bakertilly
MUNICIPAL ADVISORS

Sellersburg Municipal Water Utility

2024 Cost-of-Service Study
March 11, 2025

DRAFT

SELLERSBURG MUNICIPAL WATER UTILITY

Cost-of-Service Study

- Purpose of a Cost-of-Service Study
  - Allocate costs of operations to customer class based on usage characteristics
  - Develop rate structure to recover costs fairly and equitably
  - Base-Extra Capacity Allocation Method (AWWA M1 – *Principles of Water Rates, Fees and Charges*)
    - Cost functions or cost activity centers
      - Source of supply, treatment, transmission and distribution, billing and customer accounts, administrative
    - Works well with gov't or utility-based charts of accounts
    - Cost components or cost-causative factors
      - Average day demand, peak demands, customer meters and bills, direct fire protection
- Steps to Complete a Cost-of-Service Study
  - Consumer analysis
    - Detailed analysis of test year billings and usage by customer class (billing determinants)
      - Bills, usage by rate block, and number of meters by meter size (12 months ended 12/31/23)
      - Number of private hydrants and number of sprinklers by connection size
  - Develop revenue requirements (annual budget/cash needs)
    - How much money is required to operate the Utility
      - Operating expenses, debt payments, debt service reserve funding and capital improvements
      - Phase-in requirements over 5 periods ~ (2025-2029) to decrease the burden on customers

Cost-of-Service Study (Cont'd)

- Costs of Service development
  - Allocate total revenue requirements to cost activity center (O&M/Capital and DS)
    - Source of supply, treatment, transmission and distribution, billing and customers accounts, and admin.
  - Allocate costs by customer class and cost component
    - Residential, commercial, industrial, governmental
    - Average day demand (base), peak demand (max day/max hour)
    - Billing and collecting, meters and services
    - Direct fire protection service
- Rate design
  - Determine how to recover the appropriate level of costs from each customer class
  - Ensure full cost recovery and fairness in allocation of total costs of service to different customer classes
  - Seeks to avoid interclass subsidies and provide accurate price signals
    - **Current structure – minimum bill based on meter size, one flow rate for all classes with 6 declining blocks**
    - **Proposed structure – reduced number of flow blocks from 6 to 3**

Objectives When Setting Rates

- Revenue Stability
- Continuity in Rate Philosophy
- Fairness and Equity
- Cost-Based
- Ability to Pay
- Conservation
- Simplicity
- Feasibility
- Defendable
- Legal and Regulatory Constraints

COSS Overview – Base Model

- Residential gallons billed – represent ~53% of billed gallons (~71% exclusive of wholesale customers)
- Residential connections – represent ~94% of customers
- Capital improvement plan 5-year average - $855,000 ($4.3m - 2025-2029)
- SRF loan:
  - $17.6 million, 35-year term assumed @ 3.68% interest rate
- Across-the-board increase – 58%
  - Phase 1 – 15%, Phase 2 – 9%, Phase 3 – 8%, Phase 4 – 8%, Phase 5 – 8%
- **Cost-of-service study**
  - **Residential class – allocated 76% of allocated costs exclusive of wholesale customers and fire protection**
  - **Revenue shift to fire protection and Industrial and Contract customers (large water users)**

COSS Overview – Base Model (Cont'd)

Comparison of Fund Balances with Minimum Balances Required

	Fund Balances 12/31/2023	Minimum Balance Recommended	Variance
Operation and Maintenance Fund (1)	$1,637,494	$416,682	$1,220,812
Sinking Fund:			
Bond and Interest Account	-	-	-
Debt Service Reserve Account	597,456	597,456	-
Improvement Fund	249,348	192,300	57,048
Totals	**$2,484,298**	**$1,206,438**	**$1,277,860**

(1) Could move funds into improvement to reserve for priority improvements.

COSS Overview – Base Model (Cont'd)

Estimated Project Costs	
Estimated Construction Costs and Contingencies:	
Creston Water Main Replacement	$2,677,000
Raw Water Main	6,615,000
New 1 MG Storage Tank – North	3,500,000
Construction Contingency (10%)	1,279,200
Total Estimated Construction Costs and Contingencies:	**14,071,200**
Estimated Non-Construction Costs:	
Allowance for engineering	3,317,800
Allowance for legal, financial advisory, bond issuance costs, general project contingencies and rounding	200,000
Total Estimated Non-Construction Costs:	**3,517,800**
Total Estimated Project Costs	**$17,589,000**
Estimated Project Funding	
Proposed Waterworks Revenue Bonds of 2026	$17,589,000
Total Estimated Project Funding	**$17,589,000**

COSS Overview – Base Model (Cont'd)

Estimated Revenue Requirements:	2025	2026	2027	2028	2029
Operation and Maintenance Expenses	$2,574,600	$2,651,800	$2,731,400	$2,813,300	$2,897,700
Debt Service:					
Outstanding	574,300	576,700	578,700	580,200	586,300
Proposed	-	485,500	649,300	649,200	659,700
Debt Service Reserve	-	97,300	129,800	129,800	129,800
Payment in Lieu of Taxes	59,500	59,500	59,500	59,500	59,500
Replacements and Improvements	855,200	855,200	855,200	855,200	855,200
Replacements and Improvements Adjustment	(270,000)	(580,000)	(520,000)	(270,000)	-
Total Revenue Requirements	**3,793,600**	**4,146,000**	**4,483,900**	**4,817,200**	**5,188,200**
Less: Non-Operating Revenues and RMWC Receipts	(570,500)	(624,800)	(665,400)	(699,300)	(737,500)
Total Net Revenue Requirements	**$3,223,100**	**$3,521,200**	**$3,818,500**	**$4,117,900**	**$4,450,700**
Estimated Annual Revenues:					
Water Sales	$2,407,100	$2,407,100	$2,407,100	$2,407,100	$2,407,100
Fire Protection	395,400	395,400	395,400	395,400	395,400
Additional Revenues from Prior Phase Rate Increase	-	420,600	718,700	1,016,000	1,315,400
Available Revenues	**$2,802,500**	**$3,223,100**	**$3,521,200**	**$3,818,500**	**$4,117,900**
Additional Revenues Required	**$420,600**	**$298,100**	**$297,300**	**$299,400**	**$332,800**
Average Increase in Monthly Bill (1)	**$5.31**	**$3.67**	**$3.55**	**$3.84**	**$4.14**

(1) Based on a 5/8" residential meter at 4,000 gallons plus monthly fire hydrant surcharge based on a phased-in across-the-board increase. Actual rates will be calculated on the cost-of-service study.

COSS Overview – Base Model (Cont'd)

Comparison of Allocated Cost-of-Service with Revenue Under Adjusted Rates

Customer Class	Phase V Cost of Service	Revenue Under Existing Rates	Amount (%) Change	Amount ($) Change	Revenue Under Adjusted Rates	Variance Between Adj. Revenues and Cost of Service (%)	Variance Between Adj. Revenues and Cost of Service ($)
Residential	$2,766,883	$1,915,657	44.44%	$851,226	$2,612,509	(5.58)%	($154,374)
Commercial	663,640	397,707	66.87%	265,933	807,888	21.74%	144,248
Industrial	211,444	83,024	154.68%	128,420	211,364	(0.04)%	(80)
Governmental	9,709	10,757	(9.74)%	(1,048)	20,373	109.84%	10,664
Contract	557,100	352,005	58.26%	205,095	557,555	0.08%	455
Public Fire Protection	720,270	332,609	116.55%	387,661	720,165	(0.01)%	(105)
Private Fire Protection	78,754	62,787	25.43%	15,967	78,758	0.01%	4
Totals	**$5,007,800**	**$3,154,546**	**58.75%**	**$1,853,254**	**$5,008,612**	**0.02%**	**$812**

SELLERSBURG MUNICIPAL WATER UTILITY

COSS Overview – Base Model (Cont'd)

Current Rate Structure

Monthly Metered Consumption (rate per 1,000 gallons)			
First	2,500	Gallons	$8.27
Next	500	Gallons	6.80
Next	2,000	Gallons	5.62
Next	15,000	Gallons	4.51
Next	30,000	Gallons	3.33
Over	50,000	Gallons	2.56
Rural Membership Water Corp (per 1,000 gallons)			$2.74

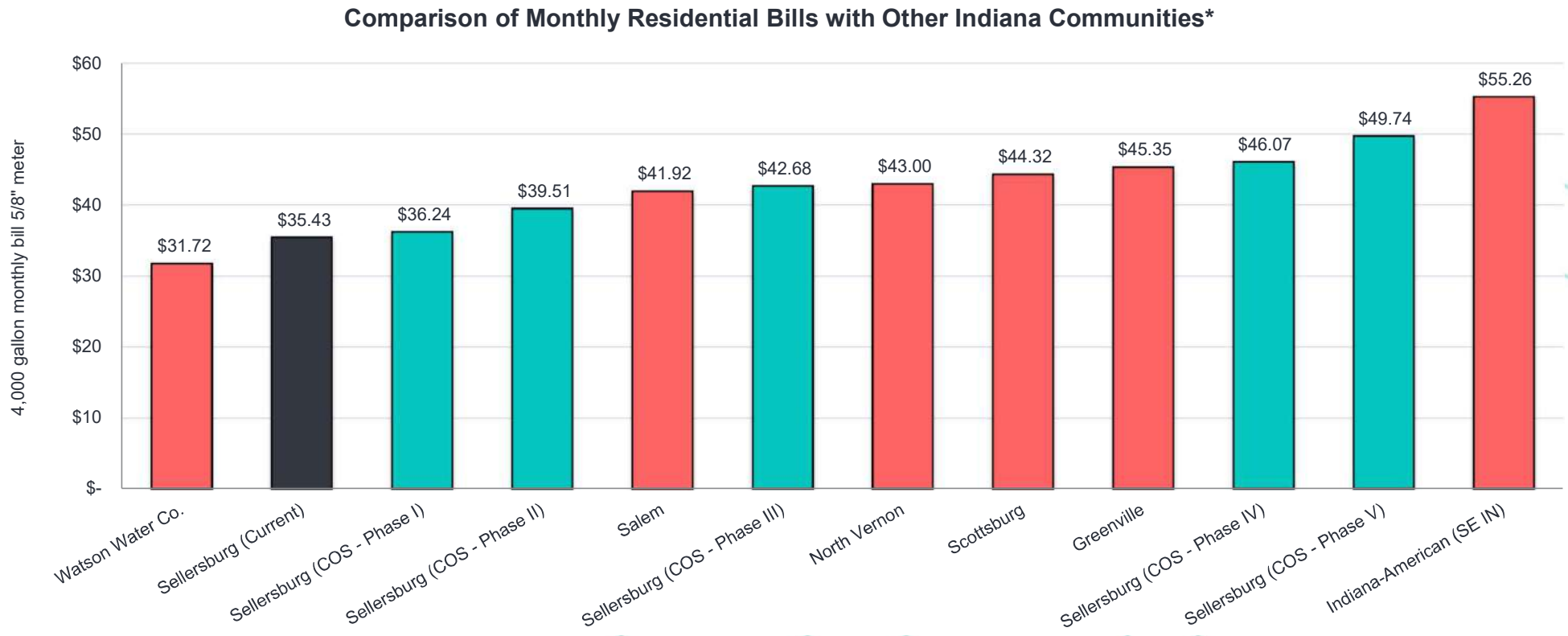
Minimum Charge (per month)		Gallons Allowed For Minimum	
5/8 - 3/4	inch meter	2,033	$16.81
1	inch meter	6,410	41.67
1 1/4	inch meter	13,800	75.00
1 1/2	inch meter	19,394	100.23
2	inch meter	37,254	160.42
3	inch meter	133,495	416.61
4	inch meter	221,000	640.63
6	inch meter	439,769	1,200.67
Fire Protection (surcharge per customer – per month)			$5.73

Modified Rate Structure

Monthly Metered Consumption (rate per 1,000 gallons)			(Phase V)
First	20,000	Gallons	$9.10
Next	30,000	Gallons	7.42
Next	50,000	Gallons	6.56
Rural Membership Water Corp (per 1,000 gallons)			$4.34

Minimum Charge (per month)		Gallons Allowed For Minimum	
5/8 - 3/4	inch meter	2,033	$18.50
1	inch meter	6,410	58.33
1 1/4	inch meter	13,800	125.58
1 1/2	inch meter	19,394	176.49
2	inch meter	37,254	310.02
3	inch meter	133,495	952.33
4	inch meter	221,000	1,526.36
6	inch meter	439,769	2,961.48
Fire Protection (surcharge per customer – per month)			$13.34

COSS Overview – Base Model (Cont'd)



*Amounts include monthly fire protection surcharges when applicable.

COSS Overview – Base Model (Cont'd)

Average Usage by Customer Class

	Residential	Commercial	Industrial	Government	Contract
Total Test Year Flow (1,000s of Gallons)	264,677	68,266	32,080	926	128,469
Divided by: Total Annual Bills	62,927	3,677	12	94	12
Average Usage by Class (1,000s of Gallons)	**4**	**19**	**2,673**	**10**	**10,706**

Change ($) in Average Monthly Bill at Each Phase of Proposed Adjustment (Based on Average Usage Above)

Customer Class	Current	Change ($) in Average Monthly Bill from Prior Rates					Total Cumulative Change ($)
		Phase I	Phase II	Phase III	Phase IV	Phase V	
Residential	$35.43	$0.81	$3.27	$3.17	$3.39	$3.67	$14.31
Commercial	104.19	31.50	12.27	11.87	12.69	13.72	82.05
Industrial	6,923.48	5,892.55	1,155.46	1,128.21	1,208.96	1,316.16	10,701.34
Governmental	63.60	12.42	6.87	6.65	7.11	7.69	40.74
Contract	29,334.44	3,211.80	4,496.52	3,425.92	2,783.56	3,211.80	17,129.60

Discussion Points

Discussion Points

- Lead service line inventory – in progress
  - Potential grant funding for eligible projects based on results
- Will need to prepare a preliminary engineering report (PER) for submittal to SRF
  - No later than April 1, 2025
  - Asset management plan – will need to be submitted on this date as well
    - Required for State Revolving Fund (SRF) loan program application and to be placed on the PPL (project priority list)
  - LSLR projects typically receive favorable financing through SRF
    - 0% loans plus principal only payback
    - Extended term maturity

Discussion Points (Cont'd)

- Rural Membership Water Corp. – price sensitivity concerns
  - Current $2.74 per 1,000 gallons
  - Phase 1 – $3.04, Phase 2 – $3.46, Phase 3 – $3.78, Phase 4 – $4.04, Phase 5 – $4.34
  - Other wholesale rates:
    - Stucker Fork: $2.54 per 1,000 gallons (2018)
    - Indiana-American: $3.6923 per 1,000 gallons (2024)

bakertilly

Andre J. Riley
Principal

P: +1 (317) 465-1537
E: andre.riley@bakertilly.com