292,209	$ 57,240	$ 77,488	$ 77,488	$ 92,288
14							
15	Common Shares	1,000	1,000	1,000	1,000	1,000	1,000
16							
17	Earned Per Average						
18	Common Share	52.60	292.21	57.24	77.49	77.49	92.29
19							
20	Dividends Paid	-	(11,572)	-	-	-	-
21							
22	Dividends Per						
23	Common Share	-	-	-	-	-	-
24							
25	Payout Ratio	-	-	-	-	-	-
26							
27	Return on Average						
28	Invested Capital	1.63%	8.74%	1.62%	1.99%	1.87%	2.23%
29							
30	Return on Year End						
31	Capital	1.60%	8.60%	1.57%	1.87%	1.88%	2.24%
32							
33	Return on Average						
34	Common Equity	2.33%	12.04%	2.20%	2.97%	3.59%	4.27%
35							
36	Return on Year End						
37	Common Equity	2.30%	11.38%	2.18%	2.93%	4.57%	5.44%
38							
39							
40	EBIT	105,733	91,283	122,336	77,996	77,996	150,504
41	Bond Interest	223	361	414	24,639	24,639	24,639
42							
43	Times Bond Interest Earned						
44	Before Income Taxes	474.97	253	295.73	3.17	3.17	6.11
45							
46	EBI	53,377	293,879	60,081	59,668	59,668	94,715
47							
48	Times Total Interest and						
49	Preferred Dividends Earned						
50	After Income Taxes	239.78	815	145.24	2.42	2.42	3.84
51							
52							
53							
54							
55							
56	SUPPORTING SCHEDULES						
57	C-1						
58	E-2						
59	F-1						

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Summary Of Capital Structure

Exhibit
Schedule A-3
Page 1
Witness: Cifuentes

Line No.	Description:	Prior Years Ended December 31, 2018	Prior Years Ended December 31, 2019	Test Year December 31, 2020	Projected Year December 31, 2021
1	Short-Term Debt	-	-	-	-
2					
3	Long-Term Debt	-	-	-	1,445,333
4					
5	Total Debt	$ -	$ -	$ -	$ 1,445,333
6					
7	Preferred Stock	-	-	-	-
8					
9	Common Equity	2,286,856	2,567,493	2,624,733	1,696,696
10					
11					
12	Total Capital & Debt	$ 2,286,856	$ 2,567,493	$ 2,624,733	$ 3,142,029
13					
14					
15	Capitalization Ratios:				
16					
17	Long-Term Debt	0.00%	0.00%	0.00%	46.00%
18					
19	Total Debt	0.00%	0.00%	0.00%	46.00%
20					
21					
22	Preferred Stock	-	-	-	-
23					
24	Common Equity	100.00%	100.00%	100.00%	54.00%
25					
26					
27	Total Capital	100.00%	100.00%	100.00%	100.00%
28					
29					
30	Weighted Cost of				
31	Senior Capital	0.00%	0.00%	0.00%	1.44%
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43	SUPPORTING SCHEDULES:				
44	E-1				
45	D-1				

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Construction Expenditures And Gross Utility Plant In Service

Exhibit
Schedule A-4
Page 1
Witness: Cifuentes

Line No.		Construction Expenditures	Net Plant Placed in Service	Gross Utility Plant in Service
1	Prior Year Ended December 31, 2018	(10,852)	(10,852)	3,482,836
2				
3	Prior Year Ended December 31, 2019	(34,371)	4,551	3,487,388
4				
5	Test Year Ended December 31, 2020	(467,803)	47,285	3,534,672
6				
7	Projected Year Ended December 31, 2021	980,548	730,805	4,265,477
8				
9	SUPPORTING SCHEDULES:			
10	B-2			
11	E-5			
12	F-3			

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Summary Statements Of Cash Flows

Exhibit
Schedule A-5
Page 1
Witness: Cifuentes

Line No.		Prior Year Ended December 31, 2018	Prior Year Ended December 31, 2019	Test Year Ended December 31, 2020	Projected Year Present Rates December 31, 2021	Projected Year Proposed Rates December 31, 2021
1	Cash Flows from Operating Activities					
2	Net Income	$ 52,601	$ 292,209	$ 57,240	$ 77,488	$ 92,288
3	Adjustments to reconcile net income to net cash					
4	provided by operating activities:					
5	Depreciation and Amortization	134,487	150,293	130,019	137,205	137,205
6	Other -Adjustments	(16,311)	(34,904)	(10,228)	-	-
7	Changes in Certain Assets and Liabilities:					
8	Restricted Cash				-	-
9	Accounts Receivable	(5,806)	(1,239)	(5,440)	-	-
10	Other Receivables	-	-	-	-	-
11	Materials and Supplies Inventory	-	-	-	-	-
12	Prepaid Expenses	1,235	1,505	(3,721)	-	-
13	Deferred Regulatory Assets/Liabilities	-	-	-	-	-
14	Deferred Income Taxes	52,356	(200,943)	64,061	-	-
15	Receivables/Payables to Associated Co.	(254,516)	(222,102)	95,412	-	-
16	Accounts Payable	-	-	-	-	-
17	Interest Payable	-	-	-	-	-
18	Customer Meter and Security Deposits	12,420	4,580	(3,590)	-	-
19	Taxes Payable	-	-	-	-	-
20	Other assets and liabilities	30,115	46,799	121,797	-	-
21	Rounding	(1)	1	2	-	-
22	Net Cash Flow Provided by Operating Activities	$ 6,581	$ 36,199	$ 445,552	$ 214,693	$ 229,493
23	Cash Flow From Investing Activities:					
24	Capital Expenditures	(10,852)	(34,371)	(467,803)	(980,548)	(980,548)
25	Plant Held for Future Use	-	-	-		
26	Changes in debt reserve fund	-	-	-		
27	Net Cash Flows from Investing Activities	$ (10,852)	$ (34,371)	$ (467,803)	$ (980,548)	$ (980,548)
28	Cash Flow From Financing Activities					
29	Change in Restricted Cash	-	-	-	-	-
30	Proceeds from Long-Term Debt	-	-	-	-	-
31	Net receipt of contributions in aid of construction	-	-	-	-	-
32	Net receipts of advances in aid of construction	5,000	7,009	26,807	-	-
33	Long-Term Debt	-	-	-	1,445,333	1,452,141
34	Distributions/Dividends Paid	-	(11,572)	-	(464,840)	(471,648)
35	Deferred Financing Costs	-	-	-	-	-
36	Paid in Capital	-	-	-	-	-
37	Net Cash Flows Provided (Used) by Financing Activities	$ 5,000	$ (4,563)	$ 26,807	$ 980,493	$ 980,493
38	Increase(decrease) in Cash and Cash Equivalents	729	(2,735)	4,556	214,638	229,438
39	Cash and Cash Equivalents at Beginning of Year	6,154	6,883	4,148	8,704	8,704
40	Cash and Cash Equivalents at End of Year	$ 6,883	$ 4,148	$ 8,704	$ 223,342	$ 238,142
41						
42						
43						
44						
45	SUPPORTING SCHEDULES:					
46	E-3					
47	F-2					

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Summary Of Rate Base

Exhibit
Schedule B-1
Page 1
Witness: Cifuentes

Line No.		Original Cost Rate base	Fair Value Rate Base
1			
2	Gross Utility Plant in Service	$ 4,265,477	$ 4,265,477
3	Less: Accumulated Depreciation	1,717,828	1,717,828
4			
5	Net Utility Plant in Service	$ 2,547,649	$ 2,547,649
6			
7	Less:		
8	Advances in Aid of Construction	-	-
9			
10	Contributions in Aid of Construction	1,013,352	1,013,352
11			
12	Accumulated Amortization of CIAC	(147,204)	(147,204)
13			
14	Customer Meter Deposits	6,340	6,340
15	Customer Security Deposits	(160)	(160)
16	Accumulated Deferred Income Tax	(5,387)	(5,387)
17	Deferred Regulatory Liability - Tax (EADIT)	(39,354)	(39,354)
18			
19	Plus:		
20	Deferred Reg. Asset - Plant Closure	-	-
21			
22	Prepayments	7,498	7,498
23	Materials and Sup[plies	-	-
24	Cash Working Capital	(10,766)	(10,766)
25			
26			
27	Total Rate Base	$ 1,716,795	$ 1,716,795
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42	SUPPORTING SCHEDULES:		
43	B-2		
44	B-3		
45	B-5		
46	E-1		

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments

Exhibit
Schedule B-2
Page 1
Witness: Cifuentes

Line No.		Actual at End of Test Year	Proforma Adjustment	Adjusted at end of Test Year
1				
2	Gross Utility Plant in Service	$ 3,534,672	730,805	$ 4,265,477
3				
4	**Less:**			
5				
6	Accumulated Depreciation	1,727,000	(9,173)	1,717,828
7				
8				
9				
10	Net Utility Plant in Service	$ 1,807,672		$ 2,547,649
11				
12	**Less:**			
13				
14	Advances in Aid of Construction	-	-	-
15				
16				
17	Contributions in Aid of Construction	1,013,252	100	1,013,352
18				
19	Accumulated Amortization of CIAC	(85,869)	(61,335)	(147,204)
20				
21	Customer Meter Deposits	6,340	-	6,340
22	Customer Security Deposits	(160)	-	(160)
23	Accumulated Deferred Income Tax	(84,526)	79,138	(5,387)
24	Deferred Regulatory Liability - Tax (EADIT)	-	(39,354)	(39,354)
25				
26				
27	**Plus:**			
28		-	-	-
29	Prepayments	7,498	-	7,498
30	Materials and Supplies	-	-	-
31	Cash Working capital	-	(10,766)	(10,766)
32				
33				
34	Total	$ 966,133		$ 1,716,795
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45	SUPPORTING SCHEDULES:			RECAP SCHEDULES:
46	B-2, pages 2			B-1
47	E-1			

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments

Exhibit
Schedule B-2
Page 2
Witness: Cifuentes

Line No.		Actual at End of Test Year	Proforma Adjustments 1 Plant-in-Service	2 Accumulated Depreciation	3 CIAC	4 AIAC	5 Deferred Regulatory Assets	6 ADIT/EADIT	7 Working Capital	Adjusted at end of Test Year
1										
2	Gross Utility Plant in Service	$ 3,534,672	730,805							$ 4,265,477
3										
4	**Less:**									
5										
6	Accumulated Depreciation	1,727,000		(9,173)						1,717,828
7										
8										
9										
10	Net Utility Plant in Service	$ 1,807,672	$ 730,805	$ 9,173	$ -	$ -	$ -	$ -	$ -	$ 2,547,649
11										
12	**Less:**									
13										
14	Advances in Aid of Construction					-				-
15										
16										
17	Contributions-in-Aid of Construction	1,013,252			100					1,013,352
18										
19	Accumulated Amortization of CIAC	(85,869)			(61,335)					(147,204)
20										
21	Customer Deposits	6,340								6,340
22	Customer Security Deposits	(160)								(160)
23	Accumulated Deferred Income Taxes	(84,526)						79,138		(5,387)
24	Deferred Regulatory Liability - Tax (EADIT)							(39,354)		(39,354)
25										
26	**Plus:**									
27										-
28	Prepayments	7,498								7,498
29	Materials and Supplies	-								-
30	Cash Working Capital								(10,766)	(10,766)
31										
32	Total	$ 966,133	$ 730,805	$ 9,173	$ 61,235	$ -	$ -	$ (39,785)	$ (10,766)	$ 1,716,795
33										
34										
35										
36	SUPPORTING SCHEDULES:						RECAP SCHEDULES:			
37	B-2, pages 3-5						B-1			
38	E-1									

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment Number 1

Exhibit
Schedule B-2
Page 3
Witness: Cifuentes

Plant-in-Service

Line No.	NARUC	Description	Actual Original Cost	A 3.1 PTY Plant	B 3.2 PTY Retirements	C 3.3 2020 Plant Adjustments	D 3.4 Allocated Plant Adjustments	E 3.5 Prior Case Plant Adjustments	F 3.6 Adjustments to Reconcile Plant to Reconstruction	Adjusted Original Cost
1	106	Plant not Classified						-		-
2	351	Organization	37,898	-	-	-	-	-	-	37,898
3	352	Franchise	808	-	-	-	-	-	(63)	745
4	353	Land	400,000	5,565	-	-	937	-	-	406,502
5	354	Structures & Improvements	549,609	44,675	(1,598)	3,049	28,518	5,710	47	630,009
6	355	Power Generation	124,916	-	-	-	21	-	-	124,937
7	360	Collection Sewer Forced	7,141	-	-	-	-	-	-	7,141
8	361	Collection Sewers Gravity	480,710	-	-	-	-	-	0	480,710
9	362	Special Collecting Structures	-	-	-	-	-	-	-	-
10	363	Customer Services	122,760	-	-	-	-	-	-	122,760
11	364	Flow Measuring Devices	10,980	-	-	-	-	-	-	10,980
12	365	Flow Measuring Installations	12,858	-	-	-	-	-	-	12,858
13	366	Reuse Services	-	-	-	-	-	-	-	-
14	367	Reuse Meters And Installation	-	-	-	-	-	-	-	-
15	370	Receiving Wells	26,226	-	-	-	-	-	-	26,226
16	371	Pumping Equipment	154,860	1,248	(31,838)	54,849	-	16,185	0	195,304
17	374	Reuse Distribution Reservoirs	-	-	-	-	-	-	-	-
18	375	Reuse Trans. and Dist. System	126,541	-	-	-	-	-	-	126,541
19	380	Treatment & Disposal Equipment	1,416,918	449,500	(94,371)	28,750	-	9,593	0	1,810,389
20	381	Plant Sewers	27,752	128,205	-	-	-	-	-	155,957
21	382	Outfall Sewer Lines	5,541	0	-	-	-	-	-	5,541
22	389.0	Other Sewer Plant & Equipment	-	-	-	-	-	-	-	-
23	390	Office Furniture & Equipment	1,747	-	-	-	17,017	-	-	18,764
24	390.1	Computers and Software	12,188	13	-	-	939	-	-	13,140
25	391	Transportation Equipment	-	-	-	-	-	-	-	-
26	392	Stores Equipment	-	-	-	-	-	-	-	-
27	393	Tools, Shop And Garage Equip	8,229	-	(964)	-	-	-	(0)	7,264
28	394	Laboratory Equip	6,990	-	-	-	-	-	(0)	6,990
29	395	Power Operated Equipment	-	-	-	-	3,423	-	-	3,423
30	396	Communication Equip	-	-	-	36,729	-	-	-	36,729
31	397	Miscellaneous Equip	-	-	-	-	-	-	-	-
32	398	Other Tangible Plant	-	24,669	-		-	-	-	24,669
33										
34		SUBTOTAL	3,534,672	653,874	(128,772)	123,377	50,855	31,487	(16)	4,265,477
35										
36										
37	103.0	Plant Held for Future Use		-	-		-		-	-
38		TOTALS	$ 3,534,672	$ 653,874	$ (128,772)	$ 123,377	$ 50,855	$ 31,487	$ (16)	$ 4,265,477
39										
40	Plant-in-Service per Books									$ 3,534,672
41										
42	Increase (decrease) in Plant-in-Service									$ 730,805
43										
44	Adjustment to Plant-in-Service									$ 730,805
45										
46	SUPPORTING SCHEDULES									
47	B-2, pages 3.1 to 3.5									

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment Number 1 - A
Post Test-Year Plant

Exhibit
Schedule B-2
Page 3.1
Witness: Cifuentes

Line No.	NARUC	Description	Amount	Reference
1	106	Plant not Classified		EDO Post-Test Year Plant ADJ WP
2	351	Organization		
3	352	Franchise		
4	353	Land	5,565	
5	354	Structures & Improvements	44,675	
6	355	Power Generation		
7	360	Collection Sewer Forced		
8	361	Collection Sewers Gravity		
9	362	Special Collecting Structures		
10	363	Customer Services		
11	364	Flow Measuring Devices		
12	365	Flow Measuring Installations		
13	366	Reuse Services		
14	367	Reuse Meters And Installation		
15	370	Receiving Wells		
16	371	Pumping Equipment	1,248	
17	374	Reuse Distribution Reservoirs		
18	375	Reuse Trans. and Dist. System		
19	380	Treatment & Disposal Equipment	449,500	
20	381	Plant Sewers	128,205	
21	382	Outfall Sewer Lines	0	
22	389.0	Other Sewer Plant & Equipment		
23	390	Office Furniture & Equipment		
24	390.1	Computers and Software	13	
25	391	Transportation Equipment		
26	392	Stores Equipment		
27	393	Tools, Shop And Garage Equip		
28	394	Laboratory Equip		
29	395	Power Operated Equipment		
30	396	Communication Equip	-	
31	397	Miscellaneous Equip		
32	398	Other Tangible Plant	24,669	
33			-	
34		TOTAL	$ 653,874	
35				
36				
37				
38				
39				
40				
41				
42				
43				
44	SUPPORTING SCHEDULE			
45	Testimony			
46	Work papers			

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment Number 1 - B
Post Test-Year Retirements

Exhibit
Schedule B-2
Page 3.2
Witness: Cifuentes

Line No.	NARUC	Description	Amount	Reference
1	106	Plant not Classified		EDO Retirements 07.14.21
2	351	Organization		
3	352	Franchise		
4	353	Land		
5	354	Structures & Improvements	(1,598)	
6	355	Power Generation		
7	360	Collection Sewer Forced		
8	361	Collection Sewers Gravity		
9	362	Special Collecting Structures		
10	363	Customer Services		
11	364	Flow Measuring Devices		
12	365	Flow Measuring Installations		
13	366	Reuse Services		
14	367	Reuse Meters And Installation		
15	370	Receiving Wells		
16	371	Pumping Equipment	(31,838)	
17	374	Reuse Distribution Reservoirs		
18	375	Reuse Trans. and Dist. System		
19	380	Treatment & Disposal Equipment	(94,371)	
20	381	Plant Sewers		
21	382	Outfall Sewer Lines		
22	389.0	Other Sewer Plant & Equipment		
23	390	Office Furniture & Equipment		
24	390.1	Computers and Software		
25	391	Transportation Equipment		
26	392	Stores Equipment		
27	393	Tools, Shop And Garage Equip	(964)	
28	394	Laboratory Equip		
29	395	Power Operated Equipment		
30	396	Communication Equip		
31	397	Miscellaneous Equip		
31	398	Other Tangible Plant		
29				
30		TOTAL	$ (128,772)	
31				
32				
33				
34				
35				
36				
37				
38				
39				
40	SUPPORTING SCHEDULE			
41	Testimony			
42	Work papers			

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment Number 1 - C
2020 Plant Adjustments

Exhibit
Schedule B-2
Page 3.3
Witness: Cifuentes

Line No.	NARUC	Description	Amount	Reference
1	106	Plant not Classified		EDO Test Year Plant ADJ WP
2	351	Organization		
3	352	Franchise		
4	353	Land		
5	354	Structures & Improvements	3,049	
6	355	Power Generation		
7	360	Collection Sewer Forced		
8	361	Collection Sewers Gravity		
9	362	Special Collecting Structures		
10	363	Customer Services		
11	364	Flow Measuring Devices		
12	365	Flow Measuring Installations		
13	366	Reuse Services		
14	367	Reuse Meters And Installation		
15	370	Receiving Wells		
16	371	Pumping Equipment	54,849	
17	374	Reuse Distribution Reservoirs		
18	375	Reuse Trans. and Dist. System		
19	380	Treatment & Disposal Equipment	28,750	
20	381	Plant Sewers		
21	382	Outfall Sewer Lines		
22	389.0	Other Sewer Plant & Equipment		
23	390	Office Furniture & Equipment		
24	390.1	Computers and Software		
25	391	Transportation Equipment		
26	392	Stores Equipment		
27	393	Tools, Shop And Garage Equip		
28	394	Laboratory Equip		
29	395	Power Operated Equipment		
30	396	Communication Equip	36,729	
31	397	Miscellaneous Equip		
31	398	Other Tangible Plant		
29				
30		TOTAL	$ 123,377	
31				
32				
33				
34				
35				
36				
37				
38				
39				
40		SUPPORTING SCHEDULE		
41		Testimony		
42		Work papers		

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment Number 1 - D
Allocated Corporate Plant

Exhibit
Schedule B-2
Page 3.4
Witness: Cifuentes

Line No.	NARUC	Description	AZ Building Adj WP Amount	2020 Oakville Building (GC-EDO) WP Amount	8020 TY Plant Adj WP Amount	8020 PTYP GC-EDO Adj WP Amount	Total Amount
1	106	Plant not Classified					
2	351	Organization					
3	352	Franchise					
4	353	Land	211	726		-	937
5	354	Structures & Improvements	22,364	6,154	-	-	28,518
6	355	Power Generation	21			-	21
7	360	Collection Sewer Forced					$ -
8	361	Collection Sewers Gravity					$ -
9	362	Special Collecting Structures					
10	363	Customer Services					-
11	364	Flow Measuring Devices					-
12	365	Flow Measuring Installations					-
13	366	Reuse Services					-
14	367	Reuse Meters And Installation					
15	370	Receiving Wells					-
16	371	Pumping Equipment					-
17	374	Reuse Distribution Reservoirs					
18	375	Reuse Trans. and Dist. System					-
19	380	Treatment & Disposal Equipment					-
20	381	Plant Sewers					-
21	382	Outfall Sewer Lines					-
22	389.0	Other Sewer Plant & Equipment					-
23	390	Office Furniture & Equipment	3,854		1,781	11,381	17,017
24	390.1	Computers and Software	939	-			939
25	391	Transportation Equipment					-
26	392	Stores Equipment					-
27	393	Tools, Shop And Garage Equip					-
28	394	Laboratory Equip					-
29	395	Power Operated Equipment	3,423			-	3,423
30	396	Communication Equip					-
31	397	Miscellaneous Equip			-		-
32	398	Other Tangible Plant					-
33							
34		TOTAL	$ 30,812	$ 6,880	$ 1,781	$ 11,381	$ 50,855
35							
36							
37							
38							
39							
40							
41							
42							
43							
44	SUPPORTING SCHEDULE						
45	Testimony						
46	Work papers						

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment Number 1 - E
Prior Case Plant Adjustments

Exhibit
Schedule B-2
Page 3.5
Witness: Cifuentes

Line No.	NARUC	Description	Amount	Reference
1	106	Plant not Classified		Plant (ADJ Per Decision)
2	351	Organization		
3	352	Franchise		
4	353	Land		
5	354	Structures & Improvements	5,710	
6	355	Power Generation		
7	360	Collection Sewer Forced		
8	361	Collection Sewers Gravity		
9	362	Special Collecting Structures		
10	363	Customer Services		
11	364	Flow Measuring Devices		
12	365	Flow Measuring Installations		
13	366	Reuse Services		
14	367	Reuse Meters And Installation		
15	370	Receiving Wells		
16	371	Pumping Equipment	16,185	
17	374	Reuse Distribution Reservoirs		
18	375	Reuse Trans. and Dist. System		
19	380	Treatment & Disposal Equipment	9,593	
20	381	Plant Sewers		
21	382	Outfall Sewer Lines		
22	389.0	Other Sewer Plant & Equipment		
23	390	Office Furniture & Equipment		
24	390.1	Computers and Software		
25	391	Transportation Equipment		
26	392	Stores Equipment		
27	393	Tools, Shop And Garage Equip		
28	394	Laboratory Equip		
29	395	Power Operated Equipment		
30	396	Communication Equip		
31	397	Miscellaneous Equip		
32	398	Other Tangible Plant		
33				
34		TOTAL	$ 31,487	
35				
36				
37				
38				
39				
40				
41				
42				
43				
44	SUPPORTING SCHEDULE			
45	Testimony			
46	Work papers			

Reconciliation of Plant to Plant Reconstruction

Line No.	NARUC	Description	Original Cost	B-2 Adjustments	Adjusted Original Cost	Plant Per Reconstruction	Difference
1	106	Plant not Classified	$ -	$ -	$ -	$ -	-
2	351	Organization	37,898	-	37,898	37,898	-
3	352	Franchise	808	-	808	745	(63)
4	353	Land	400,000	6,502	406,502	406,502	-
5	354	Structures & Improvements	549,609	80,353	629,963	630,009	47
6	355	Power Generation	124,916	21	124,937	124,937	-
7	360	Collection Sewer Forced	7,141	-	7,141	7,141	-
8	361	Collection Sewers Gravity	480,710	-	480,710	480,710	0
9	362	Special Collecting Structures	-	-	-		-
10	363	Customer Services	122,760	-	122,760	122,760	-
11	364	Flow Measuring Devices	10,980	-	10,980	10,980	-
12	365	Flow Measuring Installations	12,858	-	12,858	12,858	-
13	366	Reuse Services	-	-	-	-	-
14	367	Reuse Meters And Installation	-	-	-		-
15	370	Receiving Wells	26,226	-	26,226	26,226	-
16	371	Pumping Equipment	154,860	40,444	195,304	195,304	0
17	374	Reuse Distribution Reservoirs	-	-	-		-
18	375	Reuse Trans. and Dist. System	126,541	-	126,541	126,541	-
19	380	Treatment & Disposal Equipment	1,416,918	393,471	1,810,389	1,810,389	0
20	381	Plant Sewers	27,752	128,205	155,957	155,957	-
21	382	Outfall Sewer Lines	5,541	0	5,541	5,541	-
22	389.0	Other Sewer Plant & Equipment	-	-	-	-	-
23	390	Office Furniture & Equipment	1,747	17,017	18,764	18,764	-
24	390.1	Computers and Software	12,188	952	13,140	13,140	-
25	391	Transportation Equipment	-	-	-	-	-
26	392	Stores Equipment	-	-	-	-	-
27	393	Tools, Shop And Garage Equip	8,229	(964)	7,264	7,264	(0)
28	394	Laboratory Equip	6,990	-	6,990	6,990	(0)
29	395	Power Operated Equipment	-	3,423	3,423	3,423	-
30	396	Communication Equip	-	36,729	36,729	36,729	-
31	397	Miscellaneous Equip	-	-	-	-	-
32	398	Other Tangible Plant	-	24,669	24,669	24,669	-
33							
34	103.0	Plant Held for Future Use	-	-	-		-
35		TOTALS	$ 3,534,672	$ 730,821	$ 4,265,493	$ 4,265,477	$ (16)
36							
37							
38		SUPPORTING SCHEDULE					
39		B-2, pages 3.1 through 3.4					
40		B-2, pages 3.6 through 3.10					

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment Number 2

Exhibit
Schedule B-2
Page 4
Witness: Cifuentes

Accumulated Depreciation

Line No.	NARUC	Description	Per Books Accum. Depr.	Adjustments A 4.1 PTY Plant A/D	B 4.2 PTY Retirements	C 4.3 2020 Plant Adjustments A/D	D 4.4 Allocated Plant A/D	E 4.5 Prior Case Plant Adjustments Plant A/D	F 4.6 Adjustments to Reconcile A/D to Reconstruction	Adjusted Accum. Depr.
1	106	Plant not Classified	-	-	-	-	-	-	-	-
2	351	Organization	550	-	-	-	-	-	(550)	-
3	352	Franchise	(444)	-	-	-	-	-	444	-
4	353	Land	-	-	-	-	-	-	-	-
5	354	Structures & Improvements	250,155	744	(1,598)	51	1,704	79	15,958	267,092
6	355	Power Generation	67,581	-	-	-	1	-	4,629	72,210
7	360	Collection Sewer Forced	2,083	-	-	-	-	-	107	2,190
8	361	Collection Sewers Gravity	139,420	-	-	-	-	-	5,642	145,063
9	362	Special Collecting Structures	-	-	-	-	-	-	-	-
10	363	Customer Services	20,665	-	-	-	-	-	16,982	37,646
11	364	Flow Measuring Devices	7,623	-	-	-	-	-	531	8,154
12	365	Flow Measuring Installations	7,928	-	-	-	-	-	250	8,178
13	366	Reuse Services	15,140	-	-	-	-	-	(15,140)	-
14	367	Reuse Meters And Installation	-	-	-	-	-	-	-	-
15	370	Receiving Wells	12,749	-	-	-	-	-	642	13,391
16	371	Pumping Equipment	146,092	78	(31,838)	3,428	-	843	10,980	129,583
17	374	Reuse Distribution Reservoirs	-	-	-	-	-	-	-	-
18	375	Reuse Trans. and Dist. System	45,818	-	-	-	-	-	2,689	48,507
19	380	Treatment & Disposal Equipment	966,179	11,237	(94,371)	719	-	200	48,449	932,413
20	381	Plant Sewers	20,236	3,205	-	-	-	-	1,041	24,482
21	382	Outfall Sewer Lines	2,679	0	-	-	-	-	151	2,829
22	389.0	Other Sewer Plant & Equipment	-	-	-	-	-	-	-	-
23	390	Office Furniture & Equipment	12,188	-	-	-	568	-	(10,588)	2,167
24	390.1	Computers and Software	1,551	1	-	-	94	-	10,637	12,283
25	391	Transportation Equipment	-	-	-	-	-	-	-	-
26	392	Stores Equipment	-	-	-	-	-	-	-	-
27	393	Tools, Shop And Garage Equip	2,931	-	(964)	-	-	-	184	2,150
28	394	Laboratory Equip	5,878	-	-	-	-	-	457	6,335
29	395	Power Operated Equipment	-	-	-	-	86	-	-	86
30	396	Communication Equip	-	-	-	1,836	-	-	-	1,836
31	397	Miscellaneous Equip	-	-	-	-	-	-	-	-
31	398	Other Tangible Plant	-	1,233	-	-	-	-	-	1,233
29										
30		SUBTOTAL	1,727,000	16,499	(128,772)	6,034	2,452	1,122	93,493	1,717,828
31										
32										
33	103.0	Plant Held for Future Use	-							-
34		TOTALS	$ 1,727,000	$ 16,499	$ (128,772)	$ 6,034	$ 2,452	$ 1,122	$ 93,493	$ 1,717,828
35										
36		Accumulated Depreciation per Books								$ 1,727,000
37										
38		Increase (decrease) in Accumulated Depreciation								$ (9,173)
39										
40		Adjustment to Accumulated Depreciation								$ (9,173)
41										
42		SUPPORTING SCHEDULES								
43		B-2, pages 4.1 through 4.5								

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment Number 2 - A
Post Test-Year Plant Depreciation

Exhibit
Schedule B-2
Page 4.1
Witness: Cifuentes

Line No.	NARUC	Description	Amount	Depr. Rate	Depreciation (1/2 yr conv.)
1	106	Plant not Classified	$ -	0.0%	$ -
2	351	Organization	-	0.0%	-
3	352	Franchise	-	0.0%	-
4	353	Land	5,565	0.0%	-
5	354	Structures & Improvements	44,675	3.3%	744
6	355	Power Generation	-	5.0%	-
7	360	Collection Sewer Forced	-	2.0%	-
8	361	Collection Sewers Gravity	-	2.0%	-
9	362	Special Collecting Structures		2.0%	-
10	363	Customer Services	-	2.0%	-
11	364	Flow Measuring Devices	-	10.0%	-
12	365	Flow Measuring Installations	-	10.0%	-
13	366	Reuse Services	-	2.0%	-
14	367	Reuse Meters And Installation		8.3%	-
15	370	Receiving Wells	-	3.3%	-
16	371	Pumping Equipment	1,248	12.5%	78
17	374	Reuse Distribution Reservoirs		2.5%	-
18	375	Reuse Trans. and Dist. System	-	2.5%	-
19	380	Treatment & Disposal Equipment	449,500	5.0%	11,237
20	381	Plant Sewers	128,205	5.0%	3,205
21	382	Outfall Sewer Lines	0	3.3%	0
22	389	Other Sewer Plant & Equipment	-	6.7%	-
23	390	Office Furniture & Equipment	-	6.7%	-
24	390.1	Computers and Software	13	20.0%	1
25	391	Transportation Equipment	-	20.0%	-
26	392	Stores Equipment	-	4.0%	-
27	393	Tools, Shop And Garage Equip	-	5.0%	-
28	394	Laboratory Equip	-	10.0%	-
29	395	Power Operated Equipment	-	5.0%	-
30	396	Communication Equip	-	10.0%	-
31	397	Miscellaneous Equip	-	10.0%	-
31	398	Other Tangible Plant	24,669	10.0%	1,233
29					
30		TOTAL	$ 653,874		$ 16,499
31					
32					
33					
34					
35					
36					
37					
38					
39					
40	SUPPORTING SCHEDULE				
41	Testimony				
42	Work papers				

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment Number 2 - B
Post Test-Year Retirements

Exhibit
Schedule B-2
Page 4.2
Witness: Cifuentes

Line No.	NARUC	Description	A/D Amount	Reference
1	106	Plant not Classified	$ -	EDO Retirements 07.14.21
2	351	Organization	-	
3	352	Franchise	-	
4	353	Land	-	
5	354	Structures & Improvements	(1,598)	
6	355	Power Generation	-	
7	360	Collection Sewer Forced	-	
8	361	Collection Sewers Gravity	-	
9	362	Special Collecting Structures		
10	363	Customer Services	-	
11	364	Flow Measuring Devices	-	
12	365	Flow Measuring Installations	-	
13	366	Reuse Services	-	
14	367	Reuse Meters And Installation		
15	370	Receiving Wells	-	
16	371	Pumping Equipment	(31,838)	
17	374	Reuse Distribution Reservoirs		
18	375	Reuse Trans. and Dist. System	-	
19	380	Treatment & Disposal Equipment	(94,371)	
20	381	Plant Sewers	-	
21	382	Outfall Sewer Lines	-	
22	389	Other Sewer Plant & Equipment	-	
23	390	Office Furniture & Equipment	-	
24	390.1	Computers and Software	-	
25	391	Transportation Equipment	-	
26	392	Stores Equipment	-	
27	393	Tools, Shop And Garage Equip	(964)	
28	394	Laboratory Equip	-	
29	395	Power Operated Equipment	-	
30	396	Communication Equip	-	
31	397	Miscellaneous Equip	-	
31	398	Other Tangible Plant	-	
29				
30		TOTAL	$ (128,772)	

SUPPORTING SCHEDULE
Testimony
Work papers

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment Number 2 - C
Plant Adjustments

Exhibit
Schedule B-2
Page 4.3
Witness: Cifuentes

Line No.	NARUC	Description	A/D Amount	Reference
1	106	Plant not Classified		EDO Test Year Plant ADJ WP
2	351	Organization		
3	352	Franchise		
4	353	Land		
5	354	Structures & Improvements	51	
6	355	Power Generation		
7	360	Collection Sewer Forced		
8	361	Collection Sewers Gravity		
9	362	Special Collecting Structures		
10	363	Customer Services		
11	364	Flow Measuring Devices		
12	365	Flow Measuring Installations		
13	366	Reuse Services		
14	367	Reuse Meters And Installation		
15	370	Receiving Wells		
16	371	Pumping Equipment	3,428	
17	374	Reuse Distribution Reservoirs		
18	375	Reuse Trans. and Dist. System		
19	380	Treatment & Disposal Equipment	719	
20	381	Plant Sewers		
21	382	Outfall Sewer Lines		
22	389	Other Sewer Plant & Equipment		
23	390	Office Furniture & Equipment		
24	390.1	Computers and Software		
25	391	Transportation Equipment		
26	392	Stores Equipment		
27	393	Tools, Shop And Garage Equip		
28	394	Laboratory Equip		
29	395	Power Operated Equipment		
30	396	Communication Equip	1,836	
31	397	Miscellaneous Equip		
31	398	Other Tangible Plant		
29				
30		TOTAL	$ 6,034	
31				
32				
33				
34				
35				
36				
37				
38				
39				
40	SUPPORTING SCHEDULE			
41	Testimony			
42	Work papers			

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment Number 2 - D
Allocated Corporate Plant A/D

Exhibit
Schedule B-2
Page 4.4
Witness: Cifuentes

Line No.	NARUC	Description	AZ Building Adj WP Amount	2020 Oakville Building (GC-EDO) WP Amount	8020 TY Plant Adj WP Amount	8020 PTYP GC-EDO Adj WP Amount	Total Amount
1	106	Plant not Classified	$ -	$ -	$ -	$ -	$ -
2	351	Organization					-
3	352	Franchise					-
4	353	Land					-
5	354	Structures & Improvements	372	1,332	-	-	1,704
6	355	Power Generation	1			-	1
7	360	Collection Sewer Forced					-
8	361	Collection Sewers Gravity					-
9	362	Special Collecting Structures					-
10	363	Customer Services					-
11	364	Flow Measuring Devices					-
12	365	Flow Measuring Installations					-
13	366	Reuse Services					-
14	367	Reuse Meters And Installation					-
15	370	Receiving Wells					-
16	371	Pumping Equipment					-
17	374	Reuse Distribution Reservoirs					-
18	375	Reuse Trans. and Dist. System					-
19	380	Treatment & Disposal Equipment					-
20	381	Plant Sewers					-
21	382	Outfall Sewer Lines					-
22	389	Other Sewer Plant & Equipment	-				-
23	390	Office Furniture & Equipment	129		59	380	568
24	390.1	Computers and Software	94	-			94
25	391	Transportation Equipment					-
26	392	Stores Equipment					-
27	393	Tools, Shop And Garage Equip					-
28	394	Laboratory Equip					-
29	395	Power Operated Equipment	86			-	86
30	396	Communication Equip					-
31	397	Miscellaneous Equip			-		-
32	398	Other Tangible Plant					-
33							-
34		TOTAL	$ 681	$ 1,332	$ 59	$ 380	$ 2,452
35							
36							
37							
38							
39							
40							
41							
42							
43							
44	SUPPORTING SCHEDULE						
45	Testimony						
46	Work papers						

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment Number 2 - E
Prior Case Plant Adjustments

Exhibit
Schedule B-2
Page 4.5
Witness: Cifuentes

Line No.	NARUC	Description	Amount	Reference
1	106	Plant not Classified		Plant (ADJ Per Decision)
2	351	Organization		
3	352	Franchise		
4	353	Land		
5	354	Structures & Improvements	79	
6	355	Power Generation		
7	360	Collection Sewer Forced		
8	361	Collection Sewers Gravity		
9	362	Special Collecting Structures		
10	363	Customer Services		
11	364	Flow Measuring Devices		
12	365	Flow Measuring Installations		
13	366	Reuse Services		
14	367	Reuse Meters And Installation		
15	370	Receiving Wells		
16	371	Pumping Equipment	843	
17	374	Reuse Distribution Reservoirs		
18	375	Reuse Trans. and Dist. System		
19	380	Treatment & Disposal Equipment	200	
20	381	Plant Sewers		
21	382	Outfall Sewer Lines		
22	389	Other Sewer Plant & Equipment		
23	390	Office Furniture & Equipment		
24	390.1	Computers and Software		
25	391	Transportation Equipment		
26	392	Stores Equipment		
27	393	Tools, Shop And Garage Equip		
28	394	Laboratory Equip		
29	395	Power Operated Equipment		
30	396	Communication Equip		
31	397	Miscellaneous Equip		
32	398	Other Tangible Plant		
33				
34		TOTAL	$ 1,122	
35				
36				
37				
38				
39				
40				
41				
42				
43				
44	SUPPORTING SCHEDULE			
45	Testimony			
46	Work papers			

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment Number 2 - F

Exhibit
Schedule B-2
Page 4.6
Witness: Cifuentes

Reconciliation of A/D to A/D Reconstruction

Line No.	NARUC	Description	A/D Original Cost	B-2 Adjustments	Adjusted A/D Original Cost	A/D Per Reconstruction	Difference
1	106	Plant not Classified	$ -	$ -	$ -		$ -
2	351	Organization	$ 550	$ -	$ 550		$ (550)
3	352	Franchise	$ (444)	$ -	$ (444)		$ 444
4	353	Land	$ -	$ -	$ -		$ -
5	354	Structures & Improvements	$ 250,155	$ 980	$ 251,134	267,092	$ 15,958
6	355	Power Generation	$ 67,581	$ 1	$ 67,581	72,210	$ 4,629
7	360	Collection Sewer Forced	$ 2,083	$ -	$ 2,083	2,190	$ 107
8	361	Collection Sewers Gravity	$ 139,420	$ -	$ 139,420	145,063	$ 5,642
9	362	Special Collecting Structures	$ -	$ -	$ -		$ -
10	363	Customer Services	$ 20,665	$ -	$ 20,665	37,646	$ 16,982
11	364	Flow Measuring Devices	$ 7,623	$ -	$ 7,623	8,154	$ 531
12	365	Flow Measuring Installations	$ 7,928	$ -	$ 7,928	8,178	$ 250
13	366	Reuse Services	$ 15,140	$ -	$ 15,140	-	$ (15,140)
14	367	Reuse Meters And Installation	$ -	$ -	$ -		$ -
15	370	Receiving Wells	$ 12,749	$ -	$ 12,749	13,391	$ 642
16	371	Pumping Equipment	$ 146,092	$ (27,489)	$ 118,603	129,583	$ 10,980
17	374	Reuse Distribution Reservoirs	$ -	$ -	$ -		$ -
18	375	Reuse Trans. and Dist. System	$ 45,818	$ -	$ 45,818	48,507	$ 2,689
19	380	Treatment & Disposal Equipment	$ 966,179	$ (82,215)	$ 883,964	932,413	$ 48,449
20	381	Plant Sewers	$ 20,236	$ 3,205	$ 23,441	24,482	$ 1,041
21	382	Outfall Sewer Lines	$ 2,679	$ 0	$ 2,679	2,829	$ 151
22	389	Other Sewer Plant & Equipment	$ -	$ -	$ -		$ -
23	390	Office Furniture & Equipment	$ 12,188	$ 568	$ 12,755	2,167	$ (10,588)
24	390.1	Computers and Software	$ 1,551	$ 95	$ 1,646	12,283	$ 10,637
25	391	Transportation Equipment	$ -	$ -	$ -		$ -
26	392	Stores Equipment	$ -	$ -	$ -		$ -
27	393	Tools, Shop And Garage Equip	$ 2,931	$ (964)	$ 1,966	2,150	$ 184
28	394	Laboratory Equip	$ 5,878	$ -	$ 5,878	6,335	$ 457
29	395	Power Operated Equipment	$ -	$ 86	$ 86	86	$ -
30	396	Communication Equip	$ -	$ 1,836	$ 1,836	1,836	$ -
31	397	Miscellaneous Equip	$ -	$ -	$ -		$ -
32	398	Other Tangible Plant	$ -	$ 1,233	$ 1,233	1,233	$ -
33							
34	108	Accumulated Depreciation	$ -	$ -	$ -		$ -
35							
36							
37							
38	103.0	Plant Held for Future Use					-
39		TOTALS	$ 1,727,000	$ (102,665)	$ 1,624,335	$ 1,717,828	$ 93,493
40							
41						$ -	

42 SUPPORTING SCHEDULE
43 B-2, pages 4.1 through 4.4
44 B-2, pages 3.6 through 3.10

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment 3

Exhibit
Schedule B-2
Page 5
Witness: Cifuentes

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

Line No.	Description	Gross CIAC	Accumulated Amortization
1	Computed balance at end of Test Year	$ 1,013,352	$ 147,204
2			
3	Book balance at end of Test Year	$ 1,013,252	$ 85,869
4			
5	Increase (decrease)	$ 100	$ 61,335
6			
7			
8	Adjustment to CIAC/AA CIAC	$ 100	$ (61,335)
9	Label	3a	3b
10			
11			
12			
13			
14			
15	SUPPORTING SCHEDULES		
16	E-1		
17	B-2, page 5.1		

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Contributions-in-Aid of Construction and Amortization
Adjustment 3

Exhibit
Schedule B-2
Page 5.1
Witness: Cifuentes

Line No.	Description		Vintage	Per Decision 10/31/2015	2015 Activity	Balance at 12/31/2015	2016 Activity	Balance at 12/31/2016	2017 Activity	Balance at 12/31/2017	2018 Activity	Balance at 12/31/2018	2019 Activity	Balance at 12/31/2019	2020 Activity	Balance at 12/31/2020
1	Contributions-in-Aid (CIAC)	Land	2006	$ 400,000	$ -	$ 400,000	$ -	$ 400,000	$ -	$ 400,000	$ -	$ 400,000	$ -	$ 400,000	$ -	$ 400,000
2	Contributions-in-Aid (CIAC)	Collection Mains/Services	2006	$ 613,352		$ 613,352		$ 613,352		$ 613,352		$ 613,352		$ 613,352		$ 613,352
3	**Total Contributions-in-Aid (CIAC)**			$ 1,013,352	$ -	$ 1,013,352	$ -	$ 1,013,352	$ -	$ 1,013,352	$ -	$ 1,013,352	$ -	$ 1,013,352	$ -	$ 1,013,352
4																
5	Amortization Rate	Land	2006													
6	Amortization Rate	Collection Mains/Services	2006		2.00%		2.00%		2.00%		2.00%		2.00%		2.00%	
7	Amortization	Land	2006		-	-	-	-	-	-	-	-	-	-	-	-
8	Amortization	Collection Mains/Services	2006	$ 85,869	$ -	$ 85,869	$ 12,267	$ 98,136	$ 12,267	$ 110,403	$ 12,267	$ 122,670	$ 12,267	$ 134,937	$ 12,267	$ 147,204
9																
10	**Total Amortization**			$ 85,869	$ -	$ 85,869	$ 12,267	$ 98,136	$ 12,267	$ 110,403	$ 12,267	$ 122,670	$ 12,267	$ 134,937	$ 12,267	$ 147,204
11																
12																
13	Net CIAC	Land	2006	$ 400,000		$ 400,000		$ 400,000		$ 400,000		$ 400,000		$ 400,000		$ 400,000
14	Net CIAC	Collection Mains/Services	2006	$ 527,483		$ 527,483		$ 515,216		$ 502,949		$ 490,682		$ 478,415		$ 466,148
15																
16	**Total Net CIAC**			$ 927,483	$ -	$ 927,483	$ -	$ 915,216	$ -	$ 902,949	$ -	$ 890,682	$ -	$ 878,415	$ -	$ 866,148

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment 4
Advances-in-Aid of Construction (AIAC)

Exhibit
Schedule B-2
Page 6
Witness: Cifuentes

Line No.	Description		
1	Computed balance at End OF Test Year	$	-
2			
3	Book balance at End of Test Year		
4			
5	Increase (decrease)	$	-
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16	SUPPORTING SCHEDULES		
17	B-2, page 6.1		

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Advances-in-Aid of Construction (AIAC)

Exhibit
Schedule B-2
Page 6.1
Witness: Cifuentes

Line No.	Description	Per Decision Balance 12/31/2014	2015 Activity	2015 Balance 12/31/2015	2016 Activity	2016 Balance 12/31/2016	2017 Activity	2017 Balance 12/31/2017	2018 Activity	2018 Balance 12/31/2018
1										
2										
3										
4										
5	Advances-on-Aid of Construction	$ 520,749	$ (363,994)	$ 156,755	$ (3,072)	$ 153,683	$ (153,683)	$ 0	$ -	$ 0
6										
7										
8										
9										
10										
11										
12	Total AIAC	$ 520,749	$ (363,994)	$ 156,755	$ (3,072)	$ 153,683	$ (153,683)	$ 0	$ -	$ 0

Liberty Utilities (Entrada Del Oro Sewer)
Test Year Ended December 31, 2020
Advances-in-Aid of Construction (AIAC)

Exhibit
Schedule B-2
Page 6.2
Witness: Cifuentes

Line No.	Description	2019		2020		2021	
1			Balance		Balance		Balance
2		Activity	12/31/2019	Activity	12/31/2020	Activity	12/31/2021
3							
4							
5	Advances-on-Aid of Construction						
6							
7							
8							
9							
10							
11							
12	Total AIAC	$ -	$ -	$ -	$ -	$ -	$ -

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment 6

Exhibit
Schedule B-2
Page 8.0
Witness: Bourassa

Deferred Income Tax

Line No.			Sewer Adjusted Book Value		Sewer Tax Value		Probability of Realization of Future Tax Benefit	Deductible TD (Taxable TD) Expected to be Realized	Effective Tax Rate	Future Tax Asset Current	Future Tax Asset Non Current	Future Tax Liability Current	Future Tax Liability Non Current
6		Plant-in-Service	$ 3,858,975	[1]									
7		Accum. Deprec.	(1,717,828)	[1]									
8		CIAC	(866,148)	[3]									
9	Fed.	Fixed Assets	$ 1,275,000		$ 1,236,842	[2]	100.0%	$ (38,157)	19.97%		$ -		$ (7,620)
10													
11	State	Fixed Assets	$ 1,275,000		1,508,279	[2]	100.0%	233,279	4.900%		11,431		-
12													
13	Fed &State	AIAC			6,340	[4]	100.0%	6,340	[4] 24.87%		1,577		-
14													
15	Fed &State	Other	-		-		100.0%	-	24.87%		-		-
16													
17										$ -	$ 13,008	$ -	$ (7,620)
18													
19		Net Asset (Liability)								$ 5,387			
20													
21		Allocation Factor								1.0000			
22													
23		Net Asset (Liability)								$ 5,387			
24													
25		DIT Asset (Liability) per Books (per unadjusted B-2, page 1)								$ 84,526			
26													
27		Adjustment to DIT								$ 79,138			
28													
29													
30													
31													
32													
33													
34		Footnotes - See page 8.1											

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Original Cost Rate Base Proforma Adjustments
Adjustment 6

Exhibit
Schedule B-2
Page 8.1
Witness: Bourassa

Line No.								
1	[1] **Per adjusted book balances, land not included, coporate plant not included, AFUDC Equity not included**							
2	Adjusted Plant-in-Service (from B-2, page 1)	$ 4,265,477						
3	Less: Land (from B-2, page 3)	(406,502)						
4	Historical thru 2020 AFUDC Equity	-						
5								
6	Plant-in-Serivce	$ 3,858,975						
7								
8	Adjusted A/D (from B-2, page 1)	$ (1,717,828)						
9	Less: Historical A/D thru 2020 AFUDC Equity	-						
10								
11	Accumulatyed Depreciation	$ (1,717,828)						
12								
13	[2] **Computation of Net Tax Value for Adjusted Test Year**		FEDERAL			STATE		
14								
15	Based on 2020 Tax Depreciation Estimate for Adjusted Test Year							
16	Depreciable Basis at December 31, 22019 per federal and state tax depr. Schedule[5]		$ 4,118,706			$ 4,486,402		
17	Reconciling Items not on tax report:							
18	2020 Plant Additions		47,285			47,285		
19	2020 PIS Adjustments 106 Closing		123,377			123,377		
20	PTY Additions		653,874			653,874		
21	2020 Retirements		-			-		
22	PTY Retirements		(128,772)			(128,772)		
23								
24	Net Depreciable Tax Basis for Adjusted Test Year			$ 4,814,470			$ 5,182,165	
25								
26	Reductions							
27	Accumulated Depreciation 2019 and prior per federal and state tax depr. Schedule[5]		$ (3,455,815)			$ (3,537,904)		
28	Reconciling Items not on tax report:							
29	2020 Tax Depreciation on 2019 and Prior Plant		(229,511)			(243,681)		
30	Tax Depr. from 2020 PIS Addtions		(1,128)			(1,128)		
31	Tax Depr. from 2020 PIS Adjustments 106 Closing		(6,980)			(6,980)		
32	Tax Depr. For PTY Additions		(12,966)			(12,966)		
33	Tax Depr. For 2020 Retirments		-			-		
34	Tax Depr. For PTY Retirements		128,772			128,772		
35						-		
36	Net Reductions through For Text Year			(3,577,628)			(3,673,887)	
37	Net tax value of plant-in-service for Adjusted Test Year			$ 1,236,842			$ 1,508,279	
38								
39								
40	[3] **CIAC (including impact of change to probability of realization)**							
41	Gross CIAC per adjusted book balances (per B-2, page 1)			$ 1,013,352				
42	CIAC reductions/addtions							
43	A.A per adjusted book balances (per B-2 page 1)		$ (147,204)					
44								
45				(147,204)				
46	Net CIAC before unrealized AIAC				$ 866,148			
47								
48	Unrealized AIAC Component							
49	AIAC per adjusted book balances (per B-2 page 1)			$ -				
50	Adjusted Net AIAC (see footnote 5 below)			70.0%				
51	Unrealized AIAC Component % (1-Realized AIAC Component)				$ -			
52	Total realizable CIAC				$ 866,148			
53								
54								
55	[4] **AIAC (including impact of change in probability of realization)**							
56	AIAC per adjusted book balances				$ -			
57	Less: Unrealized AIAC (from Note 3, above)				$ -			
58								
59	Subtotal				$ -			
60	Meter and Service Line Installation Charges (per B-2, page 1)				6,340			
61	Total realizable AIAC				$ 6,340			
62								
63	[5] **See work papers**							

Deferred Income Tax - Current vs. Prior Tax Rates

Line No.			Sewer Adjusted Book Value		Sewer Tax Value		Probability of Realization of Future Tax Benefit	Deductible TD (Taxable TD) Expected to be Realized		Effective Tax Rate	Future Tax Asset Current	Future Tax Asset Non Current	Future Tax Liability Current	Future Tax Liability Non Current
6		Plant-in-Service	$ 3,106,953	[1]										
7		Accum. Deprec.	(1,463,040)	[1]										
8		CIAC	(902,949)	[3]										
9	Fed.	Fixed Assets	$ 740,964		$ 1,078,503	[2]	100.0%	$ 337,538		19.97%		67,410		-
11	State	Fixed Assets	740,964		1,393,955	[2]	100.0%	652,990		4.900%		31,997		-
13	Fed &State	AIAC			-	[4]	100.0%	-	[4]	24.87%		-		-
15	Fed &State	Other	-		-		100.0%	-		24.87%		-		-
17											$ -	$ 99,406	$ -	$ -
19		Net Asset (Liability)									$ 99,406			
21		Allocation Factor									1.0000			
23		Net Asset (Liability)									$ 99,406			
25		Net Asset (Liability) Prior Rates (see page 9.2)									$ 138,760			
27		Excess Accumulated Deferred Income Taxes - Asset (Liability)									$ 39,354			

Footnotes - See page 8.1

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments
Adjustment 7

Exhibit
Schedule B-2
Page 9.1
Witness: Bourassa

Line No.							
1	[1] **Per adjusted book balances, land not included, coporate plant not included, AFUDC Equity not included**						
2	Plant-in-Service (from B-2 Plant Schedule for 2017)	$ 3,506,953					
3	Less: Land	(400,000)					
4	Historical thru 2017 AFUDC Equity	-					
5							
6	Plant-in-Serivce	$ 3,106,953					
7							
8	Adjusted A/D (from B-2 Plant Schedule for 2017)	$ (1,463,040)					
9	Less: Historical A/D thru 2017 AFUDC Equity	-					
10							
11	Accumulated Depreciation	$ (1,463,040)					
12							
13	[2] **Computation of Net Tax Value December 31, 2017**			FEDERAL		STATE	
14							
15	Based on 2017 Tax Depreciation Estimate (December 31, 2017)						
16	Depreciable Basis at December 31, 2017 per federal and state tax depr. Schedule5			$ 4,054,529		$ 4,422,224	
17	Reconciling Items not on tax report:						
18						-	
19						-	
20							
21	Net Depreciable Tax Basis at December 31, 2017				$ 4,054,529		$ 4,422,224
22							
23	Reductions						
24	Accumulated Depreciation 2017 and prior per federal and state tax depr. Schedule5			$ (2,976,026)		$ (3,028,269)	
25	Reconciling Items not on tax report:						
26						-	
27						-	
28						-	
29	Net Reductions through December 31, 2017				(2,976,026)		(3,028,269)
30	Net tax value of plant-in-service at December 31. 2017				$ 1,078,503		$ 1,393,955
31							
32							
33	[3] **CIAC (including impact of change to probability of realization)**						
34	Gross CIAC per adjusted book balances (per B-2, page 5.1)				$ 1,013,352		
35	CIAC reductions/addtions						
36	A.A per adjusted book balances (per B-2 page 5.1)			$ (110,403)			
37							
38					(110,403)		
39	Net CIAC before unrealized AIAC					$ 902,949	
40							
41	Unrealized AIAC Component						
42	AIAC per adjusted book balances (per E-1)				$ -		
43	Adjusted Net AIAC (see footnote 5 below)				70.0%		
44	Unrealized AIAC Component % (1-Realized AIAC Component)					$ -	
45	Total realizable CIAC					$ 902,949	
46							
47							
48	[4] **AIAC (including impact of change in probability of realization)**						
49	AIAC per adjusted book balances					$ -	
50	Less: Unrealized AIAC (from Note 3, above)					$ -	
51							
52	Subtotal					$ -	
53	Meter and Service Line Installation Charges (per E-1)					-	
54	Total realizable AIAC					$ -	
55							
56	[5] **See work papers**						

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments
Adjustment 7

Exhibit
Schedule B-2
Page 9.2
Witness: Bourassa

Deferred Income Tax - Prior Rates

Line No.			Sewer Adjusted Book Value		Sewer Tax Value		Probability of Realization of Future Tax Benefit	Deductible TD (Taxable TD) Expected to be Realized		Effective Tax Rate	Future Tax Asset Current	Future Tax Asset Non Current	Future Tax Liability Current	Future Tax Liability Non Current
6		Plant-in-Service	$ 3,106,953	1										
7		Accum. Deprec.	(1,463,040)	1										
8		CIAC	(902,949)	3										
9	Fed.	Fixed Assets	$ 740,964		$ 1,078,503	2	100.0%	$ 337,538		31.63%		106,763		-
11	State	Fixed Assets	740,964		1,393,955	2	100.0%	652,990		4.900%		31,997		-
13	Fed &State	AIAC			-	4	100.0%	-	4	36.53%		-		-
15	Fed &State	Other	-		-		100.0%	-		36.53%		-		-
17											$ -	$ 138,760	$ -	$ -
19		Net Asset (Liability)									$ 138,760			
21		Allocation Factor									1.0000			
23		Net Asset (Liability)									$ 138,760			
34		Footnotes - See page 8.3												

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2018
Original Cost Rate Base Proforma Adjustments
Adjustment 7

Exhibit
Schedule B-2
Page 9.3
Witness: Bourassa

Line No.							
1	[1] **Per adjusted book balances, land not included, coporate plant not included, AFUDC Equity not included**						
2	Plant-in-Service (from B-2 Plant Schedule for 2017)	$ 3,506,953					
3	Less: Land	(400,000)					
4	Historical thru 2017 AFUDC Equity	-					
5							
6	Plant-in-Serivce	$ 3,106,953					
7							
8	Adjusted A/D (from B-2 Plant Schedule for 2017)	$ (1,463,040)					
9	Less: Historical A/D thru 2017 AFUDC Equity	-					
10							
11	Accumulated Depreciation	$ (1,463,040)					
12							
13	[2] **Computation of Net Tax Value December 31, 2017**		FEDERAL			STATE	
14							
15	Based on 2017 Tax Depreciation Estimate (December 31, 2017)						
16	Depreciable Basis at December 31, 2017 per federal and state tax depr. Schedule5		$ 4,054,529			$ 4,422,224	
17	Reconciling Items not on tax report:						
18						-	
19						-	
20							
21	Net Depreciable Tax Basis at December 31, 2017				$ 4,054,529		$ 4,422,224
22							
23	Reductions						
24	Accumulated Depreciation 2017 and prior per federal and state tax depr. Schedule5		$ (2,976,026)			$ (3,028,269)	
25	Reconciling Items not on tax report:						
26						-	
27						-	
28						-	
29	Net Reductions through December 31, 2017				(2,976,026)		(3,028,269)
30	Net tax value of plant-in-service at December 31. 2017				$ 1,078,503		$ 1,393,955
31							
32							
33	[3] **CIAC (including impact of change to probability of realization)**						
34	Gross CIAC per adjusted book balances (per B-2, page 5.1)			$ 1,013,352			
35	CIAC reductions/addtions						
36	A.A per adjusted book balances (per B-2 page 5.1)		$ (110,403)				
37							
38				(110,403)			
39	Net CIAC before unrealized AIAC				$ 902,949		
40							
41	Unrealized AIAC Component						
42	AIAC per adjusted book balances (per E-1)			$ -			
43	Adjusted Net AIAC (see footnote 5 below)			70.0%			
44	Unrealized AIAC Component % (1-Realized AIAC Component)				$ -		
45	Total realizable CIAC				$ 902,949		
46							
47							
48	[4] **AIAC (including impact of change in probability of realization)**						
49	AIAC per adjusted book balances				$ -		
50	Less: Unrealized AIAC (from Note 3, above)				$ -		
51							
52	Subtotal				$ -		
53	Meter and Service Line Installation Charges (per E-1)				-		
54	Total realizable AIAC				$ -		
55							
56	[5] **See work papers**						

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Lead/Lag Study - Working Cash Requirement

Exhibit
Schedule B-5
Page 1
Witness: Bourassa

Line No.	NARUC	Description	Proforma Test Year Amount[1]	Revenue Lag (Lead) Days	Expense Lag (Lead) Days	Net Lag (Lead) Days Col. C - Col. D	Lead/Lag Factor Col. E/365	Cash Working Capital Required Col. B * Col. F
1								
2		(A)	(B)	(C)	(D)	(E)	(F)	(G)
3								
4		**Operating Expenses**						
5	701	Salaries and Wages	$ -	23.14		23.14	0.063397	$ -
6	710	Purchased Water	$ 3,035	23.14	36.12	(12.98)	(0.035562)	(108)
7	710	Purchased Wastewater Treatment	$ -	23.14		23.14	0.063397	-
8	711	Sludge Removal	$ 5,981	23.14	51.09	(27.95)	(0.076575)	(458)
9	715	Purchased Power	$ 18,241	23.14	40.03	(16.89)	(0.046274)	(844)
10	716	Fuel for Power Production	$ -	23.14	-	23.14	0.063397	-
11	718	Chemicals	$ 1,789	23.14	(31.52)	54.66	0.149754	268
12	720	Materials and Supplies	$ 1,324	23.14	(13.84)	36.98	0.101315	134
13	632 & 732	Contractual Services - Accounting	$ 1,770	23.14	34.79	(11.65)	(0.031918)	(57)
14	733	Contractual Services - Legal	$ 695	23.14	34.79	(11.65)	(0.031918)	(22)
15	636, 734, 737, & 922	Contractual Services - Management	$ 56,625	23.14	20.00	3.14	0.008603	487
16	735	Contractual Services - Testing	$ 22,306	23.14	58.26	(35.12)	(0.096219)	(2,146)
17	701, 735, 736, & 760	Contractual Services - Other	$ 51,344	23.14	25.41	(2.27)	(0.006219)	(319)
18	742	Equipment Rent	$ -	23.14	(19.23)	42.37	0.116082	-
19	741	Building Rent	$ -	23.14	(19.23)	42.37	0.116082	-
20	750	Transportation Expense	$ 191	23.14	28.62	(5.48)	(0.015014)	(3)
21	756	Insurance - Auto	$ -	23.14	(182.50)	205.64	0.563397	-
22	757	Insurance - General Liability	$ 1,145	23.14	(182.50)	205.64	0.563397	645
23	732, & 775	Miscellaneous Expense	$ 17,158	23.14	(128.13)	151.27	0.414438	7,111
24				23.14	91.00	(67.86)	(0.185918)	-
25								
26								
27		**Taxes**						
28	408	General Taxes-Property[1]	$ 26,016	23.14	213.96	(190.82)	(0.522790)	$ (13,601)
29		General Taxes-Other	$ -	23.14	-	23.14	0.063397	-
30	409 & 410	Income Tax[1]	$ 31,304	23.14	44.75	(21.61)	(0.059205)	(1,853)
31								
32		**Other**						
33								
34								
35		TOTAL	$ 238,925		WORKING CASH REQUIREMENT			$ (10,766)
36								
37								
38								
39		[1]At proposed rates.						

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Income Statement

Exhibit
Schedule C-1
Page 1
Witness: Cifuentes

Line No.	NARUC	Account Description	Test Year Book Results	Adjustment	Test Year Adjusted Results	Proposed Rate Increase / (Decrease)	Adjusted with Rate Increase / (Decrease)
1		**Revenues**					
2	521	Sewer Revenues	$ 454,853	$ 20,794	$ 475,647	$ 20,105	$ 495,752
3	541 & 544	Reclaimed Water Revenues	-	-	-		-
4	536	Other Sewer Revenues	$ 670	$ -	$ 670		$ 670
5			$ 455,523	$ 20,794	$ 476,317	$ 20,105	$ 496,422
6		**Operating Expenses**					
7	701	Salaries and Wages	$ -	$ -	$ -		$ -
8	710	Purchased Water	$ 3,035	$ -	$ 3,035		$ 3,035
9	710	Purchased Wastewater Treatment	$ -	$ -	$ -		$ -
10	711	Sludge Removal	$ 5,794	$ 186	$ 5,981		$ 5,981
11	715	Purchased Power	$ 17,667	$ 575	$ 18,241		$ 18,241
12	716	Fuel for Power Production	$ -	$ -	$ -		$ -
13	718	Chemicals	$ 1,734	$ 55	$ 1,789		$ 1,789
14	720	Materials and Supplies	$ 1,324	$ -	$ 1,324		$ 1,324
15	632 & 732	Contractual Services - Accounting	$ 1,770	$ -	$ 1,770		$ 1,770
16	733	Contractual Services - Legal	$ 695	$ -	$ 695		$ 695
17	636, 734, 737, & 922	Contractual Services - Management	$ 58,114	$ (1,489)	$ 56,625		$ 56,625
18	735	Contractual Services - Testing	$ 22,306	$ -	$ 22,306		$ 22,306
19	701, 735, 736, & 760	Contractual Services - Other	$ 51,344	$ -	$ 51,344		$ 51,344
20	742	Equipment Rent	$ -	$ -	$ -		$ -
21	741	Building Rent	$ 445	$ (445)	$ -		$ -
22	750	Transportation Expense	$ 191	$ -	$ 191		$ 191
23	756	Insurance - Auto	$ -	$ -	$ -		$ -
24	757	Insurance - General Liability	$ 1,145	$ -	$ 1,145		$ 1,145
25	766, & 767	Regulatory Commission Expense	$ -	$ -	$ -		$ -
26	732, & 775	Miscellaneous Expense	$ 17,158	$ -	$ 17,158		$ 17,158
27	403 & 407	Depreciation and Amortization	$ 130,019	$ 7,186	$ 137,205		$ 137,205
28	770	Bad Debt Expense	$ 2,863	$ (1,815)	$ 1,048	$ 44	$ 1,092
29	408	Taxes Other Than Income	$ -	$ -	$ -		$ -
30	408	Property Taxes	$ 17,584	$ 8,071	$ 25,655	$ 361	$ 26,016
31	409 & 410	Income Taxes	$ 62,409	$ (36,004)	$ 26,404	$ 4,899	$ 31,304
32							
33		**Total Operating Expenses**	$ 395,596	$ (23,679)	$ 371,917	$ 5,305	$ 377,222
34		**Operating Income**	$ 59,927	$ 44,473	$ 104,400	$ 14,800	$ 119,200
35		**Other Income (Expense)**					
36	419	Interest and Dividend Income	-	-	-		-
37	420	AFUDC Income	154	-	154		154
38	426	Miscellaneous Non-Utility Expenses	(2,428)	-	(2,428)		(2,428)
39	427	Interest Expense	(414)	(24,226)	(24,639)		(24,639)
40							
41		**Total Other Income (Expense)**	$ (2,687)	$ (24,226)	$ (26,913)	$ -	$ (26,913)
42		**Net Profit (Loss)**	$ 57,240	$ 20,248	$ 77,488	$ 14,800	$ 92,288
43							
44		SUPPORTING SCHEDULES:				RECAP SCHEDULES:	
45		C-1, page 2				A-1	
46		E-2					

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Income Statement

Exhibit
Schedule C-1
Page 2.1
Witness: Cifuentes

Line No.	NARUC	Account Description	Test Year Book Results	1 Depreciation	2 Property Taxes	3 Revenue Annualization	4 Oakville Building Allocations	5 Bad Debt Expense
1		**Revenues**						
2	521	Sewer Revenues	$ 454,853			20,794		
3	541 & 544	Reclaimed Water Revenues	$ -					
4	536	Other Sewer Revenues	$ 670					
5			$ 455,523	$ -	$ -	$ 20,794	$ -	$ -
6		**Operating Expenses**						
7	701	Salaries and Wages	$ -					
8	710	Purchased Water	$ 3,035					
9	710	Purchased Wastewater Treatment	$ -					
10	711	Sludge Removal	$ 5,794			186		
11	715	Purchased Power	$ 17,667			575		
12	716	Fuel for Power Production	$ -					
13	718	Chemicals	$ 1,734			55		
14	720	Materials and Supplies	$ 1,324					
15	632 & 732	Contractual Services - Accounting	$ 1,770					
16	733	Contractual Services - Legal	$ 695					
17	636, 734, 737, & 922	Contractual Services - Management	$ 58,114				(1,489)	
18	735	Contractual Services - Testing	$ 22,306					
19	701, 735, 736, & 760	Contractual Services - Other	$ 51,344					
20	742	Equipment Rent	$ -					
21	741	Building Rent	$ 445					
22	750	Transportation Expense	$ 191					
23	756	Insurance - Auto	$ -					
24	757	Insurance - General Liability	$ 1,145					
25	766, & 767	Regulatory Commission Expense	$ -					
26	732, & 775	Miscellaneous Expense	$ 17,158					
27	403 & 407	Depreciation and Amortization	$ 130,019	7,186				
28	770	Bad Debt Expense	$ 2,863					(1,815)
29	408	Taxes Other Than Income	$ -					
30	408	Property Taxes	$ 17,584		8,071			
31	409 & 410	Income Taxes	$ 62,409					
32								
33		**Total Operating Expenses**	$ 395,596	$ 7,186	$ 8,071	$ 816	$ (1,489)	$ (1,815)
34		**Operating Income**	$ 59,927	$ (7,186)	$ (8,071)	$ 19,978	$ 1,489	$ 1,815
35		**Other Income (Expense)**						
36	419	Interest and Dividend Income	$ -					
37	420	AFUDC Income	$ 154					
38	426	Miscellaneous Non-Utility Expenses	$ (2,428)					
39	427	Interest Expense	$ (414)					
40								
41		**Total Other Income (Expense)**	$ (2,687)	$ -	$ -	$ -	$ -	$ -
42		**Net Profit (Loss)**	$ 57,240	$ (7,186)	$ (8,071)	$ 19,978	$ 1,489	$ 1,815
43								
44		SUPPORTING SCHEDULES:						
45		C-2						
46		E-2						

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Income Statement

Exhibit
Schedule C-1
Page 2.2
Witness: Cifuentes

Line No.	NARUC	Account Description	6 Building Rent	7 Interest Synch.	8 Income Taxes	Test Year Adjusted Results	Proposed Rate Increase / (Decrease)	Adjusted with Rate Increase / (Decrease)
1		**Revenues**						
2	521	Sewer Revenues				$ 475,647	$ 20,105	$ 495,752
3	541 & 544	Reclaimed Water Revenues				-		-
4	536	Other Sewer Revenues				670		670
5				$ -	$ -	$ 476,317	$ 20,105	$ 496,422
6		**Operating Expenses**						
7	701	Salaries and Wages				$ -		$ -
8	710	Purchased Water				3,035		3,035
9	710	Purchased Wastewater Treatment				-		-
10	711	Sludge Removal				5,981		5,981
11	715	Purchased Power				18,241		18,241
12	716	Fuel for Power Production				-		-
13	718	Chemicals				1,789		1,789
14	720	Materials and Supplies				1,324		1,324
15	632 & 732	Contractual Services - Accounting				1,770		1,770
16	733	Contractual Services - Legal				695		695
17	636, 734, 737, & 922	Contractual Services - Management				56,625		56,625
18	735	Contractual Services - Testing				22,306		22,306
19	701, 735, 736, & 760	Contractual Services - Other				51,344		51,344
20	742	Equipment Rent				-		-
21	741	Building Rent	(445)			-		-
22	750	Transportation Expense				191		191
23	756	Insurance - Auto				-		-
24	757	Insurance - General Liability				1,145		1,145
25	766, & 767	Regulatory Commission Expense				-		-
26	732, & 775	Miscellaneous Expense				17,158		17,158
27	403 & 407	Depreciation and Amortization				137,205		137,205
28	770	Bad Debt Expense				1,048	44	1,092
29	408	Taxes Other Than Income				-		-
30	408	Property Taxes				25,655	361	26,016
31	409 & 410	Income Taxes			(36,004)	26,404	4,899	31,304
32								
33		**Total Operating Expenses**	$ (445)	$ -	$ (36,004)	$ 371,917	$ 5,305	$ 377,222
34		**Operating Income**	$ 445	$ -	$ 36,004	$ 104,400	$ 14,800	$ 119,200
35		**Other Income (Expense)**						
36	419	Interest and Dividend Income				-		-
37	420	AFUDC Income				154		154
38	426	Miscellaneous Non-Utility Expenses				(2,428)		(2,428)
39	427	Interest Expense		(24,226)		(24,639)		(24,639)
40						-		-
41		**Total Other Income (Expense)**	$ -	$ (24,226)	$ -	$ (26,913)	$ -	$ (26,913)
42		**Net Profit (Loss)**	$ 445	$ (24,226)	$ 36,004	$ 77,488	$ 14,800	$ 92,288
43								
44		SUPPORTING SCHEDULES:					RECAP SCHEDULES:	
45		C-2					C-1, page 1	
46		E-2						

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Adjustments to Revenues and Expenses
Adjustment Number 1

Exhibit
Schedule C-2
Page 1
Witness: Cifuentes

Depreciation Expense

Line No.	NARUC	Description	Adjusted Original Cost	Non-Depr. or Fully Depr. Plant	Depr Original Cost	Proposed Rates	Depreciation Expense
1	351	Organization	$ 37,898	(37,898)	$ -	0.00%	$ -
2	352	Franchise	$ 745	(745)	-	0.00%	-
3	353	Land	$ 406,502	(406,502)	-	0.00%	-
4	354	Structures & Improvements	$ 630,009		630,009	3.33%	20,979
5	355	Power Generation	$ 124,937		124,937	5.00%	6,247
6	360	Collection Sewer Forced	$ 7,141		7,141	2.00%	143
7	361	Collection Sewers Gravity	$ 480,710		480,710	2.00%	9,614
8	362	Special Collecting Structures	$ -		-	2.00%	-
9	363	Customer Services	$ 122,760		122,760	2.00%	2,455
10	364	Flow Measuring Devices	$ 10,980	(3,845)	7,135	10.00%	714
11	365	Flow Measuring Installations	$ 12,858	(2,457)	10,401	10.00%	1,040
12	366	Reuse Services	$ -		-	2.00%	-
13	367	Reuse Meters And Installation	$ -		-	8.33%	-
14	370	Receiving Wells	$ 26,226		26,226	3.33%	873
15	371	Pumping Equipment	$ 195,304	(128,036)	67,268	12.50%	8,409
16	374	Reuse Distribution Reservoirs	$ -		-	2.50%	-
17	375	Reuse Trans. and Dist. System	$ 126,541		126,541	2.50%	3,164
18	380	Treatment & Disposal Equipment	$ 1,810,389		1,810,389	5.00%	90,519
19	381	Plant Sewers	$ 155,957		155,957	5.00%	7,798
20	382	Outfall Sewer Lines	$ 5,541		5,541	3.33%	185
21	389	Other Sewer Plant & Equipment	$ -		-	6.67%	-
22	390	Office Furniture & Equipment	$ 18,764	(1,458)	17,306	6.67%	1,154
23	390.1	Computers and Software	$ 13,140	(12,188)	952	20.00%	190
24	391	Transportation Equipment	$ -		-	20.00%	-
25	392	Stores Equipment	$ -		-	4.00%	-
26	393	Tools, Shop And Garage Equip	$ 7,264		7,264	5.00%	363
27	394	Laboratory Equip	$ 6,990	(4,730)	2,260	10.00%	226
28	395	Power Operated Equipment	$ 3,423		3,423	5.00%	171
29	396	Communication Equip	$ 36,729		36,729	10.00%	3,673
30	397	Miscellaneous Equip	$ -		-	10.00%	-
31	398	Other Tangible Plant	$ 24,669		24,669	10.00%	2,467
32							
33		TOTALS	$ 4,265,477	$ (597,858)	$ 3,667,619		$ 160,384
34							
35		Less: Deferred Liability Tax (EADIT) Amort.	$ (39,354)		$ (39,354)	9.26%	$ 3,643
36							
37				Fully Amortized	Net		
38			Gross CIAC	CIAC	CIAC	Amort. Rate	
39		Less: Contributions-in-Aid of Construction Amortization	$ 1,013,352	$ (400,000)	$ 613,352	4.3730%	$ (26,822)
40							
41			$ 1,013,352	$ (400,000)	$ 613,352		
42		Total Depreciation Expense					$ 137,205
43							
44		Adjusted Test Year Depreciation Expense					$ 130,019
45							
46		Increase (decrease) in Depreciation Expense					$ 7,186
47							
48		Adjustment to Revenues and/or Expenses					$ 7,186
49							
50		SUPPORTING SCHEDULE					
51		B-2, page 3					

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Adjustment to Revenues and Expenses
Adjustment Number 2

Exhibit
Schedule C-2
Page 2
Witness: Cifuentes

Property Taxes

Line No.	Description	Test Year as adjusted	Company Recommended	
1	Company Adjusted Test Year Revenues	$ 476,317	$ 476,317	
2	Weight Factor	2	2	
3	Subtotal (Line 1 * Line 2)	952,634	952,634	
4	Company Recommended Revenue	476,317	496,422	
5	Subtotal (Line 4 + Line 5)	1,428,952	1,449,057	
6	Number of Years	3	3	
7	Three Year Average (Line 5 / Line 6)	476,317	483,019	
8	Department of Revenue Multiplier	2	2	
9	Revenue Base Value (Line 7 * Line 8)	952,634	966,038	
10	Plus: 10% of CWIP (intentionally excluded)	-	-	
11	Less: Net Book Value of Licensed Vehicles	655	655	
12	Full Cash Value (Line 9 + Line 10 - Line 11)	951,980	965,383	
13	Assessment Ratio	17.998%	17.998%	2020 EDO Property Tax Rate
14	Assessment Value (Line 12 * Line 13)	171,338	173,750	
15	Composite Property Tax Rate - Obtained from ADOR	14.973%	14.973%	2020 EDO Property Tax Rate
16	Test Year Adjusted Property Tax Expense (Line 14 * Line 15)	$ 25,655	$ 26,016	
17	Tax on Parcels	-	-	
18	Total Property Taxes (Line 16 + Line 17)	$ 25,655		
19	Test Year Property Taxes	$ 17,584		
20	Adjustment to Test Year Property Taxes (Line 18 - Line 19)	**$ 8,071**		
21				
22	Property Tax on Company Recommended Revenue (Line 16 + Line 17)		$ 26,016	
23	Company Test Year Adjusted Property Tax Expense (Line 18)		$ 25,655	
24	Increase in Property Tax Due to Increase in Revenue Requirement (Line 24)		**$ 361**	
25				
26	Increase in Property Tax Due to Increase in Revenue Requirement (Line 24)		$ 361	
27	Increase in Gross Revenue Requirement		$ 20,105	
28	Increase in Property Tax Per Dollar Increase in Revenue (Line 26 / Line 27)		1.79661%	

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Adjustment to Revenues and Expenses
Adjustment Number 3

Exhibit
Schedule C-2
Page 3
Witness: Cifuentes

Revenue Annualization

Line No.					
1	Revenues				
2	Year 5 - Phase in Revenues				19,282
3					
4	Additional Residential billings from annualization to YE Customers		14		
5	Present Rate Per unit	$	108.00		
6	Additional Revenues Produced (Line 2 X Line 3)			$	1,512
7					
8	Total Revenue from Annualization (Line 4)			$	20,794
9					
10	Additional Gallons Treated				
11	Additional Residential billings from annualization to YE Customers		14		
12	Additional Annual Gallons Treated per Customer (in 1,000s)(360 days X112.5 gpd/1000)		36.00		
13	Additional Gallons Treated (in 1,000s) (Line 9 X Line 10)		504		
14					
15					
16	Expenses - Purchased Power				
17	Test Year Purchsed Power	$	17,667		
18	Test Year Gallons Treated (in 1,000's)		15,486		
19	Cost per 1,000 gallons (Line 15 / Line 16)	$	1.14		
20	Additional Gallons Treated (in 1,000s) (=Line 11)		504		
21	Increase(decrease) in Purchased Power Expense (Line 17 X Line 18)			$	575
22					
23	Expenses - Sludge Removal				
24	Test Year Sludge Removal Expense	$	5,794		
25	Test Year Gallons Treated (in 1,000's)		15,486		
26	Cost per 1,000 gallons (Line 22 / Line 23)	$	0.37		
27	Additional Gallons Treated (in 1,000s) (=Line 11)		504		
28	Increase(decrease) in Sludge Removal Expense (Line 24 X Line 25)			$	186
29					
30	Expenses - Chemicals Expense				
31	Test Year Sludge Removal Expense	$	1,734		
32	Test Year Gallons Treated (in 1,000's)		15,486		
33	Cost per 1,000 gallons (Line 29 / Line 30)	$	0.11		
34	Additional Gallons Treated (in 1,000s) (=Line 11)		504		
35	Increase(decrease) in Chemicals Expense (Line 31 X Line 32)			$	55
36					
37	Total Additional Expenses (Line 19 + Line 26 + Line 32)			$	816
38					
39	Adjustment to Revenue and/or Expense (Line 6 - Line 35)			$	19,978
40					
41	SUPPORTING SCHEDULES				
42	H-1				
43	Work papers				

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Adjustment to Revenues and Expenses
Adjustment Number 4

Exhibit
Schedule C-2
Page 4
Witness: Cifuentes

Allocated Oakville Building Adjustment

Line No.				Reference
1	Contractual Services - Management - Hydro Expense	$	(46)	GC-EDO Oakville Building O&M Adj WP
2	Contractual Services - Management - Operating Expense		(184)	
3	Contractual Services - Management - Property Tax Expense		(176)	
4	Contractual Services - Management - Rent Expense		(1,083)	
5	Increase(decrease) in Expense	$	(1,489)	
6				
7	Adjustment to Revenue and/or Expense	$	(1,489)	

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Adjustment to Revenues and Expenses
Adjustment Number 5

Exhibit
Schedule C-2
Page 5
Witness: Cifuentes

Bad Debt Expense

Line No.				Reference
1	Adjusted Test Year Revenues	$	476,317	
2	Bad Debt Expense Rate (3-yr Hist. Average)		0.22%	Bad Debt Write Off WP
3	Expected Annual Bad Debt Expense	$	1,048	
4	Test Year Adjusted Bad Debt Expense		2,863	
5	Increase(decrease) in Bad Debt Expense	$	(1,815)	
6				
7	Adjustment to Revenue and/or Expense	$	(1,815)	

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Adjustment to Revenues and Expenses
Adjustment Number 6

Exhibit
Schedule C-2
Page 6
Witness: Cifuentes

Building Rent

Line No.				Reference
1	Test Year Building Rent Expense	$	445	
2	Test Year Adjusted Building Rent Expense		-	
3	Increase(decrease) in Bad Debt Expense	$	(445)	
4				
5	Adjustment to Revenue and/or Expense	$	(445)	

Interest Synchronization

Line No.				
1				
2				
3				
4	Fair Value Rate Base			$ 1,716,795
5	Weighted Cost of Debt			1.44%
6	Interest Expense			$ 24,639
7				
8	Test Year Interest Expense			$ 414
9				
10				
11	Increase (decrease) in Interest Expense			24,226
12				
13				
14				
15	Adjustment to Revenue and/or Expense			$ (24,226)
16				
17				
18	Weighted Cost of Debt Computation			
19	Pro forma Capital Structure			Weighted
20		Percent	Cost	Cost
21	Debt	46.00%	3.12%	1.44%
22	Equity	54.00%	10.20%	5.51%
23	Total	100.00%		6.94%

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Adjustment to Revenues and/or Expenses
Adjustment Number 8
Income Taxes

Exhibit
Schedule C-2
Page 8
Witness: Cifuentes

Line No.		Test Year at Present Rates	Test Year at Proposed Rates
1			
2			
3			
4	Computed Income Tax	$ 26,404	$ 31,304
5	Test Year Income tax Expense	-	26,404
6	Adjustment to Income Tax Expense	$ 26,404	$ 4,899
7			
8			
9			
10			
11			
12			
13	SUPPORTING SCHEDULE		
14	C-3, page 2		

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Rate Case Expense Surcharge Computation

Exhibit
Rate Case Expense
Page 1
Witness: Schwartz

Line No.	Description	Amount	Reference
1	Rate Case Expense for Current Case	$ 42,073	Rate Case Expense Allocation WP
2	Amortization Period (Years)	2	
3	Annual Amount to be Recovered Increase/(Decrease) in Amortization Expense	$ 21,036	
4			
5	Number of Customers	365	
6	Annual Surcharge per Customer	$ 57.63	
7	Monthly Surcharge per Customer	$ 4.80	

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Computation Of Gross Revenue Conversion Factor

Exhibit
Schedule C-3
Page 1
Witness: Cifuentes

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		0.1653%
6			
7	Property Taxes		1.3498%
8			
9	Total Tax Percentage		26.386%
10			
11	Operating Income % = 100% - Tax Percentage		73.614%
12			
13			
14			
15			
16	1	= Gross Revenue Conversion Factor	
17	Operating Income %		1.35844
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28	SUPPORTING SCHEDULES:		RECAP SCHEDULES:
29	C-3, page 2		A-1

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Gross Revenue Conversion Factor

Exhibit
Schedule C-3
Page 2
Witness: Cifuentes

Line No.	Description	(A)	(B)	(C)	(D)	(E)	(F)
	Calculation of Gross Revenue Conversion Factor:						
1	Revenue	100.0000%					
2	Uncollectible Factor (Line 11)	0.1653%					
3	Revenues (L1 - L2)	99.8347%					
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	26.2208%					
5	Subtotal (L3 - L4)	73.6139%					
6	**Revenue Conversion Factor (L1 / L5)**	1.358438					
	Calculation of Uncollectible Factor:						
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	0.22%					
11	Uncollectible Factor (L9 * L10)		0.1653%				
	Calculation of Effective Tax Rate:						
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 (L56, Col E)	21.0000%					
16	Effective Federal Income Tax Rate (L14 x L15)	19.9710%					
17	Combined Federal and State Income Tax Rate (L13 +L17)		24.8710%				
	Calculation of Effective Property Tax Factor						
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	1.7966%					
22	Effective Property Tax Factor (L20*L21)		1.3498%				
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)			26.2208%			
24	Required Operating Income	$ 119,200					
25	Adjusted Test Year Operating Income (Loss)	$ 104,400					
26	Required Increase in Operating Income (L24 - L25)		$ 14,800				
27	Income Taxes on Recommended Revenue (Col. (E), L52)	$ 31,304					
28	Income Taxes on Test Year Revenue (Col. (B), L54)	$ 26,404					
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		$ 4,899				
30	Recommended Revenue Requirement	$ 496,422					
31	Uncollectible Rate	0.2200%					
32	Uncollectible Expense on Recommended Revenue (L24 * L25)	$ 1,092					
33	Adjusted Test Year Uncollectible Expense	$ 1,048					
34	Required Increase in Revenue to Provide for Uncollectible Exp.		$ 44				
35	Property Tax with Recommended Revenue	$ 26,016					
36	Property Tax on Test Year Revenue	$ 25,655					
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)		$ 361				
38	Total Required Increase (Decrease) in Revenue (L26 + L29 + L37)		$ 20,105				

		(A)	(B)	(C)	(D)	(E)	(F)
		Test Year			Company Recommended		
	Calculation of Income Tax:	Total	Sewer		Total	Sewer	
39	Revenue	$ 476,317	$ 476,317		$ 496,422	$ 496,422	
40	Operating Expenses Excluding Income Taxes	$ 345,512	$ 345,512		$ 345,918	$ 345,918	
41	Synchronized Interest (L60)	$ 24,639	$ 24,639		$ 24,639	$ 24,639	
42	Arizona Taxable Income (L39 - L40 - L41)	$ 106,165	$ 106,165		$ 125,865	$ 125,865	
43	Arizona State Effective Income Tax Rate (see work papers)	4.90%	4.90%		4.90%	4.90%	
44	Arizona Income Tax (L42 x L43)	$ 5,202	$ 5,202		$ 6,167	$ 6,167	
45	Federal Taxable Income (L42- L44)	$ 100,963	$ 100,963		$ 119,698	$ 119,698	
46							
47	Federal Taxes at 21%	$ 21,202	$ 21,202		$ 25,136	$ 25,136	
48							
49							
50							
51							
52							
53	Total Federal Income Tax	$ 21,202	$ 21,202		$ 25,136	$ 25,136	
54	Combined Federal and State Income Tax (L35 + L42)	$ 26,404	$ 26,404		$ 31,304	$ 31,304	

55	COMBINED Applicable Federal Income Tax Rate [Col. [D], L53 - Col. [A], L53 / [Col. [D], L45 - Col. [A], L45]	21.00%	
56	WASTEWATER Applicable Federal Income Tax Rate [Col. [E], L53 - Col. [B], L53] / [Col. [E], L45 - Col. [B], L45]		21.00%

	Calculation of Interest Synchronization:	Sewer	
58	Rate Base	$ 1,716,795	
59	Weighted Average Cost of Debt	1.4352%	
60	Synchronized Interest (L58 X L59)	$ 24,639	

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Summary Of Cost Of Capital

Exhibit
Schedule D-1
Page 1
Witness: Bourassa

Line No.	Item of Capital	Adjusted End of Test Year Dollar Amount	Adjusted End of Test Year Percent of Total	Adjusted End of Test Year Cost Rate	Adjusted End of Test Year Weighted Cost	Projected Capital Structure Dollar Amount	Projected Capital Structure Percent of Total	Projected Capital Structure Cost Rate	Projected Capital Structure Weighted Cost
1	Long-Term Debt	-	0.00%	0.00%	0.00%	1,445,333	46.00%	3.12%	1.44%
2									
3	Stockholder's Equity	2,624,733	100.00%	10.20%	10.20%	1,696,696	54.00%	10.20%	5.51%
4									
5	Totals	2,624,733	100.00%		10.20%	3,142,029	100.00%		6.94%
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22	SUPPORTING SCHEDULES:					RECAP SCHEDULES:			
23	D-1					A-3			
24	D-2								
25	D-3								
26	D-4								
27	E-1								
28	Testimony								

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Cost Of Long Term Debt

Exhibit
Schedule D-2
Page 1
Witness: Bourassa

Line No.	Description of Debt	End of Test Year Amount Outstanding	Annual Interest	Interest Rate	Weighted Cost	End of Projected Year Amount Outstanding	Annual Interest	Interest Rate	Weighted Cost
1									
2	Projected New Debt Under Proposed Authorization	$ -	-	0.00%	0.000%	$ 1,445,333	45,094	3.12%	3.12%
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13	Totals	$ -	-		0.000%	$ 1,445,333	45,094		3.12%
14									
15									
16	Supporting Schedules:								
17	E-1								
18	E-2								
19	Testimony								

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Cost Of Preferred Stock

Exhibit
Schedule D-3
Page 1
Witness: Bourassa

Line No.	Description of Issue	End of Test Year Shares Outstanding	Amount	Dividend Requirement	End of Projected Year Shares Outstanding	Amount	Dividend Requirement
1							
2							
3	NOT APPLICABLE, NO PREFERRED STOCK ISSUED OR OUTSTANDING						
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17	SUPPORTING SCHEDULES:			RECAP SCHEDULES:			
18	E-1			D-1			

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Cost Of Common Equity

Exhibit
Schedule D-4
Page 1
Witness: Bourassa

Line No.			
1	The Company is proposing a cost of common equity of	10.20%	.
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16	SUPPORTING SCHEDULES:		RECAP SCHEDULES:
17	E-1		D-1
18	See Cost of Capital Testimony		

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Comparative Balance Sheets

Exhibit
Schedule E-1
Page 1
Witness: Cifuentes

Line No.		Test Year Ended 12/31/2020	Year Ended 12/31/2019	Year Ended 12/31/2018
1	**ASSETS**			
2	Plant In Service	$ 3,534,672	$ 3,487,388	$ 3,482,836
3	Non-Utility Plant	-	-	-
4	Construction Work in Progress	458,924	38,405	8,586
5	Property Held for Future Use	824,900	824,900	824,900
6	Less: Accumulated Depreciation	(1,727,000)	(1,607,209)	(1,491,820)
7	Net Plant	$ 3,091,496	$ 2,743,483	$ 2,824,503
8				
9	CURRENT ASSETS			
10	Cash and Equivalents	$ 8,704	$ 4,148	$ 6,883
11	Restricted Cash	-	-	-
12	Accounts Receivable, Net	44,348	38,908	37,669
13	Inter-Company Receivable	500,702	596,114	374,012
14	Other Receivables	-	-	-
15	Notes Receivable	-	-	-
16	Materials and Supplies Inventory	-	-	-
17	Prepayments	7,498	3,777	5,282
18	Deposits	1,000	1,000	1,000
19	Miscellaneous Current and Accrued Assets	-	-	-
20	Total Current Assets	$ 562,252	$ 643,947	$ 424,846
21				
22	OTHER ASSETS			
23	Deferred Regulatory Assets	$ 2,500	$ 10,008	$ 40,005
24	Other Deferred Debits	-	-	-
25	Deferred Debits	$ 2,500	$ 10,008	$ 40,005
26				
27	TOTAL ASSETS	$ 3,656,247	$ 3,397,438	$ 3,289,354
28				
29				
30	**LIABILITIES AND STOCKHOLDER EQUITY**			
31				
32	Stockholder's Equity	$ 2,624,733	$ 2,567,493	$ 2,286,856
33				
34	Long-Term Debt	$ -	$ -	$ -
35				
36	CURRENT LIABILITIES			
37	Accounts Payable	$ -	$ -	$ -
38	Current Portion of Long-Term Debt	-	-	-
39	Payables to Associated Companies	-	-	-
40	Security Deposits	(160)	-	-
41	Customer Meter Deposits, Current	-	-	-
42	Current Portion of AIAC	-	-	-
43	Accrued Taxes	-	-	-
44	Accrued Interest	-	-	-
45	Miscellaneous Current and Accrued Liabilities	123,407	12,290	7,569
46	Total Current Liabilities	$ 123,247	$ 12,290	$ 7,569
47				
48	DEFERRED CREDITS			
49	Customer Meter Deposits, less current	$ 6,340	$ 9,770	$ 5,190
50	Advances in Aid of Construction - Tax Gross-up	-	-	-
51	Advances in Aid of Construction	-	-	-
52	AIAC in-progress	43,816	17,009	10,000
53	Accumulated Deferred Investment Tax Credits	8,266	9,919	-
54	Accumulated Deferred Income Taxes	(84,526)	(148,587)	52,356
55	Deferred Regulatory Liabilities - Tax	-	-	-
56	Contributions In Aid of Construction - Tax Gross-up	-	-	-
57	Contributions In Aid of Construction	1,013,252	1,013,252	1,013,252
58	Accumulated Amortization	(85,869)	(85,869)	(85,869)
59	CIAC in-progress	-	-	-
60	Other Deferred Credits	6,987	2,162	-
61	Total Deferred Credits	$ 908,267	$ 817,655	$ 994,929
62				
63	Total Liabilities & Common Equity	$ 3,656,247	$ 3,397,438	$ 3,289,354
64				
65				
66				
67	SUPPORTING SCHEDULES:			
68	Work papers			

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Comparative Income Statements

Exhibit
Schedule E-2
Page 1
Witness: Cifuentes

Line No.	Account Description	Test Year Ended 12/31/2020	Prior Year Ended 12/31/2019	Prior Year Ended 12/31/2018
1	**Revenues**			
2	Sewer Revenues	$ 454,853	$ 398,357	$ 368,311
3	Reclaimed Water Revenues	-	-	-
4	Other Sewer Revenues	670	4,556	3,377
5	**Total Revenues**	$ 455,523	$ 402,912	$ 371,688
6	**Operating Expenses**			
7	Salaries and Wages	$ -	$ -	$ -
8	Purchased Water	3,035	2,182	1,942
9	Purchased Wastewater Treatment	-	-	-
10	Sludge Removal	5,794	2,429	2,298
11	Purchased Power	17,667	19,620	17,933
12	Fuel for Power Production	-	-	-
13	Chemicals	1,734	-	-
14	Materials and Supplies	1,324	767	419
15	Contractual Services - Accounting	1,770	3,445	1,397
16	Contractual Services - Legal	695	251	-
17	Contractual Services - Management	58,114	61,148	39,519
18	Contractual Services - Testing	22,306	17,124	15,210
19	Contractual Services - Other	51,344	14,663	11,189
20	Equipment Rent	-	-	-
21	Building Rent	445	404	519
22	Transportation Expense	191	765	33
23	Insurance - Auto	-	-	-
24	Insurance - General Liability	1,145	1,616	4,220
25	Regulatory Commission Expense	-	-	-
26	Miscellaneous Expense	17,158	18,895	19,152
27	Depreciation and Amortization	130,019	150,293	134,487
28	Bad Debt Expense	2,863	1,566	1,796
29	Taxes Other Than Income	-	-	-
30	Property Taxes	17,584	16,459	15,841
31	Income Taxes	62,409	(202,596)	52,356
32	**Total Operating Expenses**	$ 395,596	$ 109,033	$ 318,311
33	**Operating Income**	$ 59,927	$ 293,879	$ 53,377
34	**Other Income (Expense)**			
35	Interest and Dividend Income	-	65	40
36	AFUDC Income	154	-	-
37	Miscellaneous Non-Utility Expenses	(2,428)	(1,374)	(594)
38	Interest Expense	(414)	(361)	(223)
39				
40	**Total Other Income (Expense)**	$ (2,687)	$ (1,670)	$ (776)
41	**Net Profit (Loss)**	$ 57,240	$ 292,209	$ 52,601
42				
43				
44				
45		RECAP SCHEDULES:		
46		A-2		

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Comparative Statements Of Cash Flows

Exhibit
Schedule E-3
Page 1
Witness: Cifuentes

Line No.		Test Year Ended 12/31/2020	Prior Year Ended 12/31/2019	Prior Year Ended 12/31/2018
1	Cash Flows from Operating Activities			
2	Net Income	$ 57,240	$ 292,209	$ 52,601
3	Adjustments to reconcile net income to net cash			
4	provided by operating activities:			
5	Depreciation and Amortization	130,019	150,293	134,487
6	Depreciation and Amortization Adjustments	(10,228)	(34,904)	(16,311)
7	Changes in Certain Assets and Liabilities:			
8	Accounts Receivable	(5,440)	(1,239)	(5,806)
9	Other Receivables			
10	Materials and Supplies Inventory			
11	Prepaid Expenses	(3,721)	1,505	1,235
12	Deferred Regulatory Assets/Liabilities			
13	Deferred Income Taxes	64,061	(200,943)	52,356
14	Receivables/Payables to Associated Co.	95,412	(222,102)	(254,516)
15	Accounts Payable			
16	Interest Payable			
17	Customer Meter and Security Deposits	(3,590)	4,580	12,420
18	Taxes Payable			
19	Other assets and liabilities	121,797	46,799	30,115
20	Rounding	2	1	(1)
21	Net Cash Flow provided by Operating Activities	$ 445,552	$ 36,199	$ 6,581
22	Cash Flow From Investing Activities:			
23	Capital Expenditures	(467,803)	(34,371)	(10,852)
24	Plant Held for Future Use			-
25	Changes in Special Funds			-
26	Net Cash Flows from Investing Activities	$ (467,803)	$ (34,371)	$ (10,852)
27	Cash Flow From Financing Activities			
28	Change in Restricted Cash			
29	Proceeds from Long-Term Debt			
30	Net receipt of contributions in aid of construction			
31	Net receipts of advances in aid of construction	26,807	7,009	5,000
32	Repayments of Long-Term Debt			
33	Distributions		(11,572)	
34	Deferred Financing Costs			
35	Paid in Capital			
36	Net Cash Flows Provided (Used) by Financing Activities	$ 26,807	$ (4,563)	$ 5,000
37	Increase(decrease) in Cash and Cash Equivalents	4,556	(2,735)	729
38	Cash and Cash Equivalents at Beginning of Year	4,148	6,883	6,154
39	Cash and Cash Equivalents at End of Year	$ 8,704	$ 4,148	$ 6,883
40				
41				
42	SUPPORTING SCHEDULES:		RECAP SCHEDULES:	
43	Work papers		A-5	
44	E1			
45	E-2			

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Statement Of Changes In Stockholder'S Equity

Exhibit
Schedule E-4
Page 1
Witness: Cifuentes

Line No.		Stockholder's Equity	Total
1			
2	Balance, December 31, 2017	$ 2,234,255	$ 2,234,255
3	Additional Paid In Capital Adjustment	-	-
4	Distributions	-	-
5	Net Income	52,601	52,601
6			
7	Balance, December 31, 2018	$ 2,286,856	$ 2,286,856
8	Additional Paid In Capital Adjustment	-	-
9	Distributions	(11,572)	(11,572)
10	Net Income	292,209	292,209
11			
12	Balance, December 31, 2019	$ 2,567,493	$ 2,567,493
13	Additional Paid In Capital Adjustment	-	-
14	Distributions	-	-
15	Net Income	57,240	57,240
16			
17	Balance, December, 2020	$ 2,624,734	$ 2,624,734
18			
19			
20			
21			
22			
23			
24	SUPPORTING SCHEDULES:		

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Detail Of Plant In Service

Exhibit
Schedule E-5
Page 1
Witness: Cifuentes

Line No.	NARUC	Plant Description	Plant Balance at 12/31/2019	Plant Additions, Reclass-ifications or or Retirements	Plant Balance at 12/31/2020
1	106	Plant Not Classified	$ -	$ -	$ -
2	351	Organization	37,898	-	37,898
3	352	Franchise	808	-	808
4	353	Land	400,000	-	400,000
5	354	Structures & Improvements	549,609	-	549,609
6	355	Power Generation	124,916	-	124,916
7	360	Collection Sewer Forced	7,141	-	7,141
8	361	Collection Sewers Gravity	480,710	-	480,710
9	362	Special Collecting Structures	-	-	-
10	363	Customer Services	122,760	-	122,760
11	364	Flow Measuring Devices	10,980	-	10,980
12	365	Flow Measuring Installations	12,858	-	12,858
13	366	Reuse Services	-	-	-
14	367	Reuse Meters And Installation	-	-	-
15	370	Receiving Wells	26,226	-	26,226
16	371	Pumping Equipment	154,860	-	154,860
17	374	Reuse Distribution Reservoirs	-	-	-
18	375	Reuse Trans. and Dist. System	126,541	-	126,541
19	380	Treatment & Disposal Equipment	1,371,116	45,802	1,416,918
20	381	Plant Sewers	27,752	-	27,752
21	382	Outfall Sewer Lines	5,541	-	5,541
22	389	Other Sewer Plant & Equipment	-	-	-
23	390	Office Furniture & Equipment	1,747	-	1,747
24	390.1	Computers and Software	12,188	-	12,188
25	391	Transportation Equipment	-	-	-
26	392	Stores Equipment	-	-	-
27	393	Tools, Shop And Garage Equip	6,746	1,483	8,229
28	394	Laboratory Equip	6,990	-	6,990
29	395	Power Operated Equip	-	-	-
30	396	Communication Equip	-	-	-
31	397	Miscellaneous Equip.	-	-	-
32	398	Other Tangible Plant	-	-	-
33					
34					
35					
36					
37					
38		TOTAL WATER PLANT	$ 3,487,388	$ 47,285	$ 3,534,672
39					
40		SUPPORTING SCHEDULES		RECAP SCHEDULES:	
41		Work papers		A-4	
42				E-1	

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Operating Statistics

Exhibit
Schedule E-7
Page 1
Witness: Cifuentes

Line No.		Test Year Ended 12/31/2020	Prior Year Ended 12/31/2019	Prior Year Ended 12/31/2018
1	WASTEWATER STATISTICS:			
2				
3				
4				
5	Total Gallons Treated (in Thousands)	15,486	14,359	13,438
6				
7				
8				
9	Wastewater Revenues from Customers:	$ 455,523	$ 402,912	$ 371,688
10				
11				
12				
13				
14	Year End Number of Customers	365	349	336
15				
16				
17	Annual Gallons (in Thousands)			
18	Treated Per Year End Customer	42	41	40
19				
20				
21				
22	Annual Revenue per Year End Customer	$ 1,248.01	$ 1,154.48	$ 1,106.22
23				
24	Pumping Cost Per 1,000 Gallons	$ 1.1408	$ 1.3664	$ 1.3345
25	Purchased Wastewater Cost per 1,000 Gallons	$ -	$ -	$ -

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Taxes Charged To Operations

Exhibit
Schedule E-8
Page 1
Witness: Cifuentes

Line No.	Description	Test Year Ended 12/31/2020	Prior Year Ended 12/31/2019	Prior Year Ended 12/31/2018
1	Description			
2				
3	State Income Taxes	$ 12,463	$ (40,458)	$ 10,455
4	Federal Income Taxes	49,946	(162,138)	41,901
5	Payroll Taxes	-	-	-
6	Property Taxes	17,584	16,459	15,841
7				
8	Totals	$ 79,992	$ (186,137)	$ 68,197

Line No.	
1	The Company does not conduct independent audits, reviews and/or compilations. Accordingly, there are no
2	notes which are typically associated with these financial statements. Management makes the following
3	notations to the financial statements contained herein:
4	
5	**Significant Accounting Policies** - The Company prepares its financial statements in accordance with
6	accounting principles generally accepted in the United States of America and the accounting records of the are
7	are maintained in accordance with the uniform system of accounts as prescribed by the National Association
8	of Regulatory Utility Commissioners (USOA 1996). Significant accounting policies are as follows:
9	
10	**Utility Plant** - Property, plant and equipment is stated at cost less accumulated depreciation provided on a
11	straight-line basis.
12	
13	Depreciation rates for asset classes of utility property, plant and equipment are established by the
14	Commission. The cost of additions, including betterments and replacements of units of utility fixed assets are
15	charged to utility property, plant and equipment. When units of utility property are replaced, renewed or
16	retired, their cost plus removal or disposal costs, less salvage proceeds, is charged to accumulated
17	depreciation.
18	
19	**Revenue Recognition** - Revenues are recognized on the accrual method. Under this method, revenue is
20	recognized when earned rather than when collected, and expenses are recognized when incurred rather than
21	when paid.
22	
23	**Contributions in Aid of Construction -** Contributions in aid of construction (CIAC) are nonrefundable contributions
24	by developers and customers for plant expansion. In addition, this amount includes the remaining balance, if any,
25	of advances in aid of construction at the end of the repayment period. The contributions in aid of construction are
26	being amortized at a rate equal to the rate allowed for depreciation, as a reduction of depreciation expense
27	
28	**Advances in Aid of Construction -** Customer advances for construction are subject to refund in accordance with
29	agreements approved by the Arizona Corporation Commission. Agreements provide for refunds which are typically
30	equal to 10 percent of annual water revenue generated from the expansion. The repayments are for a maximum
31	agreed upon period or until repaid in full. Any balance remaining at the end of the agreed-upon period for repayment
32	becomes a contribution in aid of construction.

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Projected Income Statements - Present & Proposed Rates

Exhibit
Schedule F-1
Page 1
Witness: Cifuentes

Line No.	Account Description	Test Year Actual Results	At Present Rates Year Ended 12/31/2020	At Proposed Rates Year Ended 12/31/2020
1	**Revenues**			
2	Sewer Revenues	$ 454,853	$ 475,647	$ 495,752
3	Reclaimed Water Revenues	-	-	-
4	Other Sewer Revenues	670	670	670
5		$ 455,523	$ 476,317	$ 496,422
6	**Operating Expenses**			
7	Salaries and Wages	$ -	$ -	$ -
8	Purchased Water	3,035	3,035	3,035
9	Purchased Wastewater Treatment	-	-	-
10	Sludge Removal	5,794	5,981	5,981
11	Purchased Power	17,667	18,241	18,241
12	Fuel for Power Production	-	-	-
13	Chemicals	1,734	1,789	1,789
14	Materials and Supplies	1,324	1,324	1,324
15	Contractual Services - Accounting	1,770	1,770	1,770
16	Contractual Services - Legal	695	695	695
17	Contractual Services - Management	58,114	56,625	56,625
18	Contractual Services - Testing	22,306	22,306	22,306
19	Contractual Services - Other	51,344	51,344	51,344
20	Equipment Rent	-	-	-
21	Building Rent	445	-	-
22	Transportation Expense	191	191	191
23	Insurance - Auto	-	-	-
24	Insurance - General Liability	1,145	1,145	1,145
25	Regulatory Commission Expense	-	-	-
26	Miscellaneous Expense	17,158	17,158	17,158
27	Depreciation and Amortization	130,019	137,205	137,205
28	Bad Debt Expense	2,863	1,048	1,092
29	Taxes Other Than Income	-	-	-
30	Property Taxes	17,584	25,655	26,016
31	Income Taxes	62,409	26,404	31,304
32	**Total Operating Expenses**	$ 395,596	$ 371,917	$ 377,222
33	**Operating Income**	$ 59,927	$ 104,400	$ 119,200
34	**Other Income (Expense)**			
35	Interest and Dividend Income	-	-	-
36	AFUDC Income	154	154	154
37	Miscellaneous Non-Utility Expenses	(2,428)	(2,428)	(2,428)
38	Interest Expense	(414)	(24,639)	(24,639)
39				
40	**Total Other Income (Expense)**	$ (2,687)	$ (26,913)	$ (26,913)
41	**Net Profit (Loss)**	$ 57,240	$ 77,488	$ 92,288
42				
43				
44	SUPPORTING SCHEDULES:			
45	C-1			

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Projected Statements Of Changes In Financial Position Present And Proposed Rates

Exhibit
Schedule F-2
Page 1
Witness: Cifuentes

Line No.		Test Year Ended December 31, 2020	At Present Rates Year Ended December 31, 2021	At Proposed Rates Year Ended December 31, 2021
1	Cash Flows from Operating Activities			
2	Net Income	$ 57,240	$ 77,488	$ 92,288
3	Adjustments to reconcile net income to net cash			
4	provided by operating activities:			
5	Depreciation and Amortization	130,019	137,205	137,205
6	Depreciation Adjustments	(10,228)		
7	Changes in Certain Assets and Liabilities:			
8	Restricted Cash			
9	Accounts Receivable	(5,440)		
10	Other Receivables	-		
11	Materials and Supplies Inventory	-		
12	Prepaid Expenses	(3,721)		
13	Deferred Regulatory Assets/Liabilities	-		
14	Deferred Income Taxes	64,061		
15	Receivables/Payables to Associated Co.	95,412		
16	Accounts Payable	-		
17	Interest Payable	-		
18	Customer Meter and Security Deposits	(3,590)		
19	Taxes Payable	-		
20	Other assets and liabilities	121,797		
21	Rounding	2		
22	Net Cash Flow provided by Operating Activities	$ 445,552	$ 214,693	$ 229,493
23	Cash Flow From Investing Activities:			
24	Capital Expenditures	(467,803)	(980,548)	(980,548)
25	Plant Held for Future Use	-		
26	Changes in debt reserve fund	-		
27	Net Cash Flows from Investing Activities	$ (467,803)	$ (980,548)	$ (980,548)
28	Cash Flow From Financing Activities			
29	Change in Restricted Cash			
30	Change in net amounts due to parent and affiliates			
31	Net Receipt contributions in aid of construction			
32	Net receipts of advances in aid of construction	26,807		
33	Long-Term Debt		1,445,333	1,452,141
34	Dividends Paid		(464,840)	(471,648)
35	Deferred Financing Costs			
36	Paid in Capital			
37	Net Cash Flows Provided by Financing Activities	$ 26,807	$ 980,493	$ 980,493
38	Increase(decrease) in Cash and Cash Equivalents	4,556	214,638	229,438
39	Cash and Cash Equivalents at Beginning of Year	4,148	8,704	8,704
40	Cash and Cash Equivalents at End of Year	$ 8,704	$ 223,342	$ 238,142
41				
42				
43				
44	SUPPORTING SCHEDULES:			
45	E-3			
46				
47				
48				
49				

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Projected Construction Requirements

Exhibit
Schedule F-3
Page 1
Witness: Cifuentes

Line No.	NARUC	Plant Asset:	Test Year	2021	2022	2023
1	351	Organization	$ -	$ -	$ -	$ -
2	352	Franchise	$ -	-	-	-
3	353	Land	$ -	-	-	-
4	354	Structures & Improvements	$ -	-	-	-
5	355	Power Generation	$ -	-	-	-
6	360	Collection Sewer Forced	$ -	387,500	345,000	345,000
7	361	Collection Sewers Gravity	$ -	100,000	100,000	100,000
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	$ -	-	-	-
16	374	Reuse Distribution Reservoirs	$ -			
17	375	Reuse Trans. and Dist. System	$ -	-	-	-
18	380	Treatment & Disposal Equipment	$ 45,802	100,950	92,950	92,950
19	381	Plant Sewers	$ -	-	-	-
20	382	Outfall Sewer Lines	$ -	-	-	-
21	389	Other Sewer Plant & Equipment	$ -	1,000,000	-	-
22	390	Office Furniture & Equipment	$ -	-	-	-
23	390.1	Computers and Software	$ -	-	-	-
24	391	Transportation Equipment	$ -	-	-	-
25	392	Stores Equipment	$ -	45,000	-	-
26	393	Tools, Shop And Garage Equip	$ 1,483	-	-	-
27	394	Laboratory Equip	$ -	-	-	-
28	395	Power Operated Equipment	$ -	972	900	900
29	396	Communication Equip	$ -	-	-	-
30	398	Other Tangible Plant	$ -	-	-	-
31						
32	Total		$ 47,285	$ 1,634,422	$ 538,850	$ 538,850

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Assumptions Used In Rate Filing

Exhibit
Schedule F-4
Page 1
Witness: Cifuentes

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.

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Revenue Summary
With Annualized Revenues to Year End Number of Customers
And Estimated Customer Growth
Test Year Ended December 31, 2020

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	$ 474,444	$ 494,845	$ 20,401	4.30%	99.68%	99.68%
2							
3							
4	Subtotal Revenues	$ 474,444	$ 494,845	$ 20,401	4.30%	99.68%	99.68%
5							
6	Residential customer revenue						
7	annualized to end of year, based on						
8	year end number of customers						
9	Residential	$ 1,512	$ 1,577	65	4.30%	0.32%	0.32%
10							
11	Subtotal Annualization	$ 1,512	$ 1,577	$ 65	4.30%	0.32%	0.32%
12							
13	Subtotal Revenues (including annualization)	475,956	496,422	20,466	4.30%	100.00%	100.00%
14	Other Sewer Revenues	670	670	-	0.00%	0.00%	0.00%
15	Reconcilation amount to C-1	(309)	(670)	(361)	116.83%	0.00%	0.00%
16	Totals	$ 476,317	$ 496,422	$ 20,105	4.22%	100.00%	100.00%
17							
18							
19							
20							
21	Reconciliation to Recorded Revenues						
22	Sewer Service Revenues Per GL	$ 454,853					
23	Add: Year 5 Phase-in Revenues not billed in TY	19,282					
24	Less:						
25							
26	Net GL	$ 474,135					
27	Per Bill Count (w/out annualization) (line 6)	474,444					
28	Difference	(309)					
29	Percent Difference	-0.065%					
30							

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Analysis of Revenue by Detailed Class

Schedule H-2
Page 1
Witness: Bourassa

Line No.	Customer Classification	Average Number of Customers at 12/31/2020	Average Usage	Average Bill Present Rates	Average Bill Proposed Rates	Proposed Increase Dollar Amount	Proposed Increase Percent Amount
1	Residential	365	N/A	$ 108.00	$ 112.64	$ 4.64	4.30%
2							
3							
4							
5							
6							
7	Total	365					
8							
9							
10							
11							

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Present and Proposed Rates
Test Year Ended December 31, 2020

Exhibit
Schedule H-3
Page 1
Witness: Bourassa

Line No.	Customer Classification	Present Rates	Proposed Rates	Dollar Change	Percent Change
1					
2	Monthly Charge for:				
3	Residential	$ 108.00	$ 112.64	$ 4.64	4.30%
4	School, per Student	$ 8.624	$ 8.995	$ 0.37	4.30%
5	Commercial	See Below [2]	See Below [2]		
6					
7	Commercial, per 1,000 gals[1]	$ 6.00	$ 6.258	$ 0.26	4.30%
8					
9					
10					
11	Effluent (per 1,000 gallons)	NT	Market Price	NM	
12					
13					
14					

15 [1] Base dupon actual water usage provided by Arizona Water Company.
16 If water usage data cannot be obtained, then the Company proposes the following flat rate design based upon meter size:

	Meter Size:	Present Monthly Charge	Proposed Monthly Charge
19	1 Inch and smaller	$ 140.00	$ 140.00
20	1 1/2 Inch	$ 280.00	$ 280.00
21	2 Inch	$ 448.00	$ 448.00
22	3 Inch	$ 896.00	$ 896.00
23	4 Inch	$ 1,400.00	$ 1,400.00
24	6 Inch	$ 2,800.00	$ 2,800.00
25	8 Inch	$ 4,480.00	$ 4,480.00
26	10 Inch	$ 6,440.00	$ 6,440.00

27
28
29 NT = No Tariff
30 NM = Not Meaningful

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Present and Proposed Rates
Test Year Ended December 31, 2020

Exhibit
Schedule H-3
Page 2
Witness: Bourassa

Line No.	Other Service Charges	Present Rates	Proposed Rates
1	Establishment	$ 25.00	$ 25.00
2	Establishment (After Hours)	NT	NT
3	Reconnection (Delinquent)	(a)	(a)
4	Reestablishment (within 12 months)	*	*
5	Deposit	**	**
6	Deposit Interest	6.00%	6.00%
7	NSF Check	$ 25.00	$ 25.00
8	Late Payment Penalty	Greater of $5.00 or 1.5% per month on unpaid balance	Greater of $5.00 or 1.5% per month on unpaid balance
9	Deferred Payment	1.5% per month	1.5% per month
10	Service Charge - after hours(b)	$ 50.00	$ 90.00
11	Main Extension/ Additonal Facillities	Cost	Cost
12	Revenues Taxes and Asessments	***	***

* Per Commission Rule A.A.C. R-14-2-603(D) - Months off system times the minimum charge.

** Per Commission Rule A.A.C. R-14-2-603(B). Residential - two times the average bill. Non-residential two and one-half times the average bill.

*** Per Commission Rule A.A.C. R14-2-608(D)

(a) Customer shall pay the actual cost of physical disconnection and Establishment Fee (if same customer) and there shall be no charge for disconnection if no physical work is performed.

(b) The after-hours service charge shall apply to any service requested by Customer that is performed by Company after regular business hours and shall be in addition to the regular business hours service charge.

IN ADDITION TO THE COLLECTION OF REGULAR RATES, THE UTILITY WILL COLLECT FROM ITS CUSTOMERS A PROPORTIONATE SHARE OF ANY PRIVILEGE, SALES, USE, AND FRANCHISE TAX. PER COMMISSION RULE 14-2-608D(5).

ALL MAIN EXTENSIONS (ADVANCES AND/OR CONTRIBUTIONS) ARE TO INCLUDE LABOR, MATERIALS, OVERHEADS AND ALL APPLICABLE TAXES, INCLUDING ALL GROSS-UP TAXES FOR INCOME TAXES.

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Representative Rate Schedule
Test Year Ended December 31, 2020

Exhibit
Schedule H3
Page 3
Witness: Bourassa

Hook-up Fee to charged Builders, Developers, and or New Homeowner's

All Builders, Developers, and/or New Homeowners are required to pay a Hook-up Fee for connection to the sewer system.

Line No.		Present Rates		Proposed Rates
8	Per Equivalent Residential Unit (ERU)(a)	NT	$	1,100

(a) One ERU is rated at 270 gallons per day (gpd)

NT= No Tariff

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Bill Comparison
Customer Classification
Residential

Exhibit
Schedule H-4
Page 1
Witness: Bourassa

Present Bill	Proposed Bill	Dollar Increase	Percent Increase
$ 108.00	$ 112.64	$ 4.64	4.30%

Present Rates:
Monthly Charge: $ 108.00

Proposed Rates:
Monthly Charge: $ 112.64

Liberty Utilities (Entrada Del Oro Sewer) Corp.
Test Year Ended December 31, 2020
Customer Classification
Residential

Exhibit
Schedule H-5
Page 1
Witness: Bourassa

Month Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Total Year	Cumul- ative Billing
364	356	359	370	372	368	370	368	369	367	365	365	4,393	4,393
												-	4,393
												-	4,393
												-	4,393
												-	4,393
												-	4,393
												-	4,393
												-	4,393
												-	4,393
												-	4,393
												-	4,393
												-	4,393
												-	4,393
												-	4,393
												-	4,393
												-	4,393
												-	4,393
												-	4,393
364	356	359	370	372	368	370	368	369	367	365	365	4,393	

Average Usage	N/A
Median Usage	N/A
Average # Customers	366