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INDIANA UTILITY
REGULATORY COMMISSION

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

PETITION OF CATARACT LAKE WATER)
CORPORATION FOR A NEW SCHEDULE OF) CAUSE NO. 45663-U
RATES AND CHARGES FOR WATER)
SERVICE)

PUBLIC'S EXHIBIT NO. 2

TESTIMONY OF KRISTEN WILLOUGHBY

ON BEHALF OF

THE INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

March 30, 2022

Respectfully submitted

INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR



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CERTIFICATE OF SERVICE

This is to certify that a copy of the *Public's Exhibit No. 2 – Testimony of Kristen Willoughby on behalf of the OUCC* has been served upon the following in the captioned proceeding by electronic service on March 30, 2022

CATARACT LAKE WATER CORPORATION

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**TESTIMONY OUCC WITNESS OF KRISTEN WILLOUGHBY
CAUSE NO. 45663-U
CATARACT LAKE WATER CORPORATION**

I. INTRODUCTION

1 **Q: Please state your name and business address.**

2 A: My name is Kristen Willoughby, and my business address is 115 West Washington
3 Street, Suite 1500 South, Indianapolis, Indiana 46204.

4 **Q: By whom are you employed and in what capacity?**

5 A: I am employed by the Indiana Office of Utility Consumer Counselor ("OUCC") as
6 a Utility Analyst in the Water/Wastewater Division. My qualifications and
7 experience are set forth in Appendix A.

8 **Q: What is the purpose of your testimony?**

9 A: I evaluate the extensions and replacements ("E&R) revenue requirement Cataract
10 Lake Water Corporation ("Cataract Lake" or "Applicant) presented in its
11 application in support of its proposal to keep its current rates. I describe Cataract
12 Lake Water Corporation's operational characteristics. I discuss Cataract Lake's
13 level of water loss and describe the steps it has taken to reduce water loss.

14 **Q: What did you do to prepare your testimony?**

15 A: I reviewed Cataract Lake's application. I reviewed the Indiana Utility Regulatory
16 Commission's ("Commission" or "IURC") Final Order in Cause No. 44897-U
17 issued May 31, 2017, for an increase in rates and charges. I reviewed Cataract
18 Lake's 2014 through 2020 IURC Annual Reports. I wrote data requests and
19 reviewed Cataract Lake's responses. I reviewed reports Cataract Lake filed with

1 the Indiana Department of Environmental Management (“IDEM”), which I
2 accessed using IDEM’s Virtual File Cabinet.¹

3 **Q: Does your testimony include attachments?**

4 A: Yes. My testimony includes the following attachments:

- 5 • OUCC Attachment KW-01: Cataract Lake’s response to OUCC DR 1-9.
- 6 • OUCC Attachment KW-02: Cataract Lake’s response to OUCC DR 1-3.
- 7 • OUCC Attachment KW-03: Utility Dashboard, showing operational statistics
8 based upon Cataract’s IURC Annual Reports from 2014-2019.
- 9 • OUCC Attachment KW-04: Cataract Lake’s response to OUCC DR 1-1 and
10 DR 1-2.

II. APPLICANT’S CHARACTERISTICS

11 **Q: Please describe Applicant’s characteristics.**

12 A: Applicant is a not-for-profit utility providing water service to 1,220 customers in
13 Putnam, Owen, and Clay Counties.² Applicant’s source of supply comprises three
14 wells with a capacity is 625 gallon per minute (gpm) with the largest well out of
15 service.³ Cataract Lake’s storage and distribution system consists of two storage
16 tanks, one booster station, and approximately 395,710 miles of water main.⁴

17 **Q: Does Applicant have adequate storage capacity?**

18 A: Yes. Cataract Lake currently has a total storage capacity of 450,000⁵ gallons. With
19 total average sales in 2020 of 187,123⁶ gallons per day, Cataract Lake meets the

¹ IDEM Virtual File Cabinet available at <https://vfc.idem.in.gov/DocumentSearch.aspx>.

² 2020 Annual Report, page W-1, Year End Customer Numbers.

³ 2020 Annual Report, page W-7.

⁴ 2020 Annual Report, pages W-7 and W-9.

⁵ 2020 Annual Report, page W-7, 300,000 + 150,000 = 450,000 gallons.

⁶ 2020 Annual Report page W-6. 68,300,000 / 365 = 187,123 gallons per day

1 Ten States Standards recommendation that total water storage meet average day
2 demands.⁷

III. EXTENSIONS AND REPLACEMENTS

3 **Q: Has Cataract Lake completed the projects from Cause No. 44897-U?**

4 A: In Cause No. 44897-U, Cataract Lake proposed to use its requested E&R funds to
5 complete three capital improvement projects. The first project was meter
6 replacement. This was a five-year project, and Applicant has completed the first
7 three years of the project. The remaining meters are to be changed out in the next
8 few years. The second project was the purchase of a service truck, which was
9 transacted in 2018. The last project was the replacement of pumps, which was
10 completed in 2019 and 2020.⁸

11 **Q: Has Cataract Lake presented an E&R revenue requirement?**

12 A: Yes. According to Indiana Code § 8-1-2-125(d), which applies to not-for-profit
13 utilities, Cataract Lake's rates should, among other things, produce sufficient
14 revenue to pay for extensions and replacements of utility infrastructure. According
15 to Cataract Lake's Small Utility Rate Application, Schedule 7, it has requested
16 \$47,559 to perform annual E&R based upon the average Cataract Lake spent on
17 extensions and replacements less any amount that was debt funded for 2018, 2019,
18 and 2020.

⁷ The Great Lakes – Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers Recommended Standards for Water Works (“Ten States Standards”), Section 7.0.1 Sizing of Finished Water Storage.

⁸ Attachment KW-01, Cataract Lake's response to OUCC DR 1-9.

1 **Q: Did you request information on the projects Cataract Lake proposes to use the**
2 **E&R revenue requirement?**

3 A: Yes. In response to OUCC DR 1-3⁹, the following projects are among those being
4 considered for improvements to the utility:

- 5 • A drive through window addition.
- 6 • Change out meters to radio read meters.
- 7 • A new service truck.
- 8 • New billing software.
- 9 • A new generator.
- 10 • New office computers.
- 11 • Leak detection equipment.
- 12 • Main replacements.
- 13 • Tank cleaning and painting.

14 **Q: Do you consider the proposed projects to be reasonable?**

15 A: While some of the foregoing items are more urgent or more essential than others,
16 each capital item appears to be reasonable and should enhance the utility's ability
17 to serve its customers effectively and efficiently.

18 **Q: Is the E&R revenue requirement Petitioner presented in its application**
19 **sufficient to accomplish all the foregoing projects?**

20 A: Based on the cost estimates provided in response to OUCC DR 1-3,¹⁰ Cataract
21 Lake could not reasonably complete all the listed E&R capital projects with the
22 revenue requirement it presented in its application. However, viewing Applicant's
23 operations as a whole, I believe Cataract Lake's proposal to keep its current rates

⁹ Attachment KW-02, Cataract Lake's response to OUCC DR 1-3.

¹⁰ Attachment KW-02, Cataract Lake's response to OUCC DR 1-3.

1 in place will still allow Applicant to responsibly maintain the utility and make
2 reasonably necessary extensions and replacements.

3 **Q: How does Cataract Lake's proposed E&R revenue requirement compare to**
4 **its depreciation expense?**

5 A: Applying the composite depreciation rate of 2% to depreciable Utility Plant in
6 Service ("UPIS") results in a pro forma test year depreciation expense of \$87,470,
7 as noted in Small-Utility Application, Schedule 7. Cataract Lake's requested E&R
8 revenue requirement of \$47,559 is less than its pro forma test year depreciation
9 expense of \$87,470. Although not-for-profit utilities are not permitted to include
10 depreciation expense in its revenue requirement but must instead recover E&R as
11 its revenue requirement. Comparing the E&R revenue requirement to a
12 hypothetical depreciation expense is a useful benchmark.

IV. WATER LOSS

13 **Q: Please discuss "water loss" as it pertains to Petition's operations.**

14 A: As used in Applicant's IURC annual reports, "water loss" is the difference between
15 total water pumped and purchased and the total amount of water sold to customers
16 or used for backwash, flushing mains, street cleaning/sewer flushing, or other
17 authorized consumption. Water loss may reasonably be attributed to both leaks and
18 inaccurate measurement of consumption.

19 **Q: How does water loss affect a utility's costs and operations?**

20 A: Whether finished water is metered, used for operations or lost through leaks, the
21 cost to produce the water is included in the utility's test year. Therefore, the cost to
22 produce water that is lost through leaks is a cost paid by all customers through
23 higher rates. Water loss caused by inaccurate or slow meters presents a different

1 dynamic. Water “lost” through under recording is nonetheless consumed, and
2 therefore, the actual cost to produce that unrecorded water is not avoided by more
3 accurate meters. However, removing inaccurate meters avoids subsidization among
4 customers and allows the utility to both recognize that water is being lost through
5 leaks and measure its success in mitigating that problem.

6 **Q: What is Cataract Lake’s water loss?**

7 A: According to its IURC annual reports, in 2014 Cataract Lake's water loss was
8 16.2%. In the following years the water loss fluctuated before rising to 27.5% in
9 2020.¹¹ (Since 2014, Cataract Lake’s annual water loss values have been 13.5% or
10 higher.)

11 **Q: Has Cataract Lake ascertained the cause of its water loss?**

12 A: In response to OUCC DR Q-1-1, Cataract Lake stated it believes its water loss is
13 caused by a combination of old billing software, terrain that makes leak detection
14 problematic, and meters that need to be replaced:

15 First, we do not feel comfortable that our billing software is totally accurate
16 (also noted under Q-1-3 below). The software is aging at 16 years
17 (purchased/installed in 2006) and our vendor has advised us they will not
18 be supporting this version (UMS-Win) much longer. The billing process is
19 performed as close to the 10th of each month, yet the daily pumping
20 readings are recorded on a monthly basis from the first day to the last day
21 of the month. Therefore, we are not comparing "apples to apples": We feel
22 this affects our water loss reporting a great deal. In addition, we have aging
23 infrastructure, the terrain in our service area has vast differences in elevation
24 over the three counties we service. This makes it difficult to find a leak as
25 we have a rural, mostly wooded service area. We have requested leak
26 detection assistance from Alliance of Indiana in the past We believe that
27 was around 2016 and was performed using a sub-service leak detection
28 device (by rep. Gordon Myers). No significant leaks were found. Our Plant
29 Manager and his assistant have walked the lines during the months the water
30 loss seems to be higher than normal looking for leaks, checking valves and

¹¹ See “Percent Water Loss” chart in Attachment KW-03.

1 hydrants and occasionally they find a leak/break. We priced leak detection
2 equipment ourselves in the past and were told as recently as 2/9/22 that the
3 type used in today's times would be Chlorinators and can be costly
4 (estimated at \$35K by Mr. Myers).¹²

5 **Q: What steps does Petitioner plan to take to mitigate its water loss?**

6 A: According to its responses to discovery, Cataract Lake plans to replace its 16-year-
7 old billing software, install leak detection equipment, and has already begun
8 replacing their meters.¹³ Petitioner also plans to update aging infrastructure through
9 main replacements.¹⁴

10 **Q: Do you have any comments regarding Applicant's efforts to reduce its water
11 loss?**

12 A: Yes. Cataract Lake's practice has been to take appropriate steps to locate source(s)
13 of water loss given the terrain and large service area. Applicant has identified
14 additional steps to take in the future to continue and improve upon this practice. I
15 recommend Applicant continue to employ cost effective solutions to ascertain
16 source(s) of water loss and work to reduce its water loss.

V. OUCC RECOMMENDATIONS

17 **Q: Please summarize your recommendations in this Cause.**

18 A: I recommend Cataract Lake continue its meter replacement program, replace its
19 billing software, and install leak detection equipment to reduce its water loss.

20 **Q: Does this conclude your testimony?**

21 A: Yes.

¹² Attachment KW-04, Cataract Lake's response to OUCC DR 1-1 and DR 1-2.

¹³ Attachment KW-04, Cataract Lake's response to OUCC DR 1-1 and DR 1-2.

¹⁴ Attachment KW-02, Cataract Lake's response to OUCC DR 1-3.

APPENDIX A

1 **Q: Please describe your educational background and experience.**

2 A: I graduated from Indiana University with a Bachelor of Science degree in Biology
3 and a Master of Public Affairs (“MPA”) concentrating in Environmental
4 Management. My graduate coursework included studying how water pollution
5 affects aquatic ecosystems, environmental rules and regulations, toxicology, risk
6 analysis, epidemiology, finance and budgeting, economics, statistics, public
7 management, and other courses on how pollution affects human health and the
8 environment. After graduating with my MPA, I was hired as an Environmental
9 Manager (EM2) by the Indiana Department of Environmental Management, Office
10 of Air Quality, Permits Branch in 2006 where I analyzed projects for a variety of
11 industries, calculated the air emissions associated with those projects, determined
12 applicable state and federal rules, and drafted federally enforceable air permits. I
13 was promoted to a Senior Environmental Manager (SEM1) about one year later. I
14 held this position for more than ten years. As an SEM1, I worked on complex permit
15 projects, trained and mentored staff, reviewed staff’s work, and developed
16 templates, guidance, and training materials. Since joining the OUCC in 2018, I have
17 attended numerous utility related seminars and workshops including the National
18 Association of Regulatory Utility Commissioners (“NARUC”) Western Utility
19 Rate School.

AFFIRMATION

I affirm the representations I made in the foregoing testimony are true to the best of my knowledge, information, and belief.



By: Kristen Willoughby
Cause No. 45663-U
Office of Utility Consumer Counselor (OUCC)

Date: 3/30/2022

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Q-1-9: In Cause No. 44897-U, Petitioner requested E & R funds for: Q-1-9-#1 = radio read meters, Q-1-9-#2 = replacement service truck and Q-1-1-9-#3 pump replacements.

For each of the three proposed projects, please state the following:

- a. Completion status. (If a project has not been completed, please explain why the project has not been completed.)
- b. Dates that work began or will begin and be completed for projects that have not been completed.
- c. Description of completed projects including any changes from what was originally proposed.
- d. Date the projects were put in service.
- e. Total project costs.

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Q-1-9 (Question cont'd.):

Answer for "Radio Read Meters" - Item #1:

- a. *Completion status: Still in process; goal was 5yr. period. We have changed-out 719 meters thus far. Due to the expense, we can only change-out a certain number each year. As previously mentioned, per our records, the number of change-outs in 2018 = 105, 2019 = 263, 2020 = 164 and 2021 = 187. We believe there was a reporting error on the IURC Report for 2020 as "no meters" were reported as being changed out; however, per our records, there were 164. In addition, we also had an employee resign last year which caused a delay in the process (time - training new employee to change them out).*
- b. *Dates that work began or will begin and be completed for projects that have not been completed. CLWC began the process of changing out the meters in 2018. Again, we change-out a limited number each year due to the expense. We plan to continue the process until all of our touch read meters are changed out to radio reads.*
- c. *Description of completed projects including any changes from what was originally proposed. Again, this project is NOT complete. We will continue this process and plan to have the project completed by or near the end of 2024.*
- d. *Date the projects were put in service. This project began in 2018 (meter change-outs from touch-read to radio-read).*
- e. *Total project costs. \$192,380.37 (719 meters; previous replacement cost for 2018 - 2021). (Plan will continue over the next 3 years; replacing 200 meters per year - $\$45,890 \times 3 = \$137,670$.)*

Answer for "Replacement service truck" - Item #2:

- a. *Completion status: Completed; purchased F150 in 2018 (from previous rate increase).*
- b. *Dates that work began or will begin and be completed for projects that have not been completed: 2018.*
- c. *Description of completed projects including any changes from what was originally proposed. Purchase a new service truck; completed in 2018.*
- d. *Date the projects were put in service. 2018*
- e. *Total project costs: \$23,488*

Answer for "Pump replacements" - Item #3:

- a. *Completion status: This project is complete. On 8/22/19, we replaced/upgraded a booster pump (\$1,887.91); on 2/5/20, we replaced/upgraded a chlorine booster pump (\$2,100.00). We also rebuilt a back-up/spare pump on 7/13/20 (\$1,255.00).*
- b. *Dates that work began or will begin and be completed for projects that have not been completed.
Project is now complete; began in 2019.*
- c. *Description of completed projects including any changes from what was originally proposed.
Pump Replacement complete; no changes from original plan.*
- d. *Date the projects were put in service.
2019 and 2020.*
- e. *Total project costs.
\$5,242.91*

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Q-1-3: Please identify and describe each of the projects that Cataract Lake plans to pay for with the E & R funds in 2022, 2023, 2024, and 2025.

Answers:

Project 1.) A DRIVE-THRU ROOM ADDITION is currently in process and construction is scheduled to begin in March of 2022. This project is being done for the health and safety of both our employees and our customers.

Supporting documents: The state required us to obtain the services of an Architect/Engineer to provide a building plan (Architect invoice \$8,000.00). There will also be a building permit fee (\$500.00) from the county, construction fee (\$25,000.00) to build the addition and the purchase of a deal tray/drive-thru window (\$7,475.00) (see minutes attached of board motion to accept construction bid and other bids).

E & R FUND PLANED PAY YEAR: 2022 (Roughly \$41,000.00)

Project 2.) Continuation of our meter change-out to RADIO READS. Supporting document: email from vendor. Plan is to continue this process for the next two to three years (2022 - 2024) installing 200 meters per year (200 @ \$229.45/ea). We saw an 8% increase in vendor cost in 2021 and 2022 will be even higher (12% over 2021.)

E & R FUND PLANED PAY YEAR: 2022 - 2024 (\$45,890.00/yr. for next 3 years)

Project 3.) We would like to obtain a new SERVICE TRUCK. We have inquired about purchasing a replacement and the quotes we have received are in the \$50K range (please see attached quote).

E & R FUND PLANED PAY YEAR: 2022 (\$50,000 - \$55,000)

** We wanted to obtain the truck this year, but wanted to finance over the next 3 years or \$18K per year.*

Project 4.) BILLING SOFTWARE: As mentioned in Q-1-1 answer, our software is outdated and support may not be available much longer (See email from our vendor AMPSTUN Corporation with quote \$15,700.00K).

E & R FUND PLANED PAY YEAR: 2023 (\$15,700.00)

Project 5.) GENERATOR - A new generator for our Booster site is needed. We had our existing one repaired several times and feel it would be more cost effective to purchase a new one (Supporting document: see quote attached to "repair only" - \$10K). A quote was obtained just recently (is attached) of \$38K to purchase a new one.

E & R FUND PLANED PAY YEAR: 2023 (\$38,000.00)

Project 6.) OFFICE COMPUTERS - Our computers were purchased in 2016 (6 yrs. ago) and are in need of updates. The main one is heavily used and is currently having issues. These are our livelihood and need attention.

Supporting documentation: see attached quote from Best Buy (1 - HP desk top and monitor; 1 HP Hard Drive).

E & R FUND PLANED PAY YEAR: 2022 (\$2,010.00)

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Project 7.) LEAK DETECTION EQUIPMENT: As previously mentioned in Q-I-I, we are experiencing water loss issues. We do not currently have any leak detection equipment. We were verbally quoted \$35K to obtain equipment to assist us in finding leaks. We feel this would be a worthwhile asset especially with the conditions (terrain, etc.) our system is spread over. Supporting documentation: Copy of order page from USA Blue Book @ \$32,000.00.
E & R FUND PLANNED PAY YEAR: 2024 \$32,000.00

Project 8.) MAIN REPLACEMENTS: As previously stated, our system has aging infrastructure. We would like to upgrade/replace the following areas: First, (Co. Rd. 1150/1175), we have 6500 feet of 4" pvc (installed early 1970's); 6500 @ \$10/foot = \$65,000. Second (Co. Road 1000 South to 10 East to Co. Rd. 100 East), we have 5400' of 4" pvc; 5400 @ \$10/ = \$54,000 and Third B/G Poland Road from SR42 to Co. Rd. 300), we have 5000' of 4" pvc; 5000 @ \$10 foot = \$50,000. Supporting documentation: \$10/ft or \$169,000 for these 3 main replacements.
E & R FUND PLANNED PAY YEAR: 2025 \$169,000

Project 9.) Main Office Tower (Exterior Cleaning) - This is normal/routine maintenance. Maintaining an asset.
E & R FUND PLANNED PAY YEAR: 2023 \$8,600

Project 10.) North Tower (Exterior Cleaning) - This is normal/routine maintenance. Maintaining an asset.
E & R FUND PLANNED PAY YEAR: 2025 \$8,600

Project 11.) Main Office Tower Painting - Maintaining Asset
E & R FUND PLANNED PAY YEAR: 2025 \$32,922
(Quote: \$123,456.00 x 15 yrs.(life of paint) divided by 4 yr. budget plan.)

Project 12.) North Tower Painting - Maintaining Asset
E & R FUND PLANNED PAY YEAR: 2025 \$32,922
(Quote: \$123,456.00 x 15 yrs. (life of paint) divided by 4 yr. budget plan.)

Project 13.) Well Testing - Maintaining Asset, as well as, state requirement.
E & R FUND PLANNED PAY YEAR: 2022-202 \$5,600
(Quote: \$1,400 x 4 yrs; overboard flow testing per quote from Bastin Logan.)

-
- **NOTATION:** *Well Lease/Well Site Property – As previously stated, we currently have an ANNUAL well lease with one of our customers for the property where our Wells are located. This lease will be expiring in 2034. We realize this time is beyond 2025, but needs to be considered as it will be a tremendously large expenditure (we estimate in the million dollar range) if a new location is necessary and will take a considerable amount of time to accomplish. The lessors have already communicated the lease payment will increase.*
-

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Capital Improvements

Drive-thru	\$ 41,000
Meter Replacement	\$137,670
Service Truck	\$ 55,000
Aging Infrastructure	\$169,000
Main Office Tower	\$ 8,600 (Tower exterior cleaning)
North Tower	\$ 8,600 (North Tower exterior cleaning)
Billing Software	\$ 15,700 (upgrade)
New Generator	\$ 38,000
Leak Detection Equip	\$ 32,000
Main Tower Painting	\$ 32,922
North Tower Painting	\$ 32,922
Well Testing	\$ 5,600 (overboard flow testing)
Office Computers	<u>\$ 2,100</u>
Total CI	\$579,114
Divided 4 years	4
Annual CI	<u>\$144,779</u>

CATARACT LAKE WATER CORPORATION

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February 16, 2022

Indiana Office of Utility Consumer Counselor
115 West Washington Street – Suite 1500 South
Indianapolis, IN 46204
Cloverdale, IN 46120
Attn: Daniel M. Le Vay

RE: Cause #45663-U - Response to questions

Mr. Le Vay,

Please see the responses to your **“Data Request”** questions below:

Q-1-1: According to its IURC annual reports, over the last seven years Petitioner’s water losses increased from 16.2% to 27.5% of total water pumped and purchased. Has Petitioner identified the causes for the increased water losses? Please describe any studies or evaluations performed since 2014 to determine the causes and provide copies of all lost water studies and reports.

Answer: First, we do not feel comfortable that our billing software is totally accurate (also noted under Q-1-3 below). The software is aging at 16 years (purchased/installed in 2006) and our vendor has advised us they will not be supporting this version (UMS-Win) much longer. The billing process is performed as close to the 10th of each month, yet the daily pumping readings are recorded on a monthly basis from the first day to the last day of the month. Therefore, we are not comparing “apples to apples”. We feel this affects our water loss reporting a great deal. In addition, we have aging infrastructure, the terrain in our service area has vast differences in elevation over the three counties we service. This makes it difficult to find a leak as we have a rural, mostly wooded service area. We have requested leak detection assistance from Alliance of Indiana in the past. We believe that was around 2016 and was performed using a sub-service leak detection device (by rep. Gordon Myers). No significant leaks were found. Our Plant Manager and his assistant have walked the lines during the months the water loss seems to be higher than normal looking for leaks, checking valves and hydrants and occasionally they find a leak/break. We priced leak detection equipment ourselves in the past and were told as recently as 2/9/22 that the type used in today’s times would be Chlorinators and can be costly (estimated at \$35K by Mr Myers).

Q-1-2: Please describe Cataract Lake’s efforts to mitigate water losses (e.g. leak detection survey, meter replacement or calibration, AWWA Water Audit Completed).

Answer: Same as the last portion of the answer to Q-1-1. Also, we have a meter change out plan in process to change all meters to Radio Badgers.