

**LAKE JUNALUSKA ASSEMBLY, INC.
DOCKET NO. W-1274, SUB 7**

**DIRECT TESTIMONY OF JACK CARLISLE
ON BEHALF OF LAKE JUNALUSKA ASSEMBLY, INC.**

December 9, 2019

1 Q. PLEASE STATE FOR THE RECORD YOUR NAME, ADDRESS, AND
2 PRESENT POSITION.

3 A. My name is Jack Carlisle. My address is 201 Wesley Way, Waynesville, North
4 Carolina, 28785. Until I retired on September 27, 2019, I was employed by Lake
5 Junaluska Assembly, Incorporated (“LJA”) as Director of Assembly Public Works.
6 I have continued to work with LJA on a part-time basis as necessary to complete
7 the proceedings in this docket associated with LJA’s Application For a Certificate
8 of Public Convenience and Necessity and For Approval of Rates filed on September
9 28, 2018, pursuant to the Commission’s Order issued in Docket No. W-1274, Subs
10 5 and 6.

11 Q. BRIEFLY STATE YOUR QUALIFICATIONS AND EXPERIENCE RELATING
12 TO WATER AND SEWER OPERATIONS AND RATE REGULATION.

13 A. I was employed as LJA’s Director of Assembly Public Works for five years. Prior
14 to that, I was employed by Hillsborough County Board of County Commissioners
15 in Tampa, FL for 27 years, of which 10 years was in various operational and staff
16 management roles in the Hillsborough County Water Department, a water, sewer
17 and reclaimed water enterprise with approximately 179,000 water, 171,000 sewer
18 and 18,000 reclaimed water connections. My education includes a BA in mass
19 communications from the University of South Florida, a Master of Liberal Arts

1 from Texas Christian University and a MS in Management from Florida Institute
2 of Technology.

3 Q. PLEASE DESCRIBE THE LAKE JUNALUSKA COMMUNITY AND ITS
4 HISTORY.

5 A. Lake Junaluska Assembly, Incorporated is a tax-exempt North Carolina non-profit
6 corporation, formed in 1938. Beginning in 1912, the predecessors to LJA
7 commenced development of a residential community in Haywood County, North
8 Carolina, to be known as Lake Junaluska. As stated in LJA's Certificate of
9 Incorporation, a principle objective when LJA was incorporated in 1938 was "to
10 acquire, establish, and maintain in Haywood County, North Carolina....a resort for
11 religious, charitable, educational, and benevolent purposes...." (LJA Certificate of
12 Incorporation §3(a)). The Lake Junaluska Assembly is an unincorporated
13 community consisting of homes, several businesses, and a Conference and Retreat
14 Center associated with the United Methodist Church.

15 Q. WHAT SERVICES DOES LJA PROVIDE TO RESIDENTS IN THE
16 COMMUNITY?

17 A. For many years LJA has provided various services to the residents of the Lake
18 Junaluska community and its Conference and Retreat Center, including water and
19 wastewater treatment services; road maintenance; security; garbage and recycling
20 collection services; other solid waste management services; and storm water
21 management. All of these services are provided through the Assembly Public
22 Works office, which I managed from September 2014 to September 2019.

23 Q. HOW DOES LJA PROVIDE WATER AND SEWER SERVICE?

1 A. LJA owns and operates water distribution and wastewater collection systems. For
2 many years it has purchased bulk water and wastewater treatment service from the
3 Town of Waynesville. LJA's water system is used to distribute purchased water to
4 the residences and businesses served by LJA, and the sewer system collects
5 wastewater which we deliver to Waynesville for treatment. As of November 26,
6 2019, LJA provided water service to 871 customers and sewer service to 832
7 customers.

8 Q. WHAT IS LJA'S REGULATORY STATUS?

9 A. LJA's regulatory status is currently in transition, as it moves from being exempt
10 from regulation by the Commission to being a regulated provider of water and
11 wastewater treatment services.

12 Q. WAS LJA HISTORICALLY REGULATED BY THE COMMISSION?

13 A. No. Up until 2007, LJA's provision of water and sewer service was not regulated
14 by the Commission. At the behest of the North Carolina Department of
15 Environment and Natural Resources, in 2007 LJA applied to the Commission and
16 was granted a Certificate of Public Convenience and Necessity ("CPCN") in
17 Docket W-1274, Sub 0 authorizing it to provide water and sewer service in the Lake
18 Junaluska community as a public utility. In its *Order Granting Petition For*
19 *Exemption From Regulation* issued on August 18, 2011, in Docket W-1274, Sub 4
20 ("the Exemption Docket"), the Commission found that LJA met the requirements
21 for its provision of water and sewer services to be exempted from regulation
22 pursuant to N.C. Gen. Stat. § 62-110.5. Since then, the rates, terms and conditions

1 on which water and sewer services are furnished to the Lake Junaluska community
2 have been established by the Junaluska Assembly Community Council.

3 In its *Order Ruling On Lake Junaluska Assembly, Inc., Status As A Public Utility*,
4 issued April 23, 2018, in Docket W-1274, Subs 5 and 6, the Commission revoked
5 LJA's exemption and directed that LJA file an Application for a new CPCN, which
6 it did on September 28, 2018.

7 Q. HOW IS THE LAKE JUNALUSKA COMMUNITY GOVERNED?

8 A. As noted above, the Lake Junaluska Assembly is an unincorporated community.
9 Except for the rates, terms and conditions on which water and sewer service are
10 furnished to the Lake Junaluska community, which have been set since 2011 by the
11 Junaluska Assembly Community Council, the Lake Junaluska community is
12 otherwise governed by a 31-member Assembly Board of Trustees. Three of the
13 Trustees are elected by the LJA community, three are Bishops of the United
14 Methodist Church, one is the President of a charitable support organization known
15 as the Junaluska Associates, and 24 are elected by the Board of Trustees. The Lake
16 Junaluska Assembly has been affiliated, since its creation, with the United
17 Methodist Church or its predecessor bodies. I understand that historically many
18 residents of the Lake Junaluska Assembly were retired Methodist clergy or other
19 individuals with professional or employment associations with the Methodist
20 Church. In recent years, that has changed, as an increasing number of property
21 owners in the Lake Junaluska community have no association with the United
22 Methodist Church.

1 The Board of Trustees manages and governs operation of the Assembly, other than
2 setting the rates, terms and conditions for water and sewer service. This means that
3 the Trustees approve budgets, and through the delegation of authority to the
4 Assembly's Executive Director, who makes employment decisions, supervise staff
5 and manage many aspects of the entire community and the Conference and Retreat
6 Center.

7 Q. ARE THERE ISSUES WITH LJA's WATER DISTRIBUTION AND SEWER
8 COLLECTION FACILITIES?

9 A. Yes, there are unmet needs for repair, replacement and refurbishment of LJA's aged
10 water and sewer infrastructure. As noted above, LJA was initially regulated by the
11 Commission in 2007. As documented in proceedings in Dockets W-1274, Sub 0
12 and Sub 2 in June of 2008, at that time there were significant problems relating to
13 extensive water leaks from LJA's aged infrastructure. The Commission's June 25,
14 2008 *Order Amending Prior Franchise Order, Approving Tariff Provision, and*
15 *Requiring Customer Notice* (the "June 25 Order") in those dockets described the
16 state of LJA's water system as follows:

17 Due to the extreme age of portions of the Lake Junaluska Assembly
18 water distribution system (some lines are 100 years old and 50% of
19 the lines are more than 50 years old), the various leaks, the
20 extremely high water pressures resulting from the mountain setting,
21 which at the lake elevation may exceed 200 psi, older meters, and
22 the necessary flushing of water and wastewater lines, the Public
23 Staff recommended a 25% unaccounted for water allowance to be
24 built into the revenue requirement and rates.

25 As established in the Public Staff's Motion to Amend Order and Approve Pass
26 Through filed in those dockets, in the first three months of LJA's operation under
27 the rates initially set for LJA by the Commission, LJA experienced a revenue

1 shortfall of \$24,540.00.¹ That shortfall was a product of LJA having incurred costs
2 of \$54,510 to purchase water and sewer service from Waynesville during that three-
3 month period, while it collected only \$29,970 from its customers for those services.
4 The Public Staff's Motion to Amend Order and Approve Pass Through in those
5 dockets included data from LJA relating to bulk water purchased and metered water
6 sold for the period January 2006 through April 2008. That data showed that in 2006
7 48% of the purchased water was not accounted for; in 2007 33% of the purchased
8 water was not accounted for; and in the first four months of 2008, 41% of the
9 purchased water was not accounted for.²

10 The Public Staff also recommended in its Motion to Amend Order that LJA "needs
11 to be incentivized to continue to reduce its unaccounted for water."³ The
12 Commission granted the Public Staff's Motion to Amend Order and revised LJA's
13 rates to include a 25% unaccounted for water allowance in the June 25 Order. That
14 arrangement meant that LJA was not able to recover the cost of a significant portion
15 of the unaccounted for water it purchased from Waynesville.

16 Q. DID LJA TAKE ACTION TO ADDRESS ITS EXTENSIVE WATER LOSSES?

17 A. Yes. Given the extent of the water loss and leakage it was experiencing, the other
18 infrastructure issues cited in the Public Staff's Motion to Amend Order and the June
19 25 Order, and the obvious economic incentive to minimize its loss of purchased
20 water,⁴ after the Commission exempted it from regulation LJA commissioned a

¹ <http://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=a1c4eb75-89e1-4fb4-a01d-0b7366b19064>

² Public Staff Motion to Amend Order ¶ 8.

³ Public Staff Motion to Amend Order ¶ 10.

⁴ Water losses increase Waynesville's billings to LJA for wastewater treatment, since those billings are based on the volume of water purchased by LJA.

1 study of its water distribution and wastewater collection systems by an engineering
2 firm in Asheville. The resulting report from Cavanaugh & Associates, P.A., issued
3 in May of 2012 (the “Cavanaugh Study”), included a 10-year Water and Sewer
4 Capital Improvements Plan (“the 10-Year Plan”).⁵ The Cavanaugh Study 10-Year
5 Plan recommended numerous projects to address issues and problems with LJA’s
6 infrastructure, principally focusing on detecting and eliminating leaks in the water
7 distribution system. That Plan projected total capital outlays over ten years for work
8 on the water distribution system of nearly \$1.2 million and nearly \$600,000 for
9 work on the wastewater collection system.

10 In 2013, LJA began implementing periodic rate increases in order to generate
11 capital necessary to fund the work called for in the 10-Year Plan to eliminate water
12 leaks and address other issues and problems in the water distribution and
13 wastewater collection infrastructure serving the Lake Junaluska community. LJA
14 was first able to begin using that funding to replace water and sewer lines in 2014.
15 Since then LJA has averaged spending approximately \$200,000 per year to repair,
16 replace, improve and modernize its water and sewer infrastructure, as shown in
17 Attachment 3B to LJA’s Application.

18 Q. HAS LJA MADE SIGNIFICANT PROGRESS IN ADDRESSING THESE
19 ISSUES?

20 A. Yes, LJA has seen great improvement as a result of those investments. Purchased
21 water losses, which averaged 33.29% in 2013, currently average 22.7%. The
22 frequency of water and sewer callouts for leaks, stoppages and overflows has been

⁵ http://www.lakejunaluska.com/i/downloads/CIP_Final.pdf

1 reduced from an estimated 3-5 per day to 3-5 per week currently. The 10-Year
2 Plan's recommended prioritization for water and sewer replacement projects was
3 divided into years 1-3, 4-7 and 8-10. Assembly Public Works has generally worked
4 from that schedule, while taking into consideration other water and sewer
5 infrastructure situations requiring attention that have arisen since then, such as
6 recent broken lines, for example, to undertake near-term capital improvement
7 projects. At this point, ten of the 14 initial projects identified in the Cavanaugh
8 Study have been completed. In addition, other water and sewer capital projects
9 addressing issues with LJA's 100-year-old infrastructure which arose after the 2012
10 study had to be given priority at times during the past five years. Capital
11 expenditures and work were reduced in 2018 and 2019 due to uncertainty regarding
12 the future availability of funding for capital spending to address system issues after
13 LJA's new rates are established, and while awaiting Commission approval of a
14 capital funding mechanism. Work under the 10-Year Plan is not complete, and
15 there are still problems to be addressed. Given the age of its water and sewer
16 infrastructure, LJA anticipates that it will commission another engineering study in
17 2020 or 2021 to identify and update any additional necessary improvements to the
18 water and sewer infrastructure serving the LJA community.

19 At this point, further work is required to reduce and eliminate water leaks and to
20 address issues with aging sewer infrastructure. For that reason, LJA's Application
21 includes a request that the Commission approve a customer assessment or other
22 funding mechanism in LJA's approved rates in order to generate sufficient funding
23 for it to continue the work called for in the 10-Year Plan.

1 Q. ARE THERE ENGINEERING AND MAINTENANCE ISSUES WITH OLDER
2 WATER AND SEWER SYSTEMS IN MOUNTAINOUS TERRAIN?

3 A. Yes. Materials used in older water systems create opportunities for leaks in the
4 system to occur, especially as those systems age. LJA's oldest water lines are made
5 of cast iron with lead joints and comprise an estimated 20% of the water lines in
6 the community. Eliminating lead solder joints continues to be a high safety
7 concern. Also, cast iron is susceptible to the high PH levels present in some soils
8 found in LJA's service area, causing pipes to erode where those conditions exist.
9 Another estimated 25-30% of LJA's water system consists of galvanized steel lines.
10 Those lines swell from the inside over time and negatively impact LJA's ability to
11 normalize water pressures. In its water system refurbishment projects LJA is
12 replacing cast iron and galvanized lines with ductile iron and plastic materials.
13 Because it is located in mountainous terrain, maintaining consistent water system
14 pressure poses an ongoing operational challenge for LJA. Water pressure increases
15 at night when Waynesville delivers water and our system is at its lowest point of
16 usage. Water pressure increases by design at points where pipe size is reduced.
17 Water pressure is impacted, not by design, when galvanized lines swell. Delivery
18 of water to certain higher elevation points in LJA's service area at an adequate
19 pressure can result in higher-than-needed pressures at points of service at lower
20 elevations. Erratic / fluctuating water pressures challenge the stability of aging
21 infrastructure and reinforce the need to replace older pipes that are beyond their
22 useful life. A 2009 engineering study of water pressures in the LJA system showed
23 wide variance across the system, with some pressures as high as 220 psi. That is

1 consistent with the Public Staff's recognition in its Motion to Amend Order and
2 Approve Pass Through in Dockets W-1274, Sub 0 and Sub 2, that "extremely high
3 water pressure resulting from [Lake Junaluska's] mountain setting" may exceed
4 200 psi at the lake level.⁶

5 Q. WHAT ARE THE CONSEQUENCES IF THESE ISSUES ARE NOT
6 ADDRESSED?

7 A. There are at least three long-term impacts to the water system: (1) Customer service
8 from service interruptions is negatively impacted as Assembly Public Works
9 continues to deal with unanticipated leaks from pipes and associated infrastructure
10 that has aged well beyond its intended useful life; (2) Operational costs will remain
11 higher due to the cost of unplanned materials and manpower expended in dealing
12 with leak events; and (3) Water loss will continue at a higher rate prior to leak
13 discovery and repair.

14 Q. HOW DO WATER LOSSES IMPACT LJA'S COST OF PROVIDING
15 SERVICE?

16 A. Because LJA resells bulk water purchased from Waynesville it is important to note
17 that unaccounted for water losses drive up LJA's cost of service in two ways. First,
18 purchased water lost through leaks in their system is gone but still has to be paid
19 for. Second, Waynesville charges LJA for bulk sewer service based on the volume
20 of water purchased by LJA. As a result, Waynesville's billings for sewer service
21 to LJA are increased by the water losses. Therefore, system improvements that

⁶ Public Staff Motion to Amend Order ¶ 8.

1 reduce water losses have a double impact on LJA's expenses by reducing
2 Waynesville's charges for both purchased water and bulk sewer service.

3 Q. EXPLAIN WHAT LJA'S SITUATION IS, IN TERMS OF RATE BASE?

4 A. LJA's situation and circumstances are unlike those of a typical water and sewer
5 public utility service provider. All of LJA's water and sewer plant has been paid
6 for by its customers. Thus, it has no rate base and its rates will be set by the
7 Commission based on the operating ratio methodology. Other than its customers,
8 LJA does not have access to other sources of capital sufficient to fund continuation
9 of the work called for in the 10-Year Plan. Further, even if LJA could borrow
10 money to fund this work, the typical ratemaking process would require filing of
11 sequential rate cases to enable it to cover the increasing level of debt. That approach
12 would not be in our customers' best interest, as the debt service and rate case
13 expenses would just increase the cost to LJA's rate payers of completing the work
14 called for in the 10-Year Plan.

15 Likewise, failure to continue efforts to complete the work called for in the 10-Year
16 Plan would not be in the best interest of LJA's customers, as continuing loss of
17 significant amounts of purchased water will continue to result in higher billings
18 from Waynesville - which billings are reduced as leaks and water loss issues are
19 addressed. The most feasible and practical source of capital to fund work on LJA's
20 water and sewer infrastructure is LJA's customers, who are the beneficiaries of the
21 work done to improve that infrastructure.

22 Based on its particular circumstances, LJA respectfully requests that the
23 Commission recognize its unique situation and approve its proposed rates for water

1 and sewer service at a level calculated to generate sufficient capital to fund the work
2 called for in the 10-Year Plan. With a new engineering study of LJA's water and
3 sewer infrastructure system planned for the next two to three years, the level of any
4 assessment to fund future capital improvements can be evaluated in future
5 proceedings before the Commission.

6 Q. DOES THIS COMPLETE YOUR TESTIMONY AT THIS TIME?

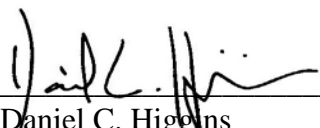
7 A. Yes.

CERTIFICATE OF SERVICE

I hereby certify that the foregoing Testimony has been served this day by e-mailing same to all parties of record in this docket, and the Public Staff.

This the 9th day of December, 2019.

BURNS, DAY & PRESNELL, P.A.

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