

# Water Workshop

Rate Adjustment Study

*April 5, 2022*



# The Why.

It's been 9 years since the last water rate adjustment.



# Why We are Having This Workshop

- **Have not adjusted rates in 9 years**
- **Built \$7MM water plant with no rate adjustment for bond payments**
  - \$2.4 MM came out of reserve fund
    - Now under-secured
- **Inflation increased 18.2% since 2016**
- **\$300,000 annually in pipe repairs**
- **Capital Expenses for next 5 years is estimated to be \$21,111,650.**



Water Needs	Project Cost
Relocate Pine St. utilities	\$3,200,000
Install AMI meters	\$3,915,000
Install 6" WL on 15 <sup>th</sup> St.	\$130,500
Install 6" WL at Carpenter/O'Connell	\$65,300
Install 6" WL at 10 <sup>th</sup> & O'Connell	\$195,750
Install 8" WL from 10 <sup>th</sup> - 15 <sup>th</sup> on Main St.	\$261,000
Install 12" WL at WP Malone	\$750,250
Install new backwash pond WTP	\$652,400
Install new water tower in Main St. pressure zone	\$5,750,000
Repaint the I-30 water tower	\$500,000

# The Next Five Years

Sewer Needs	Project Cost
Replace Riverside Dr. force main	\$521,900
Replace Ouachita Sewer lift station	\$782,900
WWTP - Treatment Improvements	\$4,386,650

Water Projects Cost: \$15,420,200

Sewer Projects Cost: \$ 5,691,450

**Total Cost: \$21,111,650**



# The Bottom 2%.

A look at our neighbors.



# A Look At Our Neighbors.

City	Water	Wastewater	Total
<b>Arkadelphia</b>	<b>\$12.62</b>	<b>\$15.11</b>	<b>\$27.73</b>
Malvern	\$22.70	\$18.00	\$40.70
Nashville	\$16.28	\$20.35	\$36.63
Camden	\$25.05	\$31.05	\$56.10
Hope	\$27.37	\$20.00	\$47.37
Hot Springs	\$18.04	\$37.69	\$55.73
Benton	\$18.90	\$23.60	\$42.50
Bryant	\$23.46	\$35.18	\$58.64

*Note: Information above depicts monthly bill for average user.  
Average user uses around 4,000 gallons per month.*



# The More You Know.

Water Rate Study.



# Water Rate Study – Our Goal

- **Completed with Crist Engineers.**
- **Goal was to determine needs of the Water Department in price structure modeling.**
  - How do we reach an annual point of financial buoyancy (break-even point)?
  - Since we have not adjusted rates in 9 years, how do we create a pricing strategy which will allow us to operate at a break-even point in 5 years?





# Water Rate Study – Modeling

- **Based on average user of 4,000 gallons per month.**
  - This is the industry standard.
  - 60% of our customers are within 4,000 gallon monthly use.
    - *Modeling for users who use over 4,000 gallons per month is also provided using standard increments.*
- **Wholesale customers were recognized as a unit.**



# Water Rate Study – Using The Model

- **Forecast budget expense to begin modeling price structure.**
  - Includes all costs of goods sold, operating costs, projected capital improvements & bond payments
- **Establish the average user monthly cost/revenue**
  - Average user is base plus 2,000 gallons or 4,000 gallons monthly
  - Provided predictability in rate modeling.
- **Determine wholesale unit pricing.**
  - We have 4 wholesale customers who purchase potable water from us.
    - These customers use their own distribution system to get our water to their customers.
- **Understand water utility revenues swings.**
  - Hot, dry summer = More water usage to water lawns/gardens, more revenue
  - Cool, wet summer = Less usage, less revenue



# Study Scenarios.

3 different roadmaps, same destination.



# Scenario 1.

Weather-dependent.



# Scenario 1

	2022	2023	2024	2025	2026
Base Rate Increase	\$6.00	10%	10%	10%	10%
Unit Rate Increase	0	10%	10%	10%	10%

## Scenario 1 - Breakdown

- **Lower base rate increase, higher percentage increase annually.**
- **Less dependent on base rate.**
  - More dependent weather and unit rate revenues.
- **Considered a riskier option.**
  - More subject to weather patterns which affect water usage/revenues.
- **More dependent on wholesale customers consumption.**

*Note: Current base rate is \$8.30.*



# Scenario 1 – 5 Year Plan Unit Pricing

	<b>Current</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>
Base Rate (first 2,000 gal.)	<b>\$8.30</b>	\$14.30	\$15.73	\$17.30	\$19.03	\$20.94
Average (4,000 gal. user)	<b>\$12.61</b>	\$18.61	\$20.47	\$22.52	\$24.77	\$27.25
Unit Rate (next 8,000 gal.)	<b>\$2.16</b>	\$2.16	\$2.37	\$2.61	\$2.87	\$3.16
Unit Rate (next 40,000 gal.)	<b>\$1.85</b>	\$1.85	\$1.93	\$2.24	\$2.46	\$2.71
Unit Rate (over 50,000 gal.)	<b>\$1.31</b>	\$1.31	\$1.44	\$1.58	\$1.74	\$1.92
Wholesale Customers	<b>\$2.00</b>	\$2.00	\$2.20	\$2.42	\$2.66	\$2.93

*Note: Base rate is set using 2,000 gallons per month.  
Average user uses around 4,000 gallons per month.*



# Scenario 2.

A balanced approach.



# Scenario 2

	2022	2023	2024	2025	2026
Base Rate Increase	\$12.00	6%	6%	6%	6%
Unit Rate Increase	0	6%	6%	6%	6%

## Scenario 2 - Breakdown

- **Moderate base rate increase, moderate percentage increase.**
- **Balanced approach.**
- **Predictable modeling.**
- **Less dependent on weather patterns for revenue.**
- **Wholesale customer neutral.**

*Note: Current base rate is \$8.30.*





# Scenario 2 – 5 Year Plan Unit Pricing

	<b>Current</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>
Base Rate (first 2,000 gal.)	<b>\$8.30</b>	\$20.30	\$21.52	\$22.81	\$24.18	\$25.63
Average (4,000 gal. user)	<b>\$12.61</b>	\$24.61	\$26.09	\$27.65	\$29.31	\$31.07
Unit Rate (next 8,000 gal.)	<b>\$2.16</b>	\$2.16	\$2.29	\$2.42	\$2.57	\$2.72
Unit Rate (next 40,000 gal.)	<b>\$1.85</b>	\$1.85	\$1.96	\$2.08	\$2.20	\$2.33
Unit Rate (over 50,000 gal.)	<b>\$1.31</b>	\$1.31	\$1.39	\$1.47	\$1.56	\$1.65
Wholesale Customers	<b>\$2.00</b>	\$2.00	\$2.12	\$2.25	\$2.38	\$2.52

*Note: Base rate is set using 2,000 gallons per month.  
Average user uses around 4,000 gallons per month.*



# Scenario 3.

Most predictable but expensive.



# Scenario 3

	2022	2023	2024	2025	2026
Base Rate Increase	\$15.50	4%	4%	4%	4%
Unit Rate Increase	0	4%	4%	4%	4%

## Scenario 3 - Breakdown

- **Higher base rate increase, lower percentage rate increase.**
- **Less dependent on unit rate.**
  - More dependent on base rate.
    - Most predictable scenario as a result.
- **Less subject to weather patterns.**
- **Less dependent on wholesale customer consumption.**
- **Greater Impact on lower water users than most.**

*Note: Current base rate is \$8.30.*



# Scenario 3 – 5 Year Plan Unit Pricing

	<b>Current</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>
Base Rate (first 2,000 gal.)	<b>\$8.30</b>	\$23.80	\$24.75	\$25.74	\$26.77	\$27.84
Average (4,000 gal. user)	<b>\$12.61</b>	\$28.11	\$29.24	\$30.41	\$31.62	\$32.89
Unit Rate (next 8,000 gal.)	<b>\$2.16</b>	\$2.16	\$2.24	\$2.33	\$2.42	\$2.52
Unit Rate (next 40,000 gal.)	<b>\$1.85</b>	\$1.85	\$1.92	\$2.00	\$2.08	\$2.16
Unit Rate (over 50,000 gal.)	<b>\$1.31</b>	\$1.31	\$1.36	\$1.42	\$1.47	\$1.53
Wholesale Customers	<b>\$2.00</b>	\$2.00	\$2.08	\$2.16	\$2.25	\$2.34

*Note: Base rate is set using 2,000 gallons per month.  
Average user uses around 4,000 gallons per month.*



# What About Wastewater?

Proposed adjustments & impact.



# Wastewater – Proposed Increase

	2022	2023	2024	2025	2026
Base Rate Increase	10%	5%	5%	5%	5%
Unit Rate Increase	10%	5%	5%	5%	5%

## Proposed Increase Breakdown

- **Due to style of processing used, very efficient and less costly to operate**
- **Rate increase addressed know operational needs and projected capital expenditures and bonding charges**
- **Monthly charge is associated with water consumption**

*Note: Current base rate is \$9.45.*



# Wastewater – 5 Year Plan Unit Pricing

	<b>Current</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>
Base Rate (first 2,000 gal.)	<b>\$9.45</b>	\$10.40	\$10.91	\$11.46	\$12.03	\$12.64
Average (4,000 gal. user)	<b>\$15.11</b>	\$16.62	\$17.78	\$21.76	\$22.84	\$23.99
Unit Rate (next 8,000 gal.)	<b>\$2.83</b>	\$3.11	\$3.27	\$3.43	\$3.60	\$3.78
Unit Rate (next 40,000 gal.)	<b>\$2.36</b>	\$2.60	\$2.73	\$2.86	\$3.01	\$3.16
Unit Rate (next 100,000 gal.)	<b>\$1.89</b>	\$2.08	\$2.18	\$2.29	\$2.41	\$2.53
Unit Rate (over 350,000 gal.)	<b>\$1.18</b>	\$1.30	\$1.36	\$1.43	\$1.50	\$1.58

*Note: Base rate is set using 2,000 gallons per month.  
Average user uses around 4,000 gallons per month.*



# Staff Recommendation

Our thoughts & why.





# Staff Recommendation

- **Staff recommends Scenario 2.**
  - Balanced between base and unit pricing.
  - Users can still lower monthly rate by limiting usage.
  - Will be a gradual increase for users over the next 5 years.
- **Scenario 1 is too weather-dependent.**
  - Relies heavily on the hope for hot, dry summers.
  - Unbalanced approach.
- **Scenario 3 hurts our lower water users.**
  - Requires huge increase in base rates.
  - Most predictable model, but too onus to recommend.
  - Unbalanced approach.



# Staff Recommendations – Further Explanation

- **Water Committee recommendation.**

- Met and moved forward with the recommendation of Scenario 1.
  - Lower front end increase.
  - Greater annual increase for users over the next 5 years.
  - Relying more on hot dry summers for revenue.

- **Staff recommends Scenario 2.**

- **Staff also recommends you look at rates annually.**

- These plans can be adjusted on a year-to-year basis.
- Example: Hot, dry summer with increased water usage in 2024, may lead to lower/no rate adjustment in 2025.



# Staff Recommendation – Total Impact on Average User

	Current	2022	2023	2024	2025	2026
Water	\$12.61	\$24.61	\$26.09	\$27.65	\$29.31	\$31.07
Wastewater	\$15.11	\$16.62	\$17.78	\$21.76	\$22.84	\$23.99
<b>Total</b>	<b>\$27.72</b>	<b>\$41.23</b>	<b>\$43.87</b>	<b>\$49.41</b>	<b>\$52.15</b>	<b>\$55.06</b>

Current

ARKADELPHIA WATER UTILITIES  
P.O. Box 495  
Arkadelphia, AR 71923  
Phone: (870) 246-5863  
Fax: (870) 246-9546

FIRST CLASS MAIL  
U.S. POSTAGE  
PAID  
ARKADELPHIA, AR 71923  
PERMIT NO. 4

SERVICES	PREV	PRESENT	USED	CHARGES
	1040	1080	4000 GL	
WTR				12.62
SEWAGE				17.94
SANITATION				15.00
TAX ON SANITATION				1.50
FSDW FEE				0.40
TAX ON WTR				1.27
<b>TOTAL DUE</b>				<b>48.73</b>

RETURN SERVICE REQUESTED

ACCOUNT	ACCOUNT	DUE DATE
9	101	4/10/2022

TOTAL DUE UPON RECEIPT: 49.73

RETURN THIS STUB WITH PAYMENT

JOHN EXAMPLE  
ARKADELPHIA, AR  
71923

June 2022

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P.O. Box 495  
Arkadelphia, AR 71923  
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U.S. POSTAGE  
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ARKADELPHIA, AR 71923  
PERMIT NO. 4

SERVICES	PREV	PRESENT	USED	CHARGES
	1040	1080	4000 GL	
WTR				\$24.61
SEWAGE				\$16.62
SANITATION				\$15.00
TAX ON SANITATION				\$1.50
FSDW FEE				\$0.40
TAX ON WTR				\$2.46
<b>TOTAL DUE</b>				<b>\$60.59</b>

RETURN SERVICE REQUESTED

ACCOUNT	ACCOUNT	DUE DATE
9	101	4/10/2022

TOTAL DUE UPON RECEIPT: \$60.59

RETURN THIS STUB WITH PAYMENT

JOHN EXAMPLE  
ARKADELPHIA, AR  
71923

Note: Monthly water bills include a \$15.00 fee for the Sanitation Department.



# Scenario 2 in Action – End of 2022 Comparison

City	Water	Wastewater	Total
<b>Arkadelphia</b>	<b>\$24.61</b>	<b>\$16.62</b>	<b>\$41.23</b>
Malvern	\$22.70	\$18.00	\$40.70
Nashville	\$16.28	\$20.35	\$36.63
Camden	\$25.05	\$31.05	\$56.10
Hope	\$27.37	\$20.00	\$47.37
Hot Springs	\$18.04	\$37.69	\$55.73
Benton	\$18.90	\$23.60	\$42.50
Bryant	\$23.46	\$35.18	\$58.64

*Note: Information above depicts monthly bill for average user.  
Average user uses around 4,000 gallons per month.*



**Thank you.**

**Let's Discuss.**

