

BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION

Docket No. W-1274, Sub 7

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

**Attachments to Application of Lake Junaluska Assembly, Incorporated**

**Lake Junaluska Assembly Public Works**  
**CURRENT AND PROPOSED RATES COMPARISON**

**Attachment #1A**

**WATER**

<i>Metered Rate Codes</i>		<b>Current Rates</b>		<b>Proposed Rates</b>		<b>Assessment</b>
<b>Rate code</b>	<b>Meter type</b>	<b>Base Rate</b>	<b>Usage Rate/ccf</b>	<b>Base Rate</b>	<b>Usage Rate/ccf</b>	<b>reu/mo.</b>
W00	3/4" meter commercial	\$ 22.24	\$ 3.27	\$ 19.75	\$ 3.27	\$ 8.14
W01	3/4" meter residential	\$ 22.24	\$ 3.27	\$ 19.75	\$ 3.27	\$ 8.14
W02	1" meter commercial	\$ 56.22	\$ 3.27	\$ 49.38	\$ 3.27	\$ 20.35
W03	2" meter commercial	\$ 177.28	\$ 3.27	\$ 158.00	\$ 3.27	\$ 65.12
W04	3" meter commercial	\$ 321.98	\$ 3.27	\$ 296.25	\$ 3.27	\$ 122.10
W05	4" meter commercial	\$ 561.99	\$ 3.27	\$ 493.75	\$ 3.27	\$ 203.50
W06	4" meter gallons commercial ( <i>per k gallon rate</i> )	\$ 561.99	\$ 4.37	\$ 493.75	\$ 4.37	\$ 203.50
W07	1" irrigation/water only commercial	\$ 56.22	\$ 7.06	\$ 49.38	\$ 7.67	\$ 20.35
W08	3/4" holston/water only residential	\$ 22.24	\$ 7.06	\$ 19.75	\$ 7.67	\$ 8.14
W09	3/4" irrig/ldscp- water only residential	\$ 22.24	\$ 7.06	\$ 19.75	\$ 7.67	\$ 8.14

**Note:** Water only usage rates include sewer usage rate since LJA pays Waynesville sewer charge for all water used.

**SEWER**

<i>Rate Codes for Metered Water Customers</i>		<b>Current Rates</b>		<b>Proposed Rates</b>		<b>Assessment</b>
<b>Rate Code</b>	<b>Type</b>	<b>Base Rate</b>	<b>Usage Rate/ccf</b>	<b>Base Rate</b>	<b>Usage Rate/ccf</b>	<b>reu/mo.</b>
S00	3/4" sewer commercial	\$ 15.94	\$ 3.99	\$ 17.00	\$ 4.40	\$ 8.14
S01	3/4" sewer residential	\$ 15.94	\$ 3.99	\$ 17.00	\$ 4.40	\$ 8.14
S02	1" sewer commercial	\$ 34.92	\$ 3.99	\$ 42.50	\$ 4.40	\$ 20.35
S03	2" sewer commercial	\$ 111.68	\$ 3.99	\$ 136.00	\$ 4.40	\$ 65.12
S04	3" sewer commercial	\$ 230.36	\$ 3.99	\$ 255.00	\$ 4.40	\$ 122.10
S05	4" sewer commercial	\$ 349.04	\$ 3.99	\$ 425.00	\$ 4.40	\$ 203.50
S06	4" sewer gallons commercial ( <i>per k gallon rate</i> )	\$ 349.04	\$ 5.33	\$ 425.00	\$ 5.88	\$ 203.50
<i>Flat Rate Sewer</i>		<b>Current Rates</b>		<b>Proposed Rates</b>		<b>Assessment</b>
<b>Rate Code</b>	<b>Type</b>	<b>Flat Rate</b>	<b>Usage Rate</b>	<b>Flat Rate</b>	<b>Usage Rate</b>	<b>reu/mo.</b>
SE1	sewer only residential	\$ 25.91	n/a	\$ 29.00	n/a	\$ 8.14
SE2	sewer only commercial	\$ 25.91	n/a	\$ 29.00	n/a	\$ 8.14
SE3	sewer only- restaurant	\$ 161.38	n/a	\$ 232.00	n/a	\$ 65.12
SE4	sewer only- mh park	\$ 351.34	n/a	\$ 435.00	n/a	\$ 122.10

Average usage per residential equivalent unit = 3.77 ccf or 2,820 gal./month/reu

Average water bill at current rate = \$22.24 + (3.77 x \$3.27) =		\$34.57	
Average water bill at proposed rate = \$19.75 base + \$8.14 assessment + (3.77 x \$3.27) =		\$40.22	
Increase		\$5.65	16.34%
Average sewer bill at current rate = \$15.94 + (3.77 x \$3.99) =		\$30.98	
Average sewer bill at proposed rate = \$17.00 base + \$8.14 assessment + (3.77 x \$4.40) =		\$41.72	
Increase		\$10.74	34.67%

## Lake Junaluska Assembly Public Works

## Attachment #1B

## BILLING ANALYSIS: CURRENT RATES, 2017 USAGE &amp; CURRENT CUSTOMERS

## WATER

<i>Metered Rate codes</i>					
Rate code	Meter type	Rate	Usage Rate	Number of Customers	Revenue
W00	3/4" meter commercial	\$ 22.24	\$ 0.0326550000	17	\$ 4,536.96
W01	3/4" meter residential	\$ 22.24	\$ 0.0326550000	752	\$ 200,693.76
W02	1" meter commercial	\$ 56.22	\$ 0.0326550000	14	\$ 9,444.96
W03	2" meter commercial	\$ 177.28	\$ 0.0326550000	6	\$ 12,764.16
W04	3" meter commercial	\$ 321.98	\$ 0.0326550000	1	\$ 3,863.76
W05	4" meter commercial	\$ 561.99	\$ 0.0326550000	3	\$ 20,231.64
W06	4" meter gallons commercial	\$ 561.99	\$ 0.0043659000	1	\$ 6,743.88
W07	1" irrigation/water only commercial	\$ 56.22	\$ 0.0706125000	2	\$ 1,349.28
W08	3/4" holston/water only residential	\$ 22.24	\$ 0.0706125000	29	\$ 7,739.52
W09	3/4" irrig/ldscp- water only residential	\$ 22.24	\$ 0.0706125000	30	\$ 8,006.40
	<b>Total Water Base Revenue</b>			855	<b>\$ 275,374.32</b>
			<b>Rate/cubic ft.</b>	<b>Water Usage (cubic ft.)</b>	
	<b>Total Water Usage Revenue</b>		\$ 0.0326550000	4,663,143	<b>\$ 152,274.93</b>
<b>TOTAL WATER REVENUE</b>					<b>\$ 427,649.25</b>

## SEWER

<i>Rate codes for Metered Water Customers</i>					
Rate Code	Type	Rate	Usage Rate	Number of Customers	Revenue
S00	3/4" sewer commercial	\$ 15.94	\$ 0.0398553750	17	\$ 3,251.76
S01	3/4" sewer residential	\$ 15.94	\$ 0.0398553750	752	\$ 143,842.56
S02	1" sewer commercial	\$ 34.92	\$ 0.0398553750	14	\$ 5,866.56
S03	2" sewer commercial	\$ 111.68	\$ 0.0398553750	6	\$ 8,040.96
S04	3" sewer commercial	\$ 230.36	\$ 0.0398553750	1	\$ 2,764.32
S05	4" sewer commercial	\$ 349.04	\$ 0.0398553750	3	\$ 12,565.44
S06	4" sewer gallons commercial	\$ 349.04	\$ 0.0053283825	1	\$ 4,188.48
	<b>Total Sewer Base Revenue</b>				<b>\$ 180,520.08</b>
			<b>Rate/cubic ft.</b>	<b>Sewer Usage (cubic ft.)</b>	
	<b>Total Sewer Usage Revenue</b>		\$ 0.0399000000	4,663,143	<b>\$ 186,059.41</b>
	<b>Total Metered Sewer Revenue</b>				<b>\$ 366,579.49</b>
<i>Flat Rate Sewer</i>					
Rate Code	Type	Rate	Usage Rate	Number of Customers	Revenue
SE1	sewer only residential	\$ 25.91	n/a	25	\$ 7,773.00
SE2	sewer only commercial	\$ 25.91	n/a	2	\$ 621.84
SE3	sewer only- restaurant	\$ 161.38	n/a	1	\$ 1,936.56
SE4	sewer only- mh park	\$ 351.34	n/a	1	\$ 4,216.08
	<b>Total Flat Rate Sewer</b>				<b>\$ 14,547.48</b>
<b>TOTAL SEWER REVENUE</b>					<b>\$ 381,126.97</b>

<b>TOTAL ANNUAL REVENUE</b>	<b>\$</b>	<b>808,776.22</b>
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## Lake Junaluska Assembly Public Works

## Attachment #1C

## BILLING ANALYSIS: PROPOSED RATES, 2017 USAGE &amp; CURRENT CUSTOMERS

## WATER

Metered Rate codes						REU's
Rate code	Meter type	Rate	Residential Multiple	Number of Customers	Revenue	
W00	3/4" meter commercial	\$ 19.75	1.0	17	\$ 4,029.00	17
W01	3/4" meter residential	\$ 19.75	1.0	752	\$ 178,224.00	752
W02	1" meter commercial	\$ 49.38	2.5	14	\$ 8,295.00	35
W03	2" meter commercial	\$ 158.00	8.0	6	\$ 11,376.00	48
W04	3" meter commercial	\$ 296.25	15.0	1	\$ 3,555.00	15
W05	4" meter commercial	\$ 493.75	25.0	3	\$ 17,775.00	75
W06	4" meter gallons commercial	\$ 493.75	25.0	1	\$ 5,925.00	25
W07	1" irrigation/water only commercial	\$ 49.38	2.5	2	\$ 1,185.00	5
W08	3/4" holston/water only residential	\$ 19.75	1.0	29	\$ 6,873.00	29
W09	3/4" irrig/ldscp- water only residential	\$ 19.75	1.0	30	\$ 7,110.00	30
	<b>Total Water Base Revenue</b>			855	<b>\$ 244,347.00</b>	1,031
			<b>Rate/cubic ft.</b>	<b>Water Usage (cubic ft.)</b>		
	<b>Total Water Usage Revenue</b>		\$ 0.0327	4,663,143	<b>\$ 152,484.78</b>	
<b>TOTAL WATER REVENUE</b>					<b>\$ 396,831.78</b>	
<b>Average monthly water usage per REU (4,663,143cf/1,030reu/12)</b>			<b>377 cf/reu</b>	<b>2,820 gal./reu</b>		

## SEWER

Rate codes for Metered Water Customers						REU's
Rate Code	Type	Rate	Residential Multiple	Number of Customers	Revenue	
S00	3/4" sewer commercial	\$17.00	1.0	17	\$ 3,468.00	17
S01	3/4" sewer residential	\$17.00	1.0	752	\$ 153,408.00	752
S02	1" sewer commercial	\$42.50	2.5	14	\$ 7,140.00	35
S03	2" sewer commercial	\$136.00	8.0	6	\$ 9,792.00	48
S04	3" sewer commercial	\$255.00	15.0	1	\$ 3,060.00	15
S05	4" sewer commercial	\$425.00	25.0	3	\$ 15,300.00	75
S06	4" sewer gallons commercial	\$425.00	25.0	1	\$ 5,100.00	25
	<b>Total Sewer Base Revenue</b>				<b>\$ 197,268.00</b>	
			<b>Rate/cubic ft.</b>	<b>Sewer Usage (cubic ft.)</b>		
	<b>Total Sewer Usage Revenue</b>		\$ 0.0440000000	4,663,143	<b>\$ 205,178.29</b>	
	<b>Total Metered Sewer Revenue</b>				<b>\$ 402,446.29</b>	
Flat Rate Sewer						REU's
Rate Code	Type	Rate	Residential Multiple	Number of Customers	Revenue	
SE1	sewer only residential	\$ 29.00	1.0	25	\$ 8,700.00	25
SE2	sewer only commercial	\$ 29.00	1.0	2	\$ 696.00	2
SE3	sewer only- restaurant	\$ 232.00	8.0	1	\$ 2,784.00	8
SE4	sewer only- mh park	\$ 435.00	15.0	1	\$ 5,220.00	15
	<b>Total Flat Rate Sewer</b>				<b>\$ 17,400.00</b>	
<b>TOTAL SEWER REVENUE</b>					<b>\$ 419,846.29</b>	1017
<b>TOTAL ANNUAL REVENUE</b>					<b>\$ 816,678.07</b>	

**Lake Junaluska Assembly Public Works****Attachment #1D****RATIONALE FOR REQUEST FOR APPROVAL OF MONTHLY ASSESSMENT**

In its Application for a Certificate of Public Convenience and Necessity and for Approval of Rates, Lake Junaluska Assembly, Incorporated (“LJA”) seeks Commission approval of rates that include a monthly customer assessment designed to generate capital necessary to fund LJA’s continued work to address problems in the water distribution and wastewater collection infrastructure serving the Lake Junaluska community.

LJA purchases bulk water and wastewater treatment service from the Town of Waynesville, and has done so for many years. LJA was initially regulated by the Commission in 2007. As shown by proceedings in Dockets W-1274, Sub 0 and Sub 2 in June of 2008, at that time there were significant problems relating to the extent of water leaks from LJA's aged infrastructure. As shown in the Public Staff's Motion to Amend Order and Approve Pass Through filed in those dockets, in the first three months of LJA’s operation under the rates initially set for LJA by the Commission, LJA experienced a revenue shortfall of \$19,644.00.<sup>1</sup> That shortfall was a product of LJA having incurred costs of \$54,510 to purchase water and sewer service from Waynesville during that three-month period, while it collected only \$29,970 from its customers for those services.

The Public Staff’s Motion to Amend Order in those dockets included data from LJA relating to bulk water purchased and metered water sold for the period January 2006 through April 2008. That data showed that in 2006 48% of the purchased water was not accounted for; in 2007 33% of the purchased water was not accounted for; and in the first four months of 2008, 41% of

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

the purchased water was not accounted for. In its Motion to Amend Order, the Public Staff noted the following with regard to the loss of purchased water:

[D]ue to the extreme age of portions of the Lake Junaluska Assembly distribution system (some lines are 100 years old and 50% of the lines are more than 50 years old), the various leaks, the extremely high water pressure resulting from the mountain setting which at the lake elevation may exceed 200 psi, older meters, and the necessary flushing of water and wastewater lines, recommends a 25% unaccounted for water allowance to be built into the revenue requirement and rates.<sup>2</sup>

The Public Staff also recommended in its Motion to Amend Order that LJA “needs to be incentivized to continue to reduce its unaccounted for water.”<sup>3</sup> The Commission granted the Public Staff’s Motion to Amend Order and revised LJA’s rates to include an unaccounted for water allowance in its *Order Amending Prior Franchise Order, Approving Tariff Provision, and Requiring Customer Notice* issued June 25, 2008.

In August of 2011 the Commission exempted LJA from regulation. Given the extent of the water loss and leakage in its infrastructure, the other infrastructure issues recognized in the Public Staff’s Motion to Amend Order, and the obvious economic incentive to minimize the loss of purchased water (water losses also increase Waynesville’s billings for wastewater treatment), LJA thereafter commissioned an engineering analysis of its water distribution and wastewater collection systems. The resulting report from a consulting engineering firm issued in May of 2012 included a 10-year Water and Sewer Capital Improvements Plan (“the 10-Year Plan”).<sup>4</sup> The 10-Year Plan recommended numerous projects to address issues and problems with LJA’s infrastructure, principally focusing on detecting and eliminating leaks in the water distribution

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<sup>2</sup> Public Staff Motion to Amend Order ¶ 8.

<sup>3</sup> Public Staff Motion to Amend Order ¶ 10.

<sup>4</sup> [http://www.lakejunaluska.com/i/downloads/CIP\\_Final.pdf](http://www.lakejunaluska.com/i/downloads/CIP_Final.pdf)

system. That Plan projected total capital outlays over ten years for work on the water distribution system of nearly \$1.2 million and nearly \$600,000 for work on the wastewater collection system.

LJA thereafter implemented periodic rate increases in order to generate capital necessary to fund the work called for in the 10-Year Plan to eliminate water leaks and address other issues and problems in the water distribution and wastewater collection infrastructure serving the Lake Junaluska community. As shown in Attachment 3B, LJA first began using that funding to replace water and sewer lines in 2014. Since then LJA has averaged spending approximately \$200,000 per year to repair, replace, improve and modernize its water and sewer infrastructure. LJA has seen great improvement as a result of those investments, but work under the 10-Year Plan is not complete, and there are still problems to be addressed. Given the age of its water and sewer infrastructure, LJA anticipates that it will commission another engineering study in 2020 or 2021 to identify any additional necessary improvements to the water and sewer infrastructure serving the community.

At this point, LJA still experiences purchased water losses in the low to mid-20% range, so further work is required to reduce and eliminate water leaks and address issues with aging sewer infrastructure. LJA therefore requests that the Commission approve a customer assessment or other funding mechanism at this time to generate sufficient funding for it to complete the work called for in the 10-Year Plan.

LJA's situation and circumstances are unlike those of a typical water and sewer utility service provider. All of its plant has been paid for by its customers. Thus, LJA has no rate base and its rates will be set based on the operating ratio methodology. LJA does not have access to other sources of capital to fund continuation of the work called for in the 10-Year Plan. Further, even if LJA could borrow money to fund this work, the typical ratemaking process would require

filing of sequential rate cases to cover the debt. That approach would not be in the customers' best interest, as the debt service and rate case expenses would only increase the cost to LJA's rate payers of completing the 10-Year Plan work. Likewise, failure to continue efforts to complete the work called for in the 10-Year Plan would not be in the best interest of LJA's customers, as continued losses of purchased water will continue to result in higher billings from Waynesville - which billings will be reduced as leaks and water loss issues are addressed. The most feasible and practical source of capital to fund work on LJA's water and sewer infrastructure is LJA's customers, who are the beneficiaries of the work to improve that infrastructure.

Based on the foregoing, LJA respectfully requests that the Commission recognize its unique circumstances and approve its proposed rates for water and sewer service at a level calculated to generate sufficient capital to fund the work called for in the 10-Year Plan. With a new engineering study of LJA's water and sewer infrastructure system planned for the next two to three years, the level of any assessment to fund future capital improvements can be evaluated in future proceedings before the Commission.



## Lake Junaluska Assembly Public Works

## Attachment #2A

2018 WATER & SEWER ADJUSTED BUDGET BASED ON PRESENT RATES

	WATER AND SEWER REVENUES AND EXPENSES	2018 Adjusted Budget		
		Water	Sewer	Total
1.	Residential service (flat rate)		\$ 7,773.00	
2.	Residential service (metered rate)	\$ 305,844.43	\$ 291,108.61	
3.	Nonresidential service (flat rate)		\$ 6,774.48	
4.	Nonresidential service (metered rate)	\$ 121,804.82	\$ 75,470.88	
5.	Other revenues (describe in remarks below)			
6.	<b>TOTAL REVENUES (Lines 1 thru 5)</b>	<b>\$ 427,649.25</b>	<b>\$ 381,126.97</b>	<b>\$ 808,776.22</b>
7.	Total salaries	\$ 91,904.00	\$ 91,904.00	
8.	Administrative and office expense (except salaries)	\$ 31,449.50	\$ 31,449.50	
9.	Maintenance and repair expense (except salaries)	\$ 6,000.00	\$ 9,000.00	
10.	Transportation expenses	\$ 8,910.00	\$ 8,910.00	
11.	Electric power for pumping	\$ 1,600.00	\$ 1,600.00	
12.	Chemicals for treatment			
13.	Testing fees	\$ 3,960.00	\$ 1,500.00	
14.	Permit fees	\$ 1,250.00	\$ 1,250.00	
15.	Purchased water/sewer treatment	\$ 179,900.00	\$ 199,810.00	
16.	Annual depreciation			
17.	Taxes: State income taxes			
18.	Federal income taxes			
19.	Gross receipts (or franchise tax)			
20.	Property taxes			
21.	Payroll taxes	\$ 7,030.50	\$ 7,030.50	
22.	Other taxes	\$ 618.52	\$ 626.65	
23.	Other expenses (described in remarks below)	\$ 23,218.50	\$ 23,218.50	
	Regulatory Commission Expense ***	\$ 5,000.00	\$ 5,000.00	
24.	<b>TOTAL EXPENSES (Lines 7 thru 23)</b>	<b>\$ 360,841.02</b>	<b>\$ 381,299.15</b>	<b>\$ 742,140.17</b>
25.	<b>Net Operating Income (Line 6 minus Line 24)</b>	<b>\$ 66,808.23</b>	<b>\$ (172.18)</b>	
	Capital Improvement Expenses	\$ 65,236.05		
26.	Interest on debt during year	\$ 700.00	\$ 700.00	
27.	<b>NET INCOME (Line 25 minus Line 26)</b>	<b>\$ 872.18</b>	<b>\$ (872.18)</b>	<b>\$ (0.00)</b>

## NOTES

- Item 7.- In the Salaries line item we are budgetting additional salary from other areas that do work related to Water and Sewer. Those items are: 60% from administration, 10% from Solid waste, 50% from streets.
- Item 8.- Items expensed here are the following: Paycom fees, postage, cellphone expense, educational travel, copies, administrative support, software services, insurance, utilities, supplies, uniforms, office rent.
- Item 9.- Items expensed here are the following: Maintenance equipment, maintenance and repair water and sewer, equipment
- Item 10.- Gasoline, vehicle leases, vehicle repairs.
- Item 23.- Health benefits, call out budget, long term disability, pension contribution, workers comp, utilities electric for shop, credit card and banking processing fees, interest on line of credit, legal services.
- \*\*\*- This includes \$10K as an estimate for consulting fees, legal fees, application fee: \$5k for water and \$5k for sewer

## Lake Junaluska Assembly Public Works

## Attachment #2B

2018 WATER & SEWER ADJUSTED BUDGET BASED ON PROPOSED RATES

	WATER AND SEWER REVENUES AND EXPENSES	2018 Adjusted Budget		
		Water	Sewer	Total
1.	Residential service (flat rate)			
2.	Residential service (metered rate)			
3.	Nonresidential service (flat rate)			
4.	Nonresidential service (metered rate)			
5.	Other revenues (describe in remarks below)			
6.	<b>TOTAL REVENUES (Lines 1 thru 5)</b>	<b>\$ 396,831.78</b>	<b>\$ 419,846.29</b>	<b>\$ 816,678.07</b>
7.	Total salaries	\$ 91,904.00	\$ 91,904.00	
8.	Administrative and office expense (except salaries)	\$ 31,449.50	\$ 31,449.50	
9.	Maintenance and repair expense (except salaries)	\$ 6,000.00	\$ 9,000.00	
10.	Transportation expenses	\$ 8,910.00	\$ 8,910.00	
11.	Electric power for pumping	\$ 1,600.00	\$ 1,600.00	
12.	Chemicals for treatment			
13.	Testing fees	\$ 3,960.00	\$ 1,500.00	
14.	Permit fees	\$ 1,250.00	\$ 1,250.00	
15.	Purchased water/sewer treatment	\$ 179,900.00	\$ 199,810.00	
16.	Annual depreciation			
17.	Taxes: State income taxes			
18.	Federal income taxes			
19.	Gross receipts (or franchise tax)			
20.	Property taxes			
21.	Payroll taxes	\$ 7,030.50	\$ 7,030.50	
22.	Other taxes	\$ 618.52	\$ 626.65	
23.	Other expenses (described in remarks below)	\$ 23,218.50	\$ 23,218.50	
	Regulatory Commission Expense ***	\$ 5,000.00	\$ 5,000.00	
24.	<b>TOTAL EXPENSES (Lines 7 thru 23)</b>	<b>\$ 360,841.02</b>	<b>\$ 381,299.15</b>	<b>\$ 742,140.17</b>
25.	<b>Net Operating Income (Line 6 minus Line 24)</b>	<b>\$ 35,990.76</b>	<b>\$ 38,547.14</b>	<b>\$ 74,537.90</b>
26.	<b>Capital Improvement Assessment Revenues</b>	<b>\$ 100,708.00</b>	<b>\$ 99,340.00</b>	

## NOTES

- Item 7.- In the Salaries line item we are budgetting additional salary from other areas that do work related to Water and Sewer. Those items are: 60% from administration, 10% from Solid waste, 50% from streets.
- Item 8.- Items expensed here are the following: Paycom fees, postage, cellphone expense, educational travel, copies, administrative support, software services, insurance, utilities, supplies, uniforms, office rent.
- Item 9.- Items expensed here are the following: Maintenance equipment, maintenance and repair of water and sewer, equipment.
- Item 10.- Gasoline, vehicle leases, vehicle repairs.
- Item 23.- Health benefits, call out budget, long term disability, pension contribution, workers comp, utilities electric for shop, credit card and banking processing fees, interest on line of credit, legal services.
- \*\*\*- This includes \$10k as an estimate for consulting fees, legal fees, application fee: \$5k for water and \$5k for sewer.

**Lake Junaluska Assembly Public Works**  
**FIVE-YEAR SYSTEM IMPROVEMENT PLAN**

**Attachment #3A**

Year(s)	Location	Scope	Estim Project Cost	Incl in Eng Plans
2018	Radio Read Meter Project (cont.)	Replacement of twelve 1" meters with electronic meters	\$25,400	yes
		<b>TOTAL</b>	<b>\$25,400</b>	
2019	Atkins Loop	Replacement of 400' 2" water line	\$32,000	no
	GIS Mapping Project	Purchase of GIS mapping equipment	\$5,000	State requirement
	Holston Village Road	Replacement of 175' 2" water line	\$15,000	no
	North Lakeshore Drive	Rerouting 4 sewer lines into a new manhole, removing 2 water valves	\$50,000	yes
	Radio Read Meter Project (cont.)	Replacement of 225 meters with electronic meters	\$40,500	yes
	Reservoir/Pump Station Study	Engineering study of old reservoir/pump station	\$10,000	no
	Siler Circle	Replacement of 300' 2" water line	\$28,000	yes
	Unidentified	Currently unknown projects	\$19,500	Unknown
		<b>TOTAL</b>	<b>\$200,000</b>	
2020	Oxford Road	Replacement of 500' 8" sewer & 500' 6" water lines, 2 new manholes	\$100,000	yes
	Sewer Truck	1st Payment towards a new sewer truck (Paid over 3 years)	\$60,000	no
	White Dogwood Road	600' 2" water lines	\$40,000	no
		<b>TOTAL</b>	<b>\$200,000</b>	
2021	Oxford Road (cont.)	Replacement of 500' 8" sewer & 500' 6" water lines, 2 new manholes	\$125,000	yes
	Sewer Truck (cont.)	2nd Payment towards a new sewer truck (Paid over 3 years)	\$60,000	no
	Unidentified	Currently unknown projects	\$15,000	Unknown
		<b>TOTAL</b>	<b>\$200,000</b>	
2022	Reservoir	Surface refurbish, installation of telemetry	\$45,000	no
	Sewer Truck (cont.)	3rd Payment towards a new sewer truck (Paid over 3 years)	\$60,000	no
	New Engineering Study	Completion of a new engineering system improvement study	\$30,000	n/a
	County Road	Replacement of 1000' 2" water line with 6" water line	\$58,000	yes
	Unidentified	Currently unknown projects	\$7,000	Unknown
		<b>TOTAL</b>	<b>\$200,000</b>	
2023	Capital Plan Projects	Water/sewer projects as recommended in the new engineering study	\$180,000	yes
	Unidentified	Currently unknown projects	\$20,000	Unknown
		<b>TOTAL</b>	<b>\$200,000</b>	
<b>GRAND TOTAL</b>			<b>\$1,025,400</b>	

**Lake Junaluska Assembly Public Works**  
**COMPLETED CAPITAL PROJECT LIST 2014-2018**

**Attachment #3B**

Year(s)	Location	Scope	Project Cost	Incl in Eng Plans
2018	Atkins Loop	Replacement of hydrant, 1 new valve, water leak repair	\$8,000	no
	Cokesbury Circle (cont.)	Cokesbury sewer certification work	\$439	yes
	Dale Drive	Replacement of 200' 2" water line, 2 new valves	\$19,318	no
	Liberty Road (cont.)	Replacement of 1000' 8" sewer & 1000' 2" water lines, 6 new manholes, 3 new valves	\$29,720	yes
	Lundy Lane (cont.)	Sewer certification for completed Lundy Lane project	\$439	no
	Radio Read Meter Project (cont.)	Replaced 250 meters with electronic meters, installed half of Center area	\$40,000	yes
	Stuart Circle	Replacement 200' 8" sewer line	\$4,701	no
TOTAL			\$102,617	
2017	Cokesbury Circle (cont.)	Replacement of 500' 8" sewer & 600' 2" water lines, 8 new manholes, 3 new valves	\$1,870	yes
	Crescent Drive	Addition of 1 manhole	\$982	no
	Glenview Drive (cont.)	Replacement of 300' 8" sewer & 1000' 2" water lines, 3 new manholes, 2 new valves	\$18,432	yes
	Lundy Lane	Addition of 200' 8" sewer line, 2 new manholes	\$18,722	no
	Liberty Road	Replacement of 1000' 8" sewer & 1000' 2" water lines, 6 new manholes, 3 new valves	\$103,168	yes
	Memory Lane	Addition of 8' 3/4" water line	\$621	no
	North Lakeshore Drive (cont.)	Replacement of 400' 8" sewer line, 4 new manholes, 4 new valves, replaced 7 water service taps	\$74,962	yes
	Purcell Drive	Replacement of 30' 6" sewer line	\$1,875	no
	Radio Read Meter Project	Replaced 245 meters w/ electronic meters, Mtn & Hols Vill areas, programming	\$51,630	yes
	Siler Circle (cont.)	Replacement of 100' 8" sewer & 100' 2" water lines, 2 new manholes, 1 new valve	\$2,623	yes
	Tri Vista Drive	Sewer lift station rebuild	\$17,277	no
TOTAL			\$292,162	
2016	Cokesbury Circle (cont.)	Replacement of 500' 8" sewer & 600' 2" water lines, 8 new manholes, 3 new valves	\$108,812	yes
	Glenview Drive (cont.)	Replacement of 300' 8" sewer & 1000' 2" water lines, 3 new manholes, 2 new valves	\$32,734	yes
	Lambuth Meter	Replacement of 4" water meter	\$2,010	no
	North Lakeshore Drive	Replacement of 400' 8" sewer line, 4 new manholes, 4 new valves, replaced 7 water service taps	\$64,532	yes
	Siler Circle	Replacement of 100' 8" sewer & 100' 2" water lines, 2 new manholes, 1 new valve	\$23,632	yes
TOTAL			\$231,720	
2015	Carolina Road (cont.)	Replacement of 300' 8" sewer & 1125' 6" water lines, 2 new manholes, 1 new hydrant, 3 new valves	\$20,636	yes
	Chapel Drive	Replacement of 780' 8" sewer line, 2 new manholes	\$85,834	yes
	Cokesbury Circle	Replacement of 500' 8" sewer & 600' 2" water lines, 8 new manholes, 3 new valves	\$41,646	yes
	County Road	Replacement of 100' 2" water line, 3 new valves	\$2,675	no
	Glenview Drive/Littleton Road	Addition of new fire hydrant, 2 new valves	\$15,554	no
	Sequoia Drive	Replacement of 100' 3/4" water line	\$1,185	no
	S Lakeshore Drive/Hickory Hill Road	Replacement of 200' 6" sewer line	\$7,723	no
	Terrace Drive	Addition of 200' 4" water line, 2 new valves	\$4,390	no
TOTAL			\$175,253	
2014	Carolina Road	Replacement of 300' 8" sewer & 1125' 6" water lines, 2 new manholes, 1 new hydrant, 3 new valves	\$53,605	yes
	TOTAL		\$53,605	
GRAND TOTAL			\$855,357	

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Lake Junaluska Assembly Public Works  
FIVE-YEAR FISCAL PROJECTIONS

## Attachment #4

REVENUE: (Water/Sewer)							
Account Number	Account/Project Description	2019	2020	2021	2022	2023	2024
01-527-4460	Water Revenues	\$ 423,796.73	\$432,272.68	\$440,918.13	\$449,736.49	\$458,731.22	\$467,905.85
01-527-4465	Sewer Revenues	\$ 376,170.15	\$383,693.55	\$391,367.42	\$399,194.77	\$407,178.67	\$415,322.24
01-527-4470	Water Tap Revenues	\$ -					
01-527-4475	total	\$ -					
01-527-4480	Fire Protection Revenues	\$ -					
	TOTAL Water/Sewer REVENUES	\$ 799,966.88	\$ 815,966.23	\$ 832,285.55	\$ 848,931.26	\$ 865,909.89	\$ 883,228.09

Increased 2% /yr

Increased 8% /yr

EXPENSES: (Water/Sewer)								
Account Number	Account/Project Description	2019	2020	2021	2022	2023	2024	
01-527-6010	Wages & Salaries/F.T./Productive	\$ 183,807.71	\$ 186,564.83	\$ 189,363.30	\$ 192,203.75	\$ 195,086.80	\$ 198,013.11	Increase 1.5% /yr
01-527-6320	ADP Charges	\$ 420.00	\$ 432.60	\$ 445.58	\$ 458.95	\$ 472.71	\$ 486.90	Increase 3% /yr
01-527-6410	Social Security Contribution	\$ 14,061.29	\$ 14,272.21	\$ 14,486.29	\$ 14,703.59	\$ 14,924.14	\$ 15,148.00	Based on salaries
01-527-6430	Hospitalization Ins/TPA	\$ 12,939.20	\$ 13,586.16	\$ 14,265.47	\$ 14,978.74	\$ 15,727.68	\$ 16,514.06	Increase 5% /yr
01-527-6010	Call Out	\$ 10,956.00	\$ 11,065.56	\$ 11,176.22	\$ 11,287.98	\$ 11,400.86	\$ 11,514.87	Increase 1% /yr
01-527-6440	Long Term Disability	\$ 290.00	\$ 292.90	\$ 295.83	\$ 298.79	\$ 301.78	\$ 304.79	Increase 1% /yr
01-527-6460	Pension Contribution	\$ 12,866.54	\$ 13,059.54	\$ 13,255.43	\$ 13,454.26	\$ 13,656.08	\$ 13,860.92	Based on salaries
01-527-6470	Workers Compensation Insurance	\$ 2,200.00	\$ 2,600.00	\$ 2,700.00	\$ 2,800.00	\$ 2,900.00	\$ 3,000.00	Based on salaries
01-527-7110	Postage/Shipping	\$ 4,300.00	\$ 4,343.00	\$ 4,386.43	\$ 4,430.29	\$ 4,474.60	\$ 4,519.34	Increased 1% /yr
01-527-7240	Cellphone Expense	\$ 1,440.00	\$ 1,440.00	\$ 1,440.00	\$ 1,440.00	\$ 1,440.00	\$ 1,440.00	
01-527-7410	Education & Related Travel	\$ 1,200.00	\$ 1,400.00	\$ 1,400.00	\$ 1,400.00	\$ 1,400.00	\$ 1,400.00	
01-527-7440	Staff benefits	\$ 250.00	\$ 250.00	\$ 250.00	\$ 250.00	\$ 250.00	\$ 250.00	
01-527-7510	Photocopying-Fax	\$ 625.00	\$ 625.00	\$ 625.00	\$ 625.00	\$ 625.00	\$ 625.00	
01-527-7535	Administrative Support	\$ 13,860.00	\$ 14,067.90	\$ 14,278.92	\$ 14,493.10	\$ 14,710.50	\$ 14,931.16	Increased 1.5% /yr
01-527-7635	Contracted Computer Services	\$ 11,672.16	\$ 12,255.77	\$ 12,868.56	\$ 13,511.98	\$ 14,187.58	\$ 14,896.96	Increased 5% /yr
01-527-7640	Service Charge	\$ -						
01-527-7655	Wtr. Testing, Licenses & Fees	\$ 3,960.00	\$ 4,078.80	\$ 4,201.16	\$ 4,327.20	\$ 4,457.01	\$ 4,590.73	Increased 3% /yr
01-527-7656	Sewer License & Fees	\$ 1,500.00	\$ 1,545.00	\$ 1,591.35	\$ 1,639.09	\$ 1,688.26	\$ 1,738.91	Increased 3% /yr
01-527-7710	Insurance-Commercial Package	\$ 3,400.00	\$ 3,502.00	\$ 3,607.06	\$ 3,715.27	\$ 3,826.73	\$ 3,941.53	Increased 3% /yr
01-527-7720	Vehicle Insurance/Automobile	\$ 2,279.87	\$ 2,348.27	\$ 2,418.71	\$ 2,491.28	\$ 2,566.01	\$ 2,642.99	Increased 3% /yr
01-527-7810	Utilities-Electric	\$ 6,000.00	\$ 6,180.00	\$ 6,365.40	\$ 6,556.36	\$ 6,753.05	\$ 6,955.64	Increased 3% /yr
01-527-7820	Utilities-Propane Gas	\$ 1,200.00	\$ 1,236.00	\$ 1,273.08	\$ 1,311.27	\$ 1,350.61	\$ 1,391.13	Increased 3% /yr
01-527-7835	Water Utilities (Waynesville)	\$ 173,990.96	\$ 181,020.19	\$ 184,640.60	\$ 188,333.41	\$ 192,100.08	\$ 195,942.08	Increased 2% /yr
01-527-7840	Sewer Utilities	\$ 210,210.20	\$ 233,513.51	\$ 252,194.59	\$ 272,370.16	\$ 294,159.77	\$ 317,692.56	Increased 8% /yr
01-527-7915	Departmental Supplies	\$ 1,800.00	\$ 1,900.00	\$ 1,900.00	\$ 1,900.00	\$ 1,900.00	\$ 1,900.00	
01-527-7945	Uniforms	\$ 1,000.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	
01-527-7992	Gasoline	\$ 3,960.00	\$ 4,078.80	\$ 4,201.16	\$ 4,327.20	\$ 4,457.01	\$ 4,590.73	Increased 3% /yr
01-527-8030	Maint & Repairs-Equipment	\$ 750.00	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00	\$ 1,787.18	
01-527-8040	Maint & Repair Motor Vehicles	\$ 3,000.00	\$ 3,000.00	\$ 3,000.00	\$ 3,000.00	\$ 3,000.00	\$ 3,000.00	
01-527-8071	Water Maintenance & Repairs	\$ 16,560.00	\$ 17,000.00	\$ 17,000.00	\$ 15,000.00	\$ 7,500.00		
01-527-8075	Sewer Maintenance & Repairs	\$ 16,560.00	\$ 17,000.00	\$ 17,000.00	\$ 15,942.90	\$ 8,433.80		
01-527-9015	Leases	\$ 8,280.00	\$ 9,000.00	\$ 9,000.00	\$ 9,000.00	\$ 9,000.00	\$ 9,000.00	
01-527-9030	Water Equipment	\$ 5,400.00	\$ 5,562.00	\$ 5,728.86	\$ 5,900.73	\$ 6,077.75	\$ 6,260.08	Increased 3% /yr
01-527-9035	Sewer Equipment	\$ 3,400.00	\$ 3,502.00	\$ 3,607.06	\$ 3,715.27	\$ 3,826.73	\$ 3,941.53	Increased 3% /yr
01-527-9415	Capital Improvements	\$ 29,324.00						
01-527-9070	Office Rent	\$ 18,504.00	\$ 18,504.00	\$ 18,504.00	\$ 18,504.00	\$ 18,504.00	\$ 18,504.00	Increased 1% /yr
	Legal Expenses	\$ 18,000.00	\$ 18,000.00					
TOTAL Water/Sewer EXPENSES		\$ 799,966.93	\$ 811,226.03	\$ 821,470.06	\$ 848,370.57	\$ 865,158.55	\$ 882,284.20	
Department NET		(\$ 0.05)	\$ 4,740.20	\$ 10,815.49	\$ 560.69	\$ 751.34	\$ 943.89	

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