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DEC 23 2019

Clerk's Office  
N.C. Utilities Commission

December 17, 2019

Ms. Kimberley A. Campbell  
Chief Clerk  
North Carolina Utilities Commission  
4325 Mail Service Center  
Raleigh, NC 27699-4300

Re: Docket No. W-1274, Sub 7

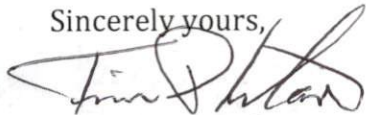
Dear Ms. Campbell,

Enclosed is the pre-filed direct testimony of Timothy F. Phelan, Intervener, in the above referenced docket.

Also included with the direct testimony are Exhibits 1A, 1B, 2A, 3A, and 4A.

Please do not hesitate to contact me if you have any questions.

Sincerely yours,



Timothy F. Phelan  
PO Box 598  
Lake Junaluska, NC 28745  
828-421-4956  
timfphe@icloud.com

**Lake Junaluska Assembly, Inc  
Docket No. W-1274, Sub 7**

**Direct Testimony of Timothy F. Phelan**

**December 17, 2019**

**Q. STATE FOR THE RECORD MY NAME, ADDRESS, AND PRESENT POSITION**

A. My name is Timothy F. Phelan. My wife Judi and I live at 48 Hoosier Court, Lake Junaluska, NC 28745. We've resided at this address for 15 years (February 2005 ). Originally from Waterbury, Connecticut, I moved to the Waynesville, NC area in 1976, soon to be 44 years ago. My present position: Retired.

**Q. QUALIFICATIONS AND EXPERIENCE**

A. I retired on September 30, 2013 from Phelan Financial Services, Inc., a Financial Planning and Investment Management practice that I began in July 1976. My office was located in Waynesville, NC. I obtained my CFP (Certified Financial Planner) designation in December 1983. I was blessed to have worked in this profession for 37 years. Additionally, I have a BS degree in Biology and a MS degree in Zoology. I served as an elected member of the Community Council for two years, September 2016-August 2018. I chose not to seek reelection in 2018.

**Q. DESCRIBE THE LAKE JUNALUSKA (LJA) COMMUNITY**

A. We, like many other residents, have chosen to live at Lake Junaluska because we love the area. It's a beautiful place to live. This area offers easy access to Waynesville and other towns west of us. Access to Asheville, and all that it offers, is a short drive away. My wife and I both enjoy walking, hiking, and for me, cycling. We've found this area offers us many opportunities to enjoy the outdoors.

**Q. EXPLAIN YOUR RATIONALE FOR FILING A FORMAL COMPLAINT**

A. First, I want to thank the Commission for considering the Formal Complaint I filed on October 11, 2017, in Docket No. W-1274, Sub 5. I was concerned, that as an elected member of the Community Council, I was charged with the responsibility and liability of setting rates to fund a budget that was prepared, approved, and monitored by another entity, namely the LJA Board of Trustees. The Position Paper submitted with the Formal Complaint lists several Issues that caused me concern. Lake Junaluska Assembly, Inc. filed their response on November 1, 2017, in Docket No. W-1274, Subs 5 and 6, denying the Issues I presented, but consented to be regulated by the Commission. On April 23, 2018 in Docket W-1274, Subs 5 and 6, the Commission issued an Order revoking the exemption granted to Lake Junaluska Assembly, Inc. Personally, my preference is that Lake Junaluska Assembly, Inc. would be exempt from Commission regulation. However, given the concerns I've

stated above and having had limited access to detailed financial information, both as a resident of our Community and as an elected member of the Community Council, at this time I feel it prudent that Lake Junaluska Assembly, Inc. Water and Sewer be regulated by the Commission as requested in Lake Junaluska Assembly's, application for a Certificate of Public Convenience and Necessity

**Q. ARE THERE ISSUES WITH LAKE JUNALUSKA'S WATER DISTRIBUTION AND SEWER COLLECTION FACILITIES**

A. Approximately seven or eight years ago, our Community was made aware there was a compelling need to significantly increase the levels of spending on our water and sewer system infrastructure replacement and upgrades. The Community was told that much of our infrastructure and equipment was approaching the end of its useful life and in need of repair or replacement. This matter was presented to the Community at multiple Municipal Task Force meetings as well as the monthly Community Council meetings. Annexation into Waynesville was the solution favored by the Board of Trustees, the governing body for Lake Junaluska Assembly, Inc. This was an option that myself and several other members of the Community opposed. We believed our Community had the talent and the wherewithal to address and fix the infrastructure repairs needed. Once it became apparent that our Community would not be annexed into the Town of Waynesville, the Community Council and the Trustees recommended moving forward with capital improvements. Two capital improvement plans (Cavanaugh and Martin McGill) were evaluated and presented to our Community. At the September 3, 2013 Community Council meeting, the Council approved the budget based on The Cavanaugh Plan (10-Year Plan).

**Q. DID LAKE JUNALUSKA ASSEMBLY TAKE ACTION TO ADDRESS ITS EXTENSIVE WATER LOSSES?**

A. Yes. In the Spring 2012, Buddy Young (Assembly Public Works Director at that time) and Andrew d'Adesky (UNC School of Government) presented to the Community their study titled Lake Junaluska Assembly Public Works Water and Sewer System Assessment and Appraisal. As stated in the Executive Summary, "this Assessment and Appraisal is being released along with the Capital Improvement Plan (CIP) that has been completed by Cavanaugh and Associates, PA. The CIP spells out in detail the areas of our water and sewer systems that are in critical need of repair and the estimated cost of those repairs over the next ten years. This Assessment and Appraisal is an attempt to put the CIP into perspective, to inform our Community about our water and sewer systems, and to help us as a community to identify the best ways to move forward with this plan and integrate it into our overall strategic planning process." As stated above, The Cavanaugh Plan was approved on September 3, 2013. The plan became the blueprint for Assembly Public Works to address problems in the water and sewer needed infrastructure repairs.



The Assessment and Appraisal report prepared by Buddy Young and Andrew d'Adesky contains a wealth of information presented to our Community (**Exhibits 1A and 1B**). The following information can be found in **Exhibit 1A**, namely:

1. Need for repairs and upgrades: pgs. 2 & 3
2. Estimated 10 Year expense to upgrade water and sewer systems: pg. 5
3. Estimated base rate increase needed to provide funds annually for capital improvements: pg. 5
4. Operation and maintenance budget of \$150,000: pgs. 4 & 5
5. Markup for water and sewer usage due to water loss: pg. 5
6. "APW's water and sewer rate structure has been established and approved by the North Carolina Utility Commission": pg. 5
7. "To continue operation of our system without putting in place the funding and planning to carry out these projects soon, will surely force painful and expensive decisions before much longer": pg. 7

**Q. HOW WAS THE COMMUNITY MADE AWARE OF THE RATE INCREASES NEEDED TO FUND THE CAPITAL IMPROVEMENT PLAN**

A. Detailed reports regarding the infrastructure improvements needed for the Community's Water and Sewer Systems were made publically available at the Lake Junaluska website. Additionally, a letter dated October 22, 2013 was mailed to the Community, highlighting the annual cost of improvements as well as the new rate structure to fund the improvements. (**Exhibit 2A**)

**Q. HAS LAKE JUNALUSKA MADE PROGRESS IN ADDRESSING THESE ISSUES**

A. Yes. I believe LJA has made progress in addressing these issues. Since the Capital Improvement work began in 2014, purchased water losses have decreased. Recently, it was reported that 10 of the initial 14 projects identified in the Cavanaugh Plan have been completed. This is wonderful news for our Community. However, it has also been reported that Radio Read Meters have been installed that cost the Capital Plan \$157,530. Radio Read (digital meters) were considered in the Cavanaugh Plan but were not included due to the estimated additional cost of \$196,000. (**Exhibit 1A, pg. 3**). Additionally, we were informed that APW was re-allocating certain expenses that previously were funded from Service Charge Revenues. They would now be included in the Water and Sewer budget. The June 2017 APW Director's Report advised the Community Council, that "putting more water/sewer expenses into that budget will impact the dollars for renewal and refurbishment of our water and sewer system." (**Exhibit 3A, pg. 2**) In both cases, it appears that funds intended for Capital Improvement were not used for that purpose.



**Q. HAVE YOU RECEIVED ALL INFORMATION FROM LJA THAT YOU REQUESTED IN YOUR DATA REQUEST No. 1?**

A. No. Please see enclosed response from Daniel C. Higgins on behalf of LJA. (**Exhibit 4A**)

**Q. ADDITIONAL CONSIDERATIONS OR REQUESTS?**

A. Yes. Prior to the Commission approving LJA's request for new rates, will the Commission consider the following:

1. A Certified Audit of Water and Sewer of LJA Assembly Public Works utility service for the period November 2013 to December 2019, to include Revenues and Expenses for both Capital Improvements and for Operations. Our Community was told that beginning November 1, 2013, the water and sewer rate increases called for in the Cavanaugh 10-Year Plan, approved by both the Community Council and LJA Board of Trustees, were intended to fund Capital Improvements of approximately \$180,000 per year for 10 years, and \$150,000 per year for operations. The Operation expenses listed in LJA attachments #2A and #2B total \$362,430, excluding the cost of water paid to the Town of Waynesville. This represents an increase of \$212,430 (approximately 142%) in expenses for Operations in five years since our rates were increased on November 1, 2013.

2. Determine the estimated capital cost to complete the remaining 4 projects that were identified in the initial Cavanaugh 10-Year Plan.

3. Determine if the current rates stated in LJA attachment #1A and #1B are adequate to fund the 4 remaining projects, based on original expense estimates for Capital Improvements and Operations, called for in the Cavanaugh 10-Year Plan.

4. Determine the Capital Funds needed for the next five years to complete the remaining 4 projects identified in the initial Cavanaugh 10-Year Plan, to include the \$30,000 estimate for a new engineering study in 2022, but exclude the \$180,000 cost listed for a new sewer truck at this time. The expense listed for a sewer truck was not part of the work called for in the Cavanaugh 10-Year Plan that was approved in 2013. Perhaps a sewer truck can be considered after the completion of a new engineering study updates the status of our water and sewer system infrastructure.

**Q. DOES THIS COMPLETE YOUR TESTIMONY?**

A. Yes.



Lake Junaluska Assembly Public Works  
Water and Sewer System  
Assessment and Appraisal

Spring 2012

By Buddy Young and Andrew d'Adesky

***DISCLAIMER: The content of this document represents the views and opinions of the authors alone. They do NOT reflect official positions or views of Cavanaugh and Associates, P.A., the Environmental Finance Center at the UNC School of Government, Lake Junaluska Assembly Board of Directors, or any of its official governing bodies.***

**Executive Summary:**

This Assessment and Appraisal is being released along with the Capital Improvement Plan (CIP) that has been completed by Cavanaugh and Associates, P.A. The CIP spells out in detail the areas of our water and sewer systems that are in critical need of repair and the estimated cost of those repairs over the next ten years. This Assessment and Appraisal is an attempt to put the CIP into perspective, to inform our community about our water and sewer systems, and to help us as a community to identify the best way to move forward with this plan and integrate it into our overall strategic planning process.



## Background

Lake Junaluska Assembly Public Works' (APW) water and sewer infrastructure finds itself in a situation similar to most water and sewer systems in the United States. The American Water Works Association completed national a study, Dawn of the Replacement Era, in May 2001, that states *"Water utilities must make a substantial reinvestment in infrastructure over the next 30 years. The oldest cast iron pipes, dating to the late 1800s, have an average life expectancy of about 120 years. Because of changing materials and manufacturing techniques, pipes laid in the 1920s have an average life expectancy of about 100 years, and pipes laid in the post-World War II boom can be expected to last about 75 years. The replacement bill for these pipes will be hard on us for the next three decades and beyond."*

Water and sewer are by far the most capital intensive of all utility services, mostly due to the cost of the pipes. The infrastructure is literally a buried treasure beneath our streets, but buried means out of sight and as the old saying goes; out of sight, out of mind. Like most communities, Lake Junaluska's infrastructure was laid down and paid for during the economic booms that characterized the last century's periods of growth and expansion. So not only do we take these pipes for granted because we can't see them, we also take them for granted because, for the most part, the huge capital expense of installation of the pipes is a cost that today's customers have never had to bear. Importantly, there is no evidence that America's utilities or Lake Junaluska's in particular are "behind the curve" or that the Assembly's infrastructure is in ruins. America has by far the safest drinking water and the most efficient waste removal in the world. Lake Junaluska is no exception. However we do find ourselves at the time when there is a compelling need to significantly increase the levels of spending on our infrastructure replacement and upgrades.

## Capital Improvement Plan

Approximately 13 years ago, Bob Mitchell, the previous Director of Residential Services, (currently APW) determined that we had a huge discrepancy between the amount of water we were purchasing from Waynesville and the amount we were billing our customers. At the time it was impossible to know what was leaking and what was not being metered correctly. Meters were installed at the Terrace Hotel and Lambuth Inn in 2001. A program of identifying defective meters and unmetered outlets was begun and continued for several years. Once we had effectively metered all known outlets, the water loss was calculated to be 48% of the amount purchased and was believed to be almost exclusively leaks or true water loss.

Our crew did their best to identify and fix leaks, but realized that we did not have the equipment or expertise to locate underground leaks that had either found their way into the storm drainage or sewer systems. Cavanaugh and Associates, P. A., an engineering firm with offices in Asheville, was retained to conduct a Modified Water Audit that included, review of purchase, consumption, operational records, verify water loss quantities and value, conduct a pressure management study and leak detection survey. The report they delivered identified

several major leaks that were repaired, bringing our water loss down to 26% in 2010. This represents a tremendous improvement in water loss in a short period of time. While there is no accepted industry standard, APW has identified, through Cavanaugh's Modified Water Audit, a long-term water loss end target of approximately 7 to 8 million gallons per year, or approximately 10 – 13% of system input.

Our crew worked closely with Cavanaugh through the study and follow up. Because of our familiarity with Cavanaugh and their understanding of our system, we retained Cavanaugh to develop our CIP in 2012. The specifications of the CIP were: develop a general system inventory, develop a schedule of water and sewer capital needs for the next 10 years, develop a preliminary cost opinion for the 10 year capital improvements, and to provide summary report. The summary report is being released and made public along with this Assessment.

APW is treated as a not for profit developer by the NC Utility Commission, Public Water Supply and by the Division of Water Quality (sewer). We are not eligible for government grants or loans. There are more stringent regulations attached to grants, federal loans and municipalities than for private developers. One example of the difference is the size of sewer pipes and the availability of manholes required. A municipality is required in some instances to use 8" pipe and install manholes at certain lengths and in certain situations. A developer may use 6" pipe with cleanouts on similar sewer service. Another example is the placement of hydrants, which is more clearly defined for a municipality than for a developer. In our CIP, Cavanaugh treated us as a developer using the less costly requirements for sewer and planning for the replacement of hydrants at or near their current locations.

APW cannot deny that it is seriously "behind the curve" in our technology and system inventory. Our system mapping and inventory is practically non-existent. This information is essential to the efficient operation of our system. More and more emphases are being placed on the accuracy and thoroughness of this information by regulatory agencies. The cost of mapping has been included in the CIP. The estimated cost for mapping our water system is \$50,000 and \$35,000 for sewer.

Our billing and work-order software is DOS based technology and was installed in 1996. The software will not be supported by the manufacturer much longer. We have looked into upgrades and have included a minimal cost of \$5,000 in our Strategic Equipment Report that was released in the spring of 2011.

Most utilities are currently upgrading older mechanical water meters to digital meters that may be read electronically. Not only are these meters more efficient and accurate when meters are read for billing, they provide much more information about customer usage and flow. To upgrade our system to include digital meters including the related software and hardware would add about \$196,000 to our capital budget. This estimate is based on a cost of \$200 installation for each meter and \$30,000 for the required software and hardware. This improvement is not included in the CIP.



There are cost estimates in the CIP included as Asphalt Repair. APWs released our Strategic Pavement Survey last year. There is a great deal of overlap in our Pavement Survey and our CIP. The information in these two plans must be considered together as we set our project priorities to avoid costly duplication of projects and may even represent savings in one study or the other.

Not only are our pipes in serious need of improvements, we must increase expenditures to keep up with compliance requirements. More rigorous testing is required as testing technology develops. APW outsources all of our testing except the most basic checks. Permitting of major projects has become much more costly and requires extensive professional engineering and surveying. APW is not equipped to undertake the needed capital improvements without professional services and guidance. Therefore these additional costs are included in the CIP as Engineering-Administration and are calculated at a rate of 15% of the cost of the projects.

There are several significant components of our system that are not addressed in the CIP, such as the reservoir, the Liberty Road pump station and the Tri-Vista sewer lift station. These facilities are in sound condition and should not need significant investment in the next ten years. They are discussed in more detail in the Current Asset portion of this report.

## **Financial Information**

APW annual water and sewer budget is approximately \$500,000 per year. Currently our monthly household charges for 5,000 gallons of water and sewer is \$55.00; the average of all NC municipal utilities is \$59.99 per month. Unlike most utilities APW does not treat water or sewage. We are a purchase system and have contracted with The Town of Waynesville to provide all of our water and sewer treatment. As a purchase system a major part of our expenses, the cost of water and sewer is passed on directly to the water and sewer supplier and is for the most part, out of our control. If a purchase system has major water loss (as we have experienced) the cost for the loss is the full price of water and sewer treatment, whereas a utility that treats its own water and sewage only pays for the cost of water treatment. However, it should be noted that by not owning and operating our own water and sewer treatment facilities, there are also no upgrades or improvements to these facilities coming due.

Of the total APW water and sewer budget of \$500,000, approximately \$350,000 is budgeted as a pass-through to Waynesville. This pass through to Waynesville includes Fire Protection fees of approximately \$40,000 per year. The reason fire protection is included in the Water and Sewer Budget is that the fire protection is included in APW monthly utility bill and also in Waynesville's monthly water and sewer billing to APW. After the pass through payments to Waynesville, our operation and maintenance budget is only around \$150,000. This includes wages and benefits for two crew members, testing, licensing, equipment, billing and postage, as well as the repair and maintenance of the system. Obviously there is very little extra funding to undertake the CIP.

The APWs' water and sewer rate structure has been established and approved by the North Carolina Utility Commission. The rate structure is set up to provide funding for the operation and management of the system by a set base rate applied to all customers regardless of usage. The rate is based on the size of the tap supplying the water and the tap to remove sewer. Our base household rate is \$8.65 for water and \$8.25 for sewer based on  $\frac{3}{4}$  inch diameter water lines and 4" sewer lines. For comparison, the base rate for the Lambuth Inn and the Terrace Hotel are \$437.25 for water and \$369.89 for sewer based on 6 inch lines for water and sewer. In addition to the base rate there is an add-on charge per cubic foot for water and sewer used. This rate is based on the rate that APW pays to the Town of Waynesville plus a markup for water loss and system flushing. The markup on our water and sewer usage is approximately 30% due to our recent water loss of 26% in 2010 and 27% on 2011 plus normal flushing. The usage rate is \$0.0253 for water and \$0.033 per cubic foot for all customers. Financing of our water and sewer upgrades should follow this formula to avoid potential intervention from the NC Utility Commission.

As pointed out in the Preliminary Report on the Municipal Status of Lake Junaluska, under our present municipal structure, the costs for maintaining the infrastructure of the Assembly will fall solely upon the property owners of Lake Junaluska; without assistance from government grants, loans, additional revenue sources or a broader tax base. The arithmetic for financing our CIP under our current rate structure is simple. As stated earlier our operation and maintenance budget is approximately \$150,000 per year, allocating half for water and half for sewer, we have a base rate budget of \$75,000 per year for each. The CIP estimates that we will need to spend approximately \$1,145,000 on water system upgrades over the next ten years, or an average of \$114,500 per year. If this amount is added to our current base of \$75,000, we should plan to budget \$189,500 per year for water operation and management. This represents a 152% increase in our base rate to \$21.80 per month for household connections. Our sewer CIP proposes a ten year layout of \$633,600 or an annual increase from \$75,000 to \$138,360 in our operation and management budget, representing an increase of 85%, bringing our monthly sewer base rate to \$15.26 for household customers. The usage rate applied on top of the base rate would remain the same unless Waynesville increases their rates, which would be passed on to our customers.

Financial and operational information along with other utility benchmarks for NC's municipalities is available on the website of the Environmental Finance Center at the UNC School of Government, [www.efc.unc.edu/ratesdashboard/nc.html](http://www.efc.unc.edu/ratesdashboard/nc.html). Lake Junaluska is not part of this survey because we are not a municipality. Additional information on benchmarking municipalities' water and sewer related debt can be found through the Local Government commission, specifically at the NC State Treasurer's website at the following address, [www.nctreasurer.com/dsthome/StateAndLocalGov/lgcreport](http://www.nctreasurer.com/dsthome/StateAndLocalGov/lgcreport).



## Current Assets

Trying to establish a value on our system has proven to be a challenge because of our lack of solid information about our systems and our limited research capabilities. However, we have established very conservative and simplified estimates of our physical assets, using federal infrastructure cost standards provided by staff at the Environmental Finance Center at UNC's School of Government. We have based our calculations on our system containing 26 miles of water and sewer pipes, a total of 137,280 feet of pipe each. The value was computed under the assumption that approximately 10% of the system was added each 10 years for the past 100 years, with the average lifespan of the pipe being 100 years. Therefore, the value of pipe placed 100 years ago would be 0, as it has fully depreciated to the end of its expected lifespan, while the value of pipe placed 50 years ago would be worth 50% of its value, since it has depreciated to half of its expected lifespan.

Using this calculation method, the total current "value" of the pipes in our water system in 2012 is \$4,257,080. If one adds to this the value of our water meters, whose estimated value is approximately \$180,000 in 2012, the total value of our water system rises to \$4,437,000.

Our sewer system's value is calculating similarly. The sewer system is approximately the same length as the water system, 26 miles, with a total of 137,280 feet of pipe. Our estimate is that 60% of the pipe is 6 inches in diameter or smaller, while 40% of the pipe is 12 inches in diameter, with the larger pipe costing more per foot than the smaller pipe. Using the same method for calculating age and depreciation as the water system, the total value of our sewer system is estimated at \$6,798,464.

Adding together both the value of the water system and sewer system, you would reach a total current value of \$11,235,543 for the Lake Junaluska water and sewer system, including water meters. This does not include the value of our reservoir or pump stations.

To determine the actual monetary amount that Lake Junaluska has put into the system over the past 100 years, we are using the Construction Index Inflation rates provided by the UNC Environmental Finance Center. In other words, about how much have we actually paid over the years for our water and sewer system? If we use the same assumption that we installed 10% of our system starting in 1912 and going forward added 10% per decade, Lake Junaluska has spent \$2,079,518 over the past 100 years on our water system, including both pipes and water meters. One might ask, "How is our water system worth almost \$4.45 million when we spent about \$2 million on it?" It is a direct result of inflation and rising construction costs. If 10% of the system was built in 1912 - 1922, in this period they are estimated to have only paid around \$10,000 for that segment; building the same amount of pipe today would cost about \$950,000, not including permitting or planning costs, which have risen drastically over the past 100 years.

Using the same calculation method for the sewer system and once again assuming that 60% of

the pipe is of 6 inch diameter or smaller and 40% is of 12 inch diameter, Lake Junaluska is estimated to have spent around \$3,033,488 over the past 100 years on its sewer system. Once you combine these figures, you can estimate that Lake Junaluska has spent an approximate total of \$5,113,006 over the past 100 years on the water and sewer system, including the installation of water meters.

All of these estimates do not include the cost of our reservoir or our pump station. The Liberty Road Pump station was built in 2005 at a cost of \$50,000 and is in very good shape. Our reservoir holds 230,000 gallons and was built in the 1960's. In 2004 the reservoir was inspected and repaired at a cost of \$20,000. The cost to replace the reservoir would be close to one million dollars today and probably cost around \$125,000 in the 1960's. The Tri-Vista sewer lift-station was constructed when the Condominiums were built in the seventies. The 2010 snowstorm severely damaged the lift-station. All of the controls and grinder pumps were replaced in 2011. If built new today, the lift station would cost approximately \$45,000. As stated earlier, the pump station, reservoir and lift station are not included in the CIP because they are not considered to be in need of repair in the next ten years.

One financial positive is that there is currently no debt associated with our water and sewer systems. We do have a line of credit of \$50,000 established for emergency repairs, but at the present time, there is no debt. Staff at the Environmental Finance Center at UNC's School of Government has compiled financial information from all NC utilities. Their Leverage Indicator measures NC utilities' Debt to Equity ratio. This indicator is used by funders and bond rating agencies to evaluate the risk of providing financing to utilities. A utility with a ratio greater than 1.0 has more long term debt than equity in the system's assets. Among North Carolina's 422 utilities included in the survey for 2011, 93% have a ratio lower than .6. There is no statewide average in the information; however, the Assembly would have a ratio of 0.0 which is unheard of. Peer municipalities to Lake Junaluska, of similar size and geographic location, typically have an average long term debt of around \$2,000,000 for water and sewer related expenses. While it might be possible for APW to finance the CIP with long term debt, it would likely require The Lake Junaluska Assembly Board of Directors to leverage Conference Center Property to secure the loan.

## **Summary**

This report and the Water and Sewer Capital Improvement Plan developed by Cavanaugh and Associates, P.A. were intended to provide information that will help us plan for our future and understand more about our water and sewer systems. Lake Junaluska is not yet at a critical crossroad, but our water and sewer infrastructure is aging and will need repairs, upgrades, and replacement to provide safe drinking water and uninterrupted service, as well as efficient and clean sewer collection. To continue operation of our system without putting in place the funding and planning to carry out these projects soon, will surely force painful and expensive decisions before much longer.



There is no evidence that current or previous Assembly utility management has been negligent or irresponsible. Like many other utilities across the country, maintenance has been deferred in an attempt to be prudent. Patches have been made on old lines instead of replacement projects to keep utility rates low. The quality of the engineering and construction in our infrastructure is impressive. As explained in the first paragraph of this report, parts of our infrastructure are simply approaching the end of its life expectancy.

The Water and Sewer Capital Improvement Plan is just the beginning of a long term commitment to rebuild and maintain our system. It should not be viewed as a onetime fix that will forever restore our system. As we move through this ten year cycle we must plan for the next ten years and beyond.

The water and sewer infrastructure are our community's most valuable asset, our most expensive liability, and provides our most vital quality of life service. However it is only one part of our overall strategic planning process. The studies and reports that are being developed for our community must be taken together to responsibly move Lake Junaluska into our next century.



# **Lake Junaluska**

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## **Assembly Public Works**

### **Water and Sewer Capital Improvements Plan 10-Year Outlay**

May 1, 2012

Prepared By:

**Cavanaugh & Associates, P.A.**

Will J. Jernigan, P.E.  
Larry Lewison, CPESC  
37 Montford Ave.  
Asheville, N.C. 28801

**CAVANAUGH**

*Stewardship Through Innovation*





## Exhibit 1B

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## Background

The Lake Junaluska Assembly (LJA) is located north of Waynesville, N.C. along US Highway 19/23. The oldest portions of LJA's water distribution and wastewater collection system (system) date back to the early 1910's. The newest portions of the system have been installed in the past year. Pipe materials from some of the oldest portions of the system's lines still functioning are considered to be original cast iron and/or vitrified clay pipe. Sections of these lines have been failing over recent years and repairs have been costly. LJA has spent over \$150,000 in water and sewer line replacements over the past 2-3 years. For further background and narrative on the context of this Capital Improvements Plan, the reader is referred to the Assessment and Appraisal document by Buddy Young and Andrew d'Adesky dated Spring 2012.

## Objective

Cavanaugh Associates, P.A. was retained to analyze and project the anticipated capital needs in the water and sewer system over a period of the next ten (10) years. The objective of this Capital Improvements Plan (CIP) is to develop a general system inventory consisting of pipe material, age of installation and pipe size based on available mapping and staff interviews. This information will be used to create a schedule of capital needs for identified priorities in the system. The CIP does not involve field investigation or field survey. Based on the value of the needs identified, the CIP will assist LJA in the evaluation of the options presented in the Preliminary Report on the Municipal Status of Lake Junaluska.

## Method

The following methodology was employed in completing this Capital Improvements Plan:

1. Cavanaugh performed staff interviews and mapping reviews to develop a general system inventory. This information was evaluated to identify pipe material, age of installation, pipe diameter and in some cases water system pressure.
2. Cavanaugh met with LJA's staff to determine an order of prioritization of the needs identified. Consideration of service criticality, pipe age and history of repairs were used as the basis for developing a high, mid and low priority system for the replacements identified.
3. Cavanaugh collected costing data from local contractors to apply in performing a valuation of the replacements. The linear foot price noted in the table reflects a typical road shoulder type installation with no asphalt repair and minimal restoration costs. A lump sum value was established for other ancillary costs (assumed at 10% of utility installation costs and categorized as General Conditions & Sitework) associated such as testing, erosion control, traffic control and minor surface restoration. A per lineal foot cost was also applied for asphalt repair (assumed 50% of replacement footage) for the case where replacements are immediately adjacent or under a paved surface and would require asphalt or concrete pavement repair. Consideration of new pavement overlap should be directed towards paving study by LJA called the "Strategic Paving Survey", posted in the spring of 2011. Coordination of new pavement projects and capital replacement installations will be directed by LJA.
4. An annual escalation factor of 5% was applied for future material and installation costs.



5. Based on the information collected, Cavanaugh created a valuation matrix to assess the prioritized needs over the next ten years.

## 10-Year Capital Outlay:

Exhibit 1B

Table 1 – Water System Capital Outlay

<i>Escalation Factor (5%)</i>	Base Unit Cost	QTY	Year 1-3	High Priority	QTY	Year 4-7	Mid Priority	QTY	Year 8-10	Low Priority
			\$/Unit	Total	LF	\$/Unit	Total	LF	\$/Unit	Total
2" Replacement (LF)	\$14.00	10,675	\$14.70	\$156,923	3,800	\$17.44	\$66,281		\$20.68	
4" Replacement (LF)	\$20.00		\$21.00		1,500	\$24.92	\$37,377	1,860	\$29.55	\$54,962
6" Replacement (LF)	\$27.00	3,285	\$28.35	\$93,130	3,075	\$33.64	\$103,440	625	\$39.89	\$24,932
Fire Hydrant Replace (EA)	\$2,400.00	2	\$2,520.00	\$5,040	2	\$3,000	\$6,000	1	\$3,500	\$3,500
Valve Replacement (EA)	\$800.00	2	\$840.00	\$1,680	2	\$900	\$1,800	1	\$1,000	\$1,000
Air Release Valves (EA)	\$2,300.00	1	\$2,415.00	\$2,415	1	\$2,300	\$2,300	1	\$2,300	\$2,300
<b>Subtotal Utility Installation</b>				<b>\$259,187</b>			<b>\$217,937</b>			<b>\$88,019</b>
Gen Conditions & Sitework (LS) (10% of Utility Installation)				\$25,919			\$21,794			\$8,802
Asphalt Repair (LF)	\$16.67	6,980	\$17.50	\$122,174	4,188	\$20.77	\$86,970	1,243	\$24.63	\$30,602
Water System Mapping & Valve Inventory (LS)				\$50,000						
<b>Subtotal</b>				<b>\$457,280</b>			<b>\$326,701</b>			<b>\$127,423</b>
Contingency (15%)				\$68,592			\$49,005			\$19,113
Engineering/Admin (15%)				\$68,592			\$49,005			\$19,113
<b>Total Water Capital Outlay by Priority Tier</b>				<b>\$594,465</b>			<b>\$424,712</b>			<b>\$165,650</b>
<b>Total Water Capital Outlay</b>	<b>\$ 1,184,826</b>									

The attached water exhibit depicts general locations, pipe diameters and priority tiers of the water system improvements indicated in the above table.

## Exhibit 1B

Table 2 – Sewer System Capital Outlay

Escalation Factor (5%)	Base Unit Cost	QTY	Year 1-3	High Priority	QTY	Year 4-7	Mid Priority	QTY	Year 8-10	Low Priority
			\$/Unit	Total	LF	\$/Unit	Total	LF	\$/Unit	Total
6" Replacement (LF)	\$18.00	3,240	\$18.90	\$61,236	3,030	\$22.43	\$67,951		\$26.59	
8" Replacement (LF)	\$34.00	1,600	\$35.70	\$57,120	1,415	\$42.36	\$59,940	175	\$50.23	\$8,791
New Manholes (EA)	\$2,400.00	6	\$2,520.00	\$15,120	4	\$2,989.20	\$11,957	2	\$3,545.88	\$7,092
New Cleanouts (EA)	\$100.00	40	\$105.00	\$4,200	35	\$124.55	\$4,359		\$147.75	
<b>Subtotal Utility Installation</b>				<b>\$137,676</b>			<b>\$144,207</b>			<b>\$15,883</b>
General Conditions & Sitework (LS) (10% of Utility Installation)				\$13,768			\$14,421			\$1,588
Asphalt Repair (LF)	\$16.67	2,420	\$17.50	\$42,358	2,222.50	\$20.76	\$46,145	88	\$20.76	\$1,817
Sewer System Mapping & MH Inventory (LS)				\$35,000						
<b>Subtotal</b>				<b>\$228,802</b>			<b>\$204,772</b>			<b>\$19,288</b>
Contingency (15%)				\$34,320			\$30,716			\$2,893
Engineering/Admin (15%)				\$34,320			\$30,716			\$2,893
<b>Total Sewer Capital Outlay by Priority Tier</b>				<b>\$297,443</b>			<b>\$266,204</b>			<b>\$25,074</b>
<b>Total Sewer Capital Outlay</b>	<b>\$ 588,720</b>									

The attached sewer exhibit depicts general locations, pipe diameters and priority tiers of the sewer system improvements indicated in the above table.

### Summary:

Total 10-year Capital Outlay for the LJA water and sewer system is estimated at \$1,773,546. The water and sewer replacements indicated in the tables above and the associated replacement costs are based on a general conditions inventory that includes age of material, material type, pipe size, history of repairs and system pressure. Prioritization was determined based on criticality, age of materials and history of repairs. As demonstrated in the table above the water line replacement costs are considerably higher than the sewer replacements. Generally, water lines made of cast iron (as are most of the original lines in the system) are more likely to deteriorate or fail over time especially when subjected to higher pressures, similar to those found in most areas of the LJA water system.

The replacements/improvements referenced in this report are, by necessity, generalized; more finite mapping and design is required to properly quantify and implement the replacements. This report is intended to provide a general understanding of the 10-year Capital Outlay for LJA as they evaluate long term options regarding ownership and management of the water and sewer system. For further background and narrative on the context of this Capital Improvements Plan, the reader is referred to the Assessment and Appraisal document by Buddy Young and Andrew d'Adesky dated Spring 2012.



Exhibit 1B



Exhibit 1B





News click on [February Lake Views and News \(.pdf\)](#).

### THE JUNALUSKA ASSEMBLY COMMUNITY COUNCIL

Members are Bill King, representing The Shackford District, Jeannette Shaver-Lambuth, Pat Koonts-Utah Mountain, David Baxter-Richland, Ken Zulla-South Lakeshore, and Jimmy Pernnell and Oscae Dowdle, At-Large. The Community Council meets the first Tuesday of each month in the Bethea Welcome Center. Bill King is Chair and Pat Koonts is Vice Chair.

### STRATEGIC MASTER PLANS

As part of an overall campus strategic plan, Lake Junaluska Assembly Public Works has developed several strategic studies. One study looks into our municipal options. The Junaluska Assembly Community Council has created a Municipal Study Task Force to gather community input on the Municipal Study. The first meeting was held April 26; and nine meetings have been held since. Numerous reports have been developed in support of the Municipal Study. All reports, minutes and presentations from the meetings are available. [Click Here](#)

On March 8 the Lake Junaluska Assembly Board of Trustees voted to request that the Town of Waynesville approve extension of corporate limits to include the area known as Lake Junaluska. On March 15 Senator Davis introduced Senate Bill 290: Annexation of Lake Junaluska by the Town of Waynesville. The bill passed through the Senate but action was not completed on the bill in the House. The Bill will be considered in the 2014 short session next spring.

Dear Friends,

The Lake Junaluska Assembly Board of Directors (the Board) has just completed their fall meeting and has affirmed several recommendations from the Junaluska Assembly Community Council (the Council) that merit your immediate attention. The Council held two well attended meetings in August and September that focused on the Assembly Public Works budget and fees. The minutes and handouts provide additional details and are available at our website: [www.lakejunaluskacommunity.com](http://www.lakejunaluskacommunity.com).

The fact that much of our infrastructure and equipment is approaching the end of its useful life and is in need of repair or replacement has been addressed extensively in our Municipal Studies and Council meetings. The information is available at our website. It is the opinion of our Board, our Council and the property owners as indicated in the survey conducted last winter that annexation into Waynesville is the desired path to address these issues. However, due to political complications, annexation will take longer to accomplish than anticipated. Therefore the Council recommended and the Board approved moving forward with capital improvements.

The water and sewer service is our most costly and vital service. Two capital improvement plans were developed with different emphases. The Cavanaugh Plan focuses on water loss and only identifies our most critical priorities. It estimated those improvements will cost approximately \$180,000 per year for the next ten years. The Martin-McGill study was much broader, and based on the standards of Waynesville. It estimates costs to be approximately \$563,000 per year for ten years. The Council recommended implementation of the Cavanaugh study. Our rates are based on formulas established by the NC Utility Commission who has reviewed our new rates. Water and sewer base rates fund operations and improvements and are charged to every customer regardless of usage. Beginning November 1, 2013, the base rate for water will increase from \$8.65 to \$21.80; base rates for sewer will increase from \$8.25 to \$15.26. Usage rates will be increased by 5% to cover the cost of our increasing water loss.

Our solid waste department is in deficit for this fiscal year. Changes at Haywood County Solid Waste have forced us to haul our garbage much further and have increased our expenses for labor, fuel and equipment. The Council recommended a rate increase of \$3.00 per month which should bring those finances into balance and fund critically needed equipment. Brush and leaf pickup is major expense in solid waste and is addressed in an enclosed pamphlet. Landscaping contractors are responsible for hauling major cleanups, but many take advantage of our pick up service. Please share the pamphlet with your contractor and let them know that I will be happy to speak with them.

To implement our paving and equipment studies fully and to fund changes in security and administration, annual service charges will be increased from \$0.33 per \$100 property value to \$0.3525 in 2014. The service charge bills that will be mailed on December 2013 will be at current rate of the \$0.33; new rates take effect January 1, 2014 and will be billed December 2014. It is very likely that Fire Protection fees will be transferred from our monthly utility bill to our County tax bill in July 2014. The new rates will be based on property values at a rate of \$0.06 per \$100 value. This change affects a greater area of the county than just the Assembly.

The software that we use to automatically pay monthly bills is changing (not at our request). Because it is a secure system managed by our bank, we do not keep any hard copy credit card information in our office. Therefore we will not be able to access the current credit card information to load into the new system. If you would like to continue to use your credit or debit card or sign up for automatic payment after November 1, you must update your information with our office. You may fill out a form that is available on our website and mail it in, call our office or come by, download [Credit Card Info Form](#) (.pdf). We will load the information in a secure site and destroy hard copy records immediately.

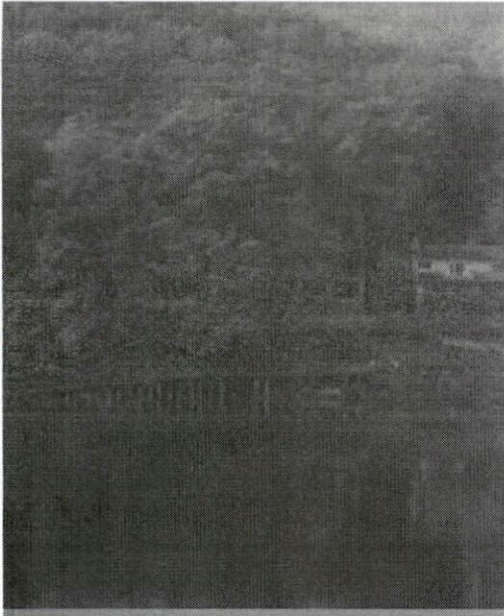
I know that this letter is not the uplifting message that we normally enjoy sharing; however it reflects the reality of our situation. We will continue to serve this community to the best of our ability and to pursue future courses that will allow us to build a sustainable future for Lake Junaluska. We have much to be thankful for during the upcoming holiday season.

More on recycling, download [Recycling Form](#) (.pdf)

## Exhibit 2A

[Home](#) [Lodging](#) [Events](#) [Meetir](#)[re](#)

828-452-2881



LAKE JUNALUSKA COMMUNITY

[LAKE JUNALUSKA COMMUNITY PLANS](#) [DISCOVER](#)

## Current News

A group of property owners has been working with Assembly Public Works to develop and circulate two petitions in support of annexation of Lake Junaluska into the Town of Waynesville. One petition is for registered voters and another for property owners. The petitions were mailed in the week of November 14. If you have not received a petition, or misplaced yours please contact us at 828-452-5911

### IMPORTANT RATE INFORMATION

On Tuesday October 22, Assembly Public Works mailed important information concerning rates and other changes affecting the community. The text of the letter is at the bottom of this page.

### LEAF VACUUM INFORMATION

The Leaf Crew will continue working through April.

Assembly Public Works offers automatic credit card or debit card monthly utility bill payment. The software that we use to automatically pay monthly bills is changing (not at our request). Because it is a secure system managed by our bank, we do not keep any hard copy credit card information in our office. Therefore we will not be able to access the current credit card information to load into the new system. If you would like to continue or to sign up to use your credit or debit card or sign up for automatic payment after November 1, you must update your information with our office. You may fill out a form that is available and mail it in, call our office, or come by or download [Credit Card Info Form](#) (.pdf). We will load the information in a secure site and destroy hard copy records immediately.

### THE LAKE VIEWS AND NEWS

Contains the most up to date information about all of the happenings at The Assembly. For the most current edition of The Lake Views and



JUNE 2017

**ASSEMBLY PUBLIC WORKS**

**DIRECTOR'S REPORT**

Good afternoon, Council.

I'd like to begin my report today with letting you know of a follow-up action to Chuck's report. We are ordering water meters to complete Phase 2 of the water meter replacement project. When this phase is completed, all customers north of County Road and south of U.S. 19 will have their meters replaced.

Today's report will focus on an important topic that will move us ahead for the future: changes to the Public Works budget.

Recall that we have no meeting in July. Therefore we have 3 meetings coming up to work through the rate-recommending and rate-setting process for 2018. This includes operational and capital dollars designated to renew and refurbish our aged-out system.

I am now in the middle of my second full budget. When I arrived in the fall of 2014, the 2015 budget was completed and I began my learning process with the budget path already established. The next two budgets – for 2016 and 2017 – were budgets I created. That has given me opportunity to see where improvements are needed.

In the same way that we have continued to enact changes to improve operations, I have been seeking opportunities to improve the budget. Simply stated, the budget ought to reflect with precision the expenditures of resources employed in each area of Public Works. For example, expenses associated with a water leak ought to be reflected in the water and sewer budget.

Let me give you a couple of obvious examples of what we're fixing: Clay is primarily a Solid Waste employee. However, Clay continues to learn and increase his value to the operation. He now takes after-hours calls, the vast majority of which are related to water and sewer issues, a separate fund that should be paying for his time when he is doing water or sewer duties. Instead, that water/sewer time has been paid out of the Solid Waste fund.

Similarly, Brian and Goob both react to water and sewer issues regularly. Yet they are Streets employees, paid out of Service Charges revenues.

And, more than half of my time, Jenna's time and Bob's time deals with water and sewer administration, taking payments, processing bills, dealing with customer requests, plus the administrative expenses associated with the operational areas we support. Yet, our time has been completely charged to Service Charges.

So here's what we've done, effective July 1: we've made internal changes to our systems to more accurately reflect the work of our operation. Here are a few examples:

## Exhibit 3A

- Our call-out program, which except for a few weather events deals exclusively with water and sewer issues, will be funded by the water and sewer fund.
- We've gone through our roster of employees and re-allocated expenses associated with that position based on the areas they support. An example is Brian. He's a B-level state licensed water distribution systems operator who is frequently in the mud hole during a water or sewer leak. Half of his time will be allocated to the water and sewer fund, whereas he was totally funded before by Roads, one of the areas supported by Service Charges.

Here's another change recently made: To further distinguish water/sewer expenses and revenues, a dedicated checking account has been established for that fund.

What are the impacts of these changes?

- The reality of how we expend our resources will be more accurately reflected in our financial documents. In the old Sears category of describing what we've had, we are going from "good" to "better". And, over time, we'll continue to tweak our systems into the "best" category. But it's an iterative process.
- Putting more water/sewer expenses into that budget will impact the dollars we'll have available for renewal and refurbishment of our water and sewer system. We'll be discussing the impact of that during our August rate-setting discussions.
- These changes will also create more dollars available for expenses associated with Service Charges. We'll be discussing the impact of that during our August rate-setting discussions.

I look forward to walking through the 2018 rate-recommending and rate-setting process with you.

### Four More Quick Notes

1. Recall that we have a Public Forum on Saturday June 24, sponsored by the Lake Junaluska Board of Trustees, the Lake Junaluska Assembly Property Owners Organization and this Community Council. The topic is the vehicular and pedestrian bridge over the dam and a recommendation by the Trustees Bridge Task Force. The forum is at 10 a.m. in Kern 100.
2. This month's water bill will be the last time a Fire Service charge of \$8 will be on the bill. Billing for fire service at a rate based on property values has been assumed by the Haywood County tax collector and will show up on annual Haywood County property tax bills.
3. We have been pursuing collections of past due Service Charges. On March 17, the amount of past due Service Charges was \$169,752. After phone calls and letters and lots of emotions, we have collected around \$68,000 and the total as of June 2 was \$101,774.
4. Security activity for April and May that resulted in a written report consisted of 38 call-outs: 19 were calls from residents to an LJA address, 11 were calls to a public access area and 8 were call-outs from the Conference Center. They ranged from medical assistance, domestic disturbances, property damage to suspicious activity, a dog attack and vehicle accidents. One more Security note: Our Chief of Security, Chris Moody, was recently promoted to Captain at the Haywood



Exhibit 3A

County Sheriff's Office, where his duties include supervision of our Lake Junaluska Assembly community.

Respectfully submitted,

Jack Carlisle, Director

From: Dan Higgins dhiggins@bdppa.com  
Subject: NCUC Docket W-1274, Sub 7  
Date: Dec 9, 2019 at 4:49:53 PM  
To: timfphe@icloud.com

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Mr. Phelan:

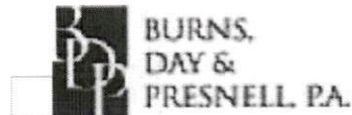
Attached find the responses of Lake Junaluska Assembly, Incorporated (LJA) to your data requests, with attachments, as well as your service copies of the direct testimony filed with the Utilities Commission on behalf of LJA this afternoon.

Please confirm your receipt of this email.

Thank you.

**Daniel C. Higgins**

Burns, Day & Presnell, P.A.



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BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-1274, Sub 7

In the Matter of )  
Application of Lake Junaluska Assembly, Inc. )  
for a Certificate of Public Convenience )  
And Necessity, and for Approval of Rates )

Responses of Lake Junaluska Assembly, Inc. to  
Timothy F. Phelan Data Request No. 1

Lake Junaluska Assembly ("LJA") notes at the outset that the North Carolina Utilities Commission ("NCUC") has not authorized the service of data requests in this docket, and thus has not established any procedure or schedules for such.

Subject to and without waiving any rights or objections, in a good faith effort to cooperate LJA provides the information described below.

1. Please provide a copy of certified audit completed for Lake Junaluska Assembly Water and Sewer utility service that's required prior to the North Carolina Utilities Commission establishing a complete Schedule of Rates.

**Response:** LJA is aware of no such requirement. The Assembly does not separately audit its water and sewer operations. See Exhibit E to the Application filed by LJA in this docket.

2. Please provide a copy of the 10 year Water and Sewer Capital Improvement Plan; to include date of approval and by whom.

**Response:** The Lake Junaluska Assembly's Public Works "Water and Sewer Capital Improvement Plan 10-Year Outlay" ("10-Year Plan") is and has been available on LJA's website via this link:

[https://www.lakejunaluska.com/i/downloads/CIP\\_Final.pdf](https://www.lakejunaluska.com/i/downloads/CIP_Final.pdf)

Decisions regarding implementation of various aspects of the work recommended in the 10-Year Plan were made by the Director of Assembly Public Works in collaboration with the Operator in Responsible Charge. The Junaluska Assembly Community Council and the Board of Trustees are briefed in the fall of each year on capital spending on the water and sewer systems planned for the upcoming year.

3. Please provide a complete list of projects identified in the 10-Year Plan by priority (high, medium, and low) and estimated cost to complete respective projects.

**Response:** See the 10-Year Plan via the link provided above for projects and

cost estimates as identified and estimated as of May 1, 2012. The prioritization of projects has generally been as recommended in the 10-Year Plan, while taking into consideration other water and sewer situations requiring attention that have arisen during the period since then, has been determined by the Director of Assembly Public Works in collaboration with the Operator in Responsible Charge.

4. Please provide a copy of the provision in the 10-Year Plan authorizing the installation of Radio Read Meters.

**Response:** The 10-Year Plan does not "authorize" any specific work; it reflects the findings and recommendations of Cavanaugh and Associates, PA as of May 1, 2012. LJA has installed radio read meters over the past two plus years in an effort to reduce water losses by assisting with leak detection, provide more accurate usage data, and to improve customer service.

5. Please provide a copy of base rate for water and sewer as of October 1, 2013.

**Response:** As of October 1, 2013, the base rates for water and sewer were:  
Water: \$8.65  
Sewer: \$8.25

6. Provide a copy of the base rate for water and sewer as of November 1, 2013. Identify the amount of base rate increase for water and sewer intended to provide funds for Capital Improvement Plan.

**Response:** As of November 1, 2013, the base rates for water and sewer were:  
Water: \$21.80  
Sewer: \$15.26  
Current Assembly management personnel were not involved in setting those rates, but believe that the amount of the difference between these base rates and the base rates identified in the response to Item 5 was intended to provide funding for work on LJA's water and sewer systems, including work identified in the 10-Year Plan.

7. Please provide Water and Sewer Usage rates for years 2013 - 2018. Identify the markup for water loss in addition to the rate paid to Town of Waynesville.

**Response:** LJA does not maintain data on gallons of water and sewer usage for which it was billed by Waynesville over these years in any readily retrievable fashion, and LJA objects to this request as it seeks information which is irrelevant to any issue legitimately presented in this docket, is not reasonably calculated to lead to the discovery of relevant evidence, and that compliance with this request would be unduly burdensome.

Subject to and without waiving the foregoing objections, LJA states that since November of 2013 the rates for water and sewer service have typically been



increased each year to pass through any price increase from Waynesville. In some years, LJA has also made a modest cost-of-living adjustment to these rates. Except for the pass through of the Waynesville's July 2019 10% increase in its bulk sewer service rate, as approved by the NCUC, LJA has not adjusted its usage rates for water or sewer service since 2017, at which time the usage rates were set as follows:

Water: \$4.37 per 1,000 gallons  
\$3.27 per 100 cubic feet  
Sewer: \$5.33 per 1,000 gallons  
\$3.99 per 100 cubic feet

LJA's current usage rates are as follows:

Water: \$4.37 per 1,000 gallons  
\$3.27 per 100 cubic feet  
Sewer: \$5.74 per 1,000 gallons  
\$4.30 per 100 cubic feet

With regard to unaccounted for water losses, LJA effectively continued the approach recommended by the Public Staff and used by the NCUC in setting rates for LJA in 2008 by attempting to hold unaccounted water losses below 25%.

8. Please provide the number of customers for water and sewer as of November 1, 2019.

**Response:** As of November 26, 2019, LJA served 871 water customers and 832 sewer customers.

9. Please provide calculation that demonstrates the assessments listed in attachment #1A for water and sewer will provide sufficient capital to fund continuation of work called for in the 10-Year Plan.

**Response:** See Attachment 3A to LJA's Application filed with the NCUC on September 28, 2018.

10. As of November 1, 2013, the estimated cost of operations was approximately \$150,000, excluding the cost of water paid to the Town of Waynesville. The estimated cost of operations listed in the adjusted budget Attachments #2A and #2B is \$362,430, excluding cost of water paid to the Town of Waynesville. Please provide calculations to substantiate the 142.5% increase in operations cost in the five year period since November 1, 2013.

**Response:** Operating costs were adjusted in mid-2017 in order to accurately reflect the cost of providing water and sewer service. LJA was advised that its rates were not capturing the cost of all of the management, administrative and operations personnel supporting the water and sewer operations, and the increase is a function

of the allocation of a portion of the costs of those personnel to the water and sewer operations. Any rate setting comparison based on 2013 cost allocations would be inaccurate. See Attachments 1 and 2, which are, respectively, the Labor Allocation and related June 2017 Report from the Director of Assembly Public Works to the Junaluska Assembly Community Counsel.

11. Please provide a copy of the bank account established for Water and Sewer receipts and expenditures.

**Response:** LJA objects to this request as it seeks information which is irrelevant to any issue legitimately presented in this docket, is not reasonably calculated to lead to the discovery of relevant evidence, and that compliance with this request would be unduly burdensome.

Subject to and without waiving the foregoing objections, LJA established a separate bank account for water and sewer receipts and expenditures in June of 2017. See Attachment 3, which is a letter from Wells Fargo.