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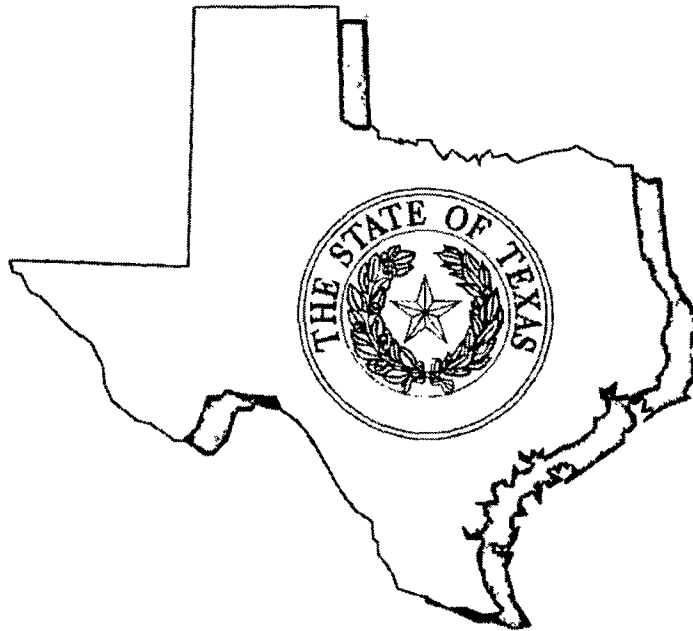
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SOAH DOCKET NO. 473-15-4435.WS
PUC DOCKET NO. 45570

APPLICATION OF MONARCH UTILITIES I, L.P. FOR AUTHORITY TO CHANGE RATES FOR WATER AND SEWER SERVICE	§ § § § § § §	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

DIRECT TESTIMONY OF
JOLIE MATHIS
WATER UTILITY DIVISION
PUBLIC UTLITY COMMISSION OF TEXAS
August 24, 2016

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ATTACHMENTS

Attachment JM-1   List of Testimonies

Attachment JM-2   TCEQ Approval of Monarch Depreciation Rate Application

1

2   **I. INTRODUCTION**

3

4   **Q.**   **Please state your name and business address.**

5   A.   My name is Jolie Mathis and my business address is 1701 North Congress Avenue, Austin

6   TX.

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

8   A.   I am employed by the Public Utility Commission of Texas ("Commission") as an

9   Engineering Specialist in the Water Utilities Division.

10 **Q.**   **How long have you been employed by the PUC?**

11 A.   I have been employed by the PUC since August 1, 2007.

12
13 **Q.**   **What are your primary job responsibilities?**

14 A.   My responsibilities include reviewing and processing applications to obtain or amend

15   certificates of convenience and necessity (CCNs); reviewing rate filings and participating in

16   negotiating settlements; preparing testimony and exhibits for contested case matters

17   involving investor-owned, non-profit and governmental water and sewer utilities; and

18   conducting rate-related inspections of water or sewer utility systems within the state.

19 **Q.**   **Please state your qualifications and experience.**

20 A.   I graduated from Prairie View A&M University of Texas in 1993 with a Bachelor of Science

21   degree in Electrical Engineering. I worked for 13 years as a Utility Engineering Specialist

22   at the Missouri Public Service Commission in Jefferson City, Missouri, developing

23   depreciation rate and reserve studies for electric, gas, water, sewer and several small

24   telephone companies. I have received formal training from Depreciation Programs, Inc. that

25   includes the following courses: 'Basic Depreciation Concepts, 'Models used in Life and

26   Salvage Analysis, 'Forecasting Life and Salvage, and 'Modeling and Life Analysis Using

1   Simulation." I have also received training while attending the Annual Society of

2   Depreciation Professionals Meeting in Colorado Springs, Colorado, Albuquerque, New

3   Mexico, and Austin, Texas. I have completed the NARUC (National Association of

4   Regulatory Utility Commissioners) Annual Regulatory Studies Program at Michigan State

5   University, and attended and participated in numerous industry seminars in the electric,

6   natural gas, water, sewer, and telecommunications areas.

7 Q.   **Have you filed testimony or worked on cases filed at this Commission?**

8 A.   Yes. I have filed testimony at this Commission, as well as the Missouri Public Service

9   Commission. See Attachment 1 for my list of case participation.

10 Q.   **On whose behalf are you testifying?**

11 A.   I am testifying on behalf of the Staff of the Public Utility Commission (Staff).

12 Q.   **What is the purpose of your testimony in this proceeding?**

13 A.   I will present Staff's recommendation for depreciation for water and sewer service.

14 Q.   **What is the scope of your review?**

15 A.   I reviewed the application, the discovery responses, and the pre-filed direct testimony of

16   Monarch's depreciation witness, Earl M. Robinson.

17 Q.   **Can you summarize your participation?**

18 A.   The purpose of my testimony is to make recommendations and to comment on the

19   depreciation filing as proposed by Monarch Utilities.

20

21 **II.   OVERVIEW OF DEPRECIATION CONCEPTS**

22 Q.   **What is depreciation?**

23 A.   Depreciation is the loss, not restored by current maintenance, which is due to all factors

24   causing the ultimate retirement of an asset.

25 Q.   **What are some of those factors?**

1   A.   These factors include wear and tear, decay, action of the elements, inadequacy, obsolescence,

2   changes in the art, changes in demand and requirements of public utilities.

3   **Q.**   **What is the purpose of depreciation?**

4   A.   The purpose of depreciation in a regulatory setting is to recover the original cost of capital

5   assets from customers, allocated over the useful life of the assets. The amount of capital

6   recovery plus an adjustment for salvage is determined as an annual amount, frequently called

7   the 'annual accrual' or 'accrual for depreciation, and is included in a determination of a

8   regulated company's revenue requirement during a rate case. In this way, the company

9   recovers, via customers' bills, the dollars the company originally paid for the plant plus or

10   minus a salvage adjustment.

11   **Q.**   **What is Depreciation Expense?**

12   A.   Depreciation expense is the dollar amount determined by applying a depreciation rate to the

13   original plant balance of the account.

14   **Q.**   **How is depreciation calculated?**

15   A.   The depreciation analyst must determine which: 1) depreciation technique; 2) depreciation

16   procedure; and 3) depreciation method that will be used. The technique can be: a) whole

17   life; or b) remaining life. The procedure can be: a) broad group; b) vintage group; or c)

18   equal life group. The method can be: a) straight line; b) units of production; c) sum of the

19   year's digits; d) double declining balance; or e) another specific method developed to

20   accelerate the recovery of the original cost of plant.

21   **Q.**   **What technique, procedure, and method were used to determine Monarch's proposed**

22   **depreciation rates?**

23   A.   The remaining life technique, broad group procedure, and straight line method.

24   **Q.**   **What is the remaining life technique?**

1   A.   The remaining life technique seeks to recover the undepreciated original cost less future net

2   salvage over its remaining life.   The formula used to calculate the depreciation rate under

3   this technique is as follows;

4
$$\text{Depreciation rate (\%)} = \left\{ \frac{1 - book\ reserve\ ratio - net\ salvage\ ratio}{composite\ remaing\ life} \right\} * 100$$

5   The *book reserve ratio* is calculated by dividing the book accumulated depreciation expense

6   (or book reserve dollars) by the original plant investment amount for each plant category.

7   *Net salvage* is the sum of the gross salvage minus the cost of removing the item.   Gross

8   salvage is the amount recorded for the property due to the sale, reimbursement, or reuse of

9   the property.   Cost of removal is the cost associated with retirement from service.   Net

10   salvage value is expressed as a ration or a percent of the total original plant for calculating

11   the depreciation rate.

12   *Composite remaining life* (CRL) is the weighted average remaining life of the property

13   account for a group of all vintages.   The average remaining life represents the future years

14   of service expected for the surviving property.

15 Q.   **What is the straight line method?**

16 A.   The Straight Line Method charges an equal amount to each accounting period over the

17   service life of the plant item or group.

18 Q.   **What is the Broad Group Procedure?**

19 A.   Under this procedure all units of plant within a particular plant account or subaccount are

20   considered to be one group.   It is a procedure that requires at least accounting records of

21   annual additions and balances.   Retirements by vintage are desirable.   This is a procedure

22   that is widely used in the electric and gas industry, but not as common in the water industry.

23 Q.   **What procedure has more often been used in the water industry?**

24 A.   The Single Unit Procedure, or Itemized Accounting.   Under this procedure each unit of

25   property is depreciated separately.   It requires separate record keeping for each unit.

1

2   III.   GROUP DEPRECIATION VS. ITEMIZED DEPRECIATION

3   Q.   **What substantive rules or water statutes apply to group accounting vs itemized**

4   **accounting?**

5   A.   Pursuant to 16 Tex. Admin. Code § 24.31(c)(2)(B)(ii), '[a]ssets may be booked in itemized

6   or group accounting, but all accounting for assets and their retirements must be supported by

7   an approved accounting system.

8   Q.   **What is the background and reason for this rule?**

9   A.   Senate Bill (SB) 2306, 81st Legislate Session, 2009, amended Texas Water Code (TWC)

10   § 13.131, by requiring the Texas Commission on Environmental Quality (TCEQ) by rule to

11   allow water and/or sewer utilities to claim the book cost less net salvage of depreciable utility

12   plant retired be charged in its entirety to the accumulated depreciation account in a manner

13   consistent with accounting treatment of regulated electric and gas utilities in this state.   In

14   the past, TCEQ treated bookkeeping entries associated with retirement of assets (net salvage

15   values) as income and expense items rather than in depreciation calculations.   This was

16   considered   itemized   accounting   (each   asset   reported   separately)   as   supporting

17   documentation for asset depreciation.   In both electric and gas utility regulation, retirement

18   costs are estimates as soon as an asset is put into service and included in the original cost to

19   be used in calculating annual depreciation.   The assets are reported as a group (group

20   accounting), instead of itemized accounting.   Due to the complexity of a depreciation study

21   associated with group accounting, TCEQ continued to allow water and or sewer utilities the

22   option of itemized accounting.

23   Q.   **In your previous experience performing group depreciation studies for the electric and**

24   **gas industry, what has been the most important component necessary to produce the**

25   **most reliable results?**

1 A. Historical data. Data is an absolute necessity for the estimation of depreciation. Plant

2   accounting data is generated by work orders that are recorded in the continuing property

3   records.

4 Q. **What are continuing property records?**

5 A. A continuing property record (CPR) shows original costs, quantities, and locations of plant

6   in service. A CPR should contain 1) an inventory of property record units which can be

7   readily checked for proof of physical existence, 2) the association of costs with such property

8   units to ensure accurate accounting for retirements, and 3) the dates of installation and

9   removal of plant to provide data for use in connection with depreciation studies.

10 Q. **How does the depreciation analyst use this information?**

11 A. With a computerized accounting system, the data is entered into an electronic database.

12   This database provides input to software designed to provide indications of the life and

13   salvage characteristics of the property.

14 Q. **Why is it important to keep this data updated?**

15 A. Preparation of data for entry into computer programs can be expensive and time consuming.

16   Though studies are not conducted annually, data should be updated each year rather than

17   waiting several years until the time of the next study. Thus, less time will be spent on data

18   preparation. Detail is lost when only generalized information is recorded about a group of

19   transactions, such as additions and retirements. This makes forecasting life and salvage

20   more difficult and less accurate.

21 Q. **Does Monarch Utilities have enough historical data to perform a group depreciation**

22   **study?**

23 A. They should, however in the depreciation study filed in this case, it is yet to be determined.

24   In Mr. Earl Robinson's Direct Testimony filed on behalf of Monarch Utilities, on page 9 line

25   6, he state states that aged plant records for Monarch's property is available for a **period of**

1   **years.** He is very broad and vague when describing the actual data used in the study. In

2   Section 3 of the depreciation study, he states; 'The scope of the study included an analysis

3   of the Company's historical data through December 31, 2014, discussion with Company

4   management and staff to identify prior and prospective factors affecting the Company's plant

5   in service, as well as interpretation of past service life data experience and future life

6   expectancies to determine the appropriate average service lives of the Company's surviving

7   plant. In response to Staff RFI 1-10, he also states that, 'The Company's provided

8   depreciation studies are not based upon the vintage group approach, an approach that

9   could/would have varying proportion surviving amounts at each age, dependent upon the

10   level of variation between actual historical experience versus amount generated via the use

11   of the estimated Iowa Curve and average service life under the Broad Group Procedure. The

12   Company does not, and few in the industry do, have **sufficient detailed data** to complete

13   detailed vintage group depreciation calculations. He all but admits that most of the water

14   industry does not have enough detailed data for a complete and thorough depreciation study

15   using group depreciation.

16   **Q.   Please provide some examples.**

17   A.   Sure. For most of the Water accounts the Life Analysis Method is using an Industry Survey,

18   that consists of a summary of ASL's of 10 water utility companies; Arizona American,

19   California Citizens, New Mexico American, California Water, Iowa American, Illinois

20   American, Tidewater Utilities, and Pennichuck East Utilities; none of which are actually

21   located in the state of Texas. Out of the 23 Water Accounts, 9 are strictly based on Industry

22   Surveys and Professional Judgement. Out of the 16 Sewer Accounts 9 are strictly based on

23   Industry Surveys and professional judgement. The rest are based on the retirement rate

24   method and professional judgement.

25   **Q.   What is the retirement rate method?**

1   A.   The retirement rate method of life analysis is an actuarial method of developing survivor

2   curves using the average rate at which property is retired from each experienced age group.

3   Historical mortality data for an account is plotted and the stub curve (curve representing

4   dollars surviving that does not reach 0%) is compared to a known shape of established set of

5   Iowa curves. The curve that best fits the data both visually and statistically. is used to

6   calculate the composite remaining life of the mass property account.

7   Survivor curve models, such as the Iowa curves are widely used to simplify life analysis and

8   forecasting. These curves were developed at the Iowa State College's Iowa Engineering

9   Experiment Station over 70 years ago. Three of the four families of curves include an age

10   group of 176 industrial property mortality curves, and 18 types, published in Bulletin 125 of

11   Iowa State University's Engineering Research Institute, entitled 'Statistical Analysis of

12   Industrial Property Retirements' The classification of the survivor curves was made

13   according to whether the mode (highest point) of the frequency curve was to the left, to the

14   right, or comparable with the average service life. The result included six left modal

15   (L0,L1,L2,L3,L4,L5); five right modal (R1,R2,R3,R4,R5); and several symmetrical curves

16   (S0,S1,S2,S3,S4,S5,S6). In 1957. a fourth family was presented, consisting of the four O

17   type survivor curves (O1,O2,O3,O4). Today. these survivor curve types are used

18   extensively in public utility depreciation studies.

19   Q.   **For those accounts that Monarch uses the retirement rate method, do you agree with**

20   **the analysis?**

21   A.   No. Placement band and experience bands do now show enough activity to produce reliable

22   results.

23   Q.   **What are placement and experience bands?**

24   A.   Placement bands show, for a group of vintages, the retirement history from the property's

25   placement in service to the present. Experience bands show the retirement history for all

1 vintages during a certain set of years. A depreciation analyst must select a band width

2 (number of years to include in the band) which must include enough data to provide

3 confidence in the reliability of the resulting curve fit. For longer life plant, widths of 10

4 years are more are necessary.

5 Q. **Does Monarch Utilities meet that criteria?**

6 A. No. The experience bands show on average 3, or 4, or 5, or 6 year widths, but none more

7 than 10 years. Some accounts do not even show enough retirement activity to produce a

8 survivor curve. This is not enough retirement data, in my opinion to perform a reliable

9 actuarial analysis for a group depreciation study.

10

11 IV. **NET SALVAGE ANALYSIS**

12 Q. **What is net salvage?**

13 A. Net salvage is the difference between the gross salvage and the cost of retiring the asset.

14 Positive net salvage occurs when gross salvage exceeds cost of retirement, and negative net

15 salvage occurs when cost of retirement exceeds gross salvage.

16 Q. **What is gross salvage?**

17 A. Gross salvage is the dollar amount received for property retired due to the sale,

18 reimbursement, or reuse of the property.

19 Q. **What is cost of removal?**

20 A. The cost of removal is the cost of demolishing or dismantling plant, and essentially labor

21 cost.

22 Q. **Please analyze the methodology used by Monarch for determining Net Salvage Value.**

23 A. In Staff RFI 1-2, Monarch was asked to provide annual gross salvage, cost of removal,

24 reimbursements, and annual adjustment to gross salvage and cost of removal by depreciable

25 plant account. Monarch responded by stating that 'the Company's historical records to

1   date, have not captured the cost in a manner that they could be analyzed and identified, so

2   estimates of future new salvage amounts were estimated upon general industry data.   So

3   again, all of the net salvage estimates were based on industry averages based on the

4   companies mentioned previously.   Monarch further states in a response to RFI 11-5 'Most

5   of these companies, contained in the referenced industry data, are located within the Midwest

6   and Western part of the US.   In general, the companies typically are ground water source

7   based companies with modest sized plant facilities as opposed to surface water entities, such

8   as would be the case with large municipal systems that routinely have far larger sized

9   transmission and distribution systems.   Again these are companies that do not reside in the

10   state of Texas, and may or may not be comparable to Monarch Utilities facilities.

11   **Q.   How did Monarch come up with some of it cost of removal percentages for some of its**

12   **accounts?**

13   A.   As an example, let's look at Water Mains, Account 331.40.   Monarch chose a -30% cost of

14   removal percentage for this account.   In Staff RFI 11-1, Staff asked Monarch to provide

15   more detailed information, such as how the transmission and distribution mains were

16   constructed, the current condition of the water lines, and how the lines were treated once they

17   were retired.   Monarch responded, 'Various mains are abandoned in place, while other

18   components of the property class are, by necessity, physical removed.   In consulting with

19   Staff witness Heidi Graham, who is the water engineering manager at the Public Utility

20   Commission of Texas, I understand that, once retired, the water mains are not removed, but

21   instead abandoned in place, with no inherent cost of removal.   Monarch goes further to

22   explain that it is mostly attributable to labor cost, but does not provide any data supporting

23   that statement.   Overall, the net salvage values in this depreciation study are unverifiable

24   and unreliable.

1   Q.   **If Monarch's proposed depreciation study is rejected, what depreciation parameters**

2   **should be used and why?**

3   A.   Monarch should use the existing plant and property depreciation service lives effective on

4   April 9, 2010 in TCEQ Docket Nos. 36630-R and 36631-R. This does not include net

5   salvage parameters. These are the most recent set of depreciation parameters ordered for

6   Monarch. No change at all is preferable to the depreciation parameters proposed by

7   Monarch. In my opinion, these depreciation parameters are consistent with depreciation

8   expense borne by Monarch ratepayers today and are comparable to depreciation parameters

9   used by other Texas utilities.

10 Q.   **Do you have any recommendations as to Monarch's proposed depreciation rates**

11   **presented in the application?**

12 A.   I recommend that the Commission adopt no adjustments to Monarch's existing depreciation

13   rates. Based on a lack of actuarial data and a heavy reliance on industry averages, Monarch

14   cannot justify the modified depreciation rates proposed in the application because Monarch's

15   group depreciation study is flawed. I recommend no change to the present depreciation

16   service lives for water and sewer utility service as approved in TCEQ Docket Nos. 36630-R

17   and 36631-R. Please see Attachment JM-2.

18 Q.   **Does this conclude your direct, pre-filed testimony?**

19 A.   Yes, it does.

Date Filed	Issue	Case Number	Exhibit	Case Name
12//1/1995		TO96147	Direct	ALLTEL Missouri, Inc.
3/7/1996		GA96130	Rebuttal	Missouri Pipeline Company
3/7/1996		GA9711	Rebuttal	Missouri Pipeline Company
1/10/1997		GM9770	Rebuttal	Atmos Energy Corp. & United Cities Gas
6/26/1997		GR97272	Direct	Associated Natural Gas
5/13/1999	Depreciation of Plant	HR99245	Direct	St. Joseph Light & Power Company
6/25/1999	Depreciation	WR99326	Direct	United Water Missouri, Inc.
4/3/2000	Amortization of Premature Retirement	SR2000282	Direct	Missouri-American Water Company
7/2/2001	Depreciation of Plant	EC20021	Direct	Union Electric Company d/b/a Ameren UE
12/6/2001	Depreciation of Plant	EC2002265	Direct	Utilicorp United Inc. d/b/a Missouri Public Service
12/6/2001	Depreciation of Plant	ER2001672	Direct	Utilicorp United Inc. d/b/a Missouri Public Service
1/22/2002	Depreciation of Plant	EC2002265	Surrebuttal	Utilicorp United Inc. d/b/a Missouri Public Service
3/1/2002	Depreciation of Plant	EC20021	Direct	Union Electric Company d/b/a Ameren UE
6/24/2002	Depreciation	EC20021	Surrebuttal	Union Electric Company d/b/a Ameren UE

4/15/2004	Depreciation	GR20040209	Direct	Missouri Gas Energy
6/14/2004	Depreciation Rates	GR20040209	Surrebuttal	Missouri Gas Energy
10/14/2004	Depreciation of Plant	HM20040618	Rebuttal	Trigen-Kansas City Energy Corp.
12/15/2006	Depreciation	ER20070002	Direct	Ameren UE
12/15/2006	Depreciation	GR20070003	Direct	Ameren UE
2/27/2007	Depreciation	ER20070002	Surrebuttal	Ameren UE
4/18/2008	Depreciation	34800	Direct Testimony	Entergy Gulf States, Inc.
10/21/2008	Depreciation	35763	Direct Testimony	Southwestern Public Service Co.
4/15/2009	Depreciation	37690	Direct Testimony	El Paso Electric
11/15/2010	Depreciation	38480	Direct Testimony	Texas-NewMexico

1

MONARH UTILITIES 1, LP
NOTICE TO CUSTOMERS OF RATES
EFFECTIVE APRIL 9, 2010

The Texas Commission on Environmental Quality did not receive protests from 10% of the customers during the statutory comment period for the recently noticed of revised utility plant and property depreciation service lives for **water** utility service. This notice was effective as proposed without hearing according to Section 13.187 of the Texas Water Code.

The following revised utility plant and property depreciation service lives for **water** utility service were effective on April 9, 2010:

Account No.	Description	Approved Average Service Life (ASL) Water
	Source of Supply	
307.20	Wells & Springs	46
	Pumping Plant	
304.20	Pumping Structures & Improvements	40
310.20	Power Gen Equip (incl Controls)	15
311.21	Electric Pumping Equipment	15
	Water Treatment Plant	
304.30	WT Structures & Improvements	33
320.30	Chemical Equipment	15
	Transmission & Distribution Plant	
330.40	Distr. Reservoirs & Standpipes	50
331.40	Water Lines (Transmission and Distrib)	85
331.42	Water Lines	85
331.43	Mains	85
333.40	Services	45

	Continue: Water Utility Assets	
334.40	Meters	20
334.50	Chlorine Meter	20
335.40	Hydrants	50
336.40	Hydrants Backflow Preventer	50
	General Plant	
304.50	Adm & Gen Structures & Improvements	35
304.51	Fencing	35
340.10	Furniture & Fixtures	15
340.50	Computers & Peripherals	5
341.00	Transportation Equipment	5
344.00	Laboratory Equipment	15
345.70	Power Operated Equipment	15
346.50	Communication Equipment	20
343.00	Tools, Shop & Garage Equipment	15
121.01	M&S Inventory (Office Furn and Equip)	20
362.20	Media	5

MONARH UTILITIES 1, LP
NOTICE TO CUSTOMERS OF RATES
EFFECTIVE APRIL 9, 2010

The Texas Commission on Environmental Quality did not receive protests from 10% of the customers during the statutory comment period for the recently noticed of revised utility plant and property depreciation service lives for **sewer** utility service. This notice was effective as proposed without hearing according to Section 13.187 of the Texas Water Code.

The following revised utility plant and property depreciation service lives for **sewer** utility service were effective on April 9, 2010:

Account No.	Description	Approved Average Service Life (ASL) Sewer
	Collection Plant	
354.20	Structures & Improvements Collection	35
354.21	Structures & Improvements Collection	35
354.22	Structures & Improvements Collection	35
360.20	Sewer Service Lines	65
360.24	Lift Stations	35
361.20	Sewers-Gravity	65
361.21	Sewers-Force	65
362.20	Filter Media	5
364.20	Flow Meters	25
367.60	Sewer Service Taps	40

	Continue: Sewer Assets	
	Pumping Equipment	
370.30	Receiving Wells / Manholes	50
371.32	Lift Station Pumps	25
355.20	Power Gen Equip (incl Controls)	25
	Treatment & Disposal Equipment	
380.40	Treatment & Disposal Equipment	25
381.40	Treatment & Disposal Equipment	25
	General Plant	
394.50	Laboratory	15
395.70	Power Operated Equipment (Heavy Equip)	15
396.70	Communication Equipment	20
397.70	Miscellaneous Equipment	25