SHERWOOD WASTEWATER RATE STRUCTURE FACT SUMMARY

Shawnee County Department contracted with Professional Engineering Consultants, P.A., to update the Sherwood Utility’s current wastewater user rate schedule based on the area’s historical and projected growth, future wastewater system needs, revenues, expenses, cash flow, and administrative costs. This rate update utilizes the previous Rate Structure Review and User Charge Development prepared in November 2000 as a base line and provided updates based on current and projected conditions for the period 2016 -2019.

Current rate charge implemented in 2000 and as maintained to present:

<table>
<thead>
<tr>
<th>Year</th>
<th>Base Charge¹</th>
<th>Volume Charge²</th>
<th>CURRENT RATE³ (based on 5,000 gallon usage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000 to Present</td>
<td>$11.26 / month</td>
<td>$4.69 / 1000 gal.</td>
<td>$27.68 / month</td>
</tr>
</tbody>
</table>

This basic user rate schedule served well after adoption in 2001. However, the following major issues have served to impact its continued effective implementation and have reduced the ability of the County to provide adequate day to day services and to maintain the long term viability of the system’s infrastructure;

- Inflation (bases on US Bureau of Labor Statistics) has driven up costs by approximately 37% since the initial adoption of the user rate schedule through 2015.
- Increased annual operational costs
- Deferred collection system maintenance and rehabilitation
- Inability to address new capital needs at the Wastewater Treatment Plant
- Future EPA mandated & unfunded nutrient (nitrogen and phosphorus) removal requirements
- Stagnant residential and commercial growth

To address these conditions and issues, Shawnee County Public Works and Audit-Finance staff reviewed the PEC update with the intent of establishing a fair and equitable rate structure which would address these conditions and issues and at the same time;

a. Keeping rates as low as practical for fixed income / low water usage customers
b. Get rates to inflationary adjusted level over a four-year period
c. Provide for inflationary increases after implementation.

Shawnee County and Audit-Finance proposes to recommend to the Board of County Commissioners the following rate structure changes for adoption and implementation beginning in 2016.

<table>
<thead>
<tr>
<th>Year</th>
<th>Base Charge¹</th>
<th>Volume Charge²</th>
<th>Equivalent Inflation - Adjusted Rate</th>
<th>PROPOSED RATE³ (based on 5,000 gallon usage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$12.95 / month</td>
<td>$5.16 / 1000 gal.</td>
<td>$38.88 / month</td>
<td>$31.01 / month</td>
</tr>
<tr>
<td>2017</td>
<td>$14.89 / month</td>
<td>$5.67 / 1000 gal.</td>
<td>$39.86 / month</td>
<td>$34.74 / month</td>
</tr>
<tr>
<td>2018</td>
<td>$17.13 / month</td>
<td>$6.24 / 1000 gal.</td>
<td>$40.87 / month</td>
<td>$38.97 / month</td>
</tr>
<tr>
<td>2019</td>
<td>$19.69 / month</td>
<td>$6.87 / 1000 gal.</td>
<td>$41.90 / month</td>
<td>$43.74 / month</td>
</tr>
</tbody>
</table>

¹ - Includes “fixed” costs such as debt, collection system operations, and the first 1,500 gallons of wastewater
² - Includes costs for treatment of the incoming wastewater at the Sherwood Treatment Plant and some collection system costs
³ - Rates based on Base Charge and Volume Charge for typical 5,000 gallons of usage per month
**Background Information**

- Lake Sherwood Area began being developed in 1960s
- 1980: Sherwood Improvement District (SID) owned/operated SRWWS
  - Two-cell lagoon
  - Area experiencing significant growth
  - Many subdivisions added to treatment district
- 1981: SRWWS transferred to Shawnee County via inter-local agreement (HR 81-1)
- SNCO contracts with COT for O&M/Billing

- Currently 4,200+ customers
  - Growth has leveled off and stagnated
  - O&M Costs keep increasing
- Several Facilities becoming aged
  - Rehab/Replacement Needs Increasing
- Completed PS Replacement and FM Project in 2011
  - Financed primarily with cash reserves
- TV Inspection Sewer Main Cleaning
  - Identified several areas of concern in collection system

- Current SRWWS Rates Among Lowest (16/21) of Eastern-Kansas communities
  - Range: $21.66-$57.15/5,000 gallons
  - Average: $33.93; Median: $35.87
Financial Overview

- **Revenues:**
  - $600,000-$670,000 avg. prior to 2000
  - $1.3M/year now

- **Expenses:**
  - Bond Payments: $700,000/year
  - COT O&M: $400,000/year avg.
  - Essentially Breaking Even with minimal maint.
  - No funds for upgrades or major maintenance

- **Last Rate Increase: 2000**
  - Current Rate: $11.26 (first 1,500 gallons) + $4.69/1,000 gallons = $27.68/5,000 gallons

  - Inflation Increase 2000-2015 = 37%
  - Equivalent Rate (2015) = $37.92/5,000 gallons

- **Bottom Line:** Additional Revenue Needed to Upgrade and Maintain an Adequate System
Sherwood Regional Wastewater System Challenges

- Many System Needs
  - Additional TV Inspection/Cleaning
  - Collection System Spot Repairs/Lining/Replacement
  - Pump Station Rehab and Replacements
  - Enhanced Nutrient Treatment Requirements (P&N)
  - $1M in Coll. Syst. Repairs/Maint. over next 5 years
  - $8-10M in Capital Project needs over next 10 years
  - Overall Increase in O&M Costs

- Limited Funds
Rate Study

- Completed by Professional Engineering Consultants (PEC)
  - Evaluated all aspects of SRWWS
  - WWTP, Pump Stations, Collection System
  - Developed Proposed Rate Structure

- Reviewed by Shawnee County Public Works and Audit-Finance Dept. Staff
  - Developed Alternate Rate Structure Scenarios

PEC Recommended Rates

- Base Charge: $20.00 (first 1,500 gallons)
- Capital Expense Surcharge: $10.00/month
- Volume Charge: $4.50-$5.50 (Varies)

- 2016-2017 ($45.75)
  - Base Charge: $20.00/month (1,500 gallons)
  - Capital Expense Surcharge: $10.00
  - Volume Charge: $4.50/1,000 gallons (>1,500 gal)

- 2018-2019 ($47.50)
  - Base Charge: $20.00/month (1,500 gallons)
  - Capital Expense Surcharge: $10.00
  - Volume Charge: $5.00/1,000 gallons (>1,500 gal)

- 2020-2021 ($49.25)
  - Base Charge: $20.00/month (1,500 gallons)
  - Capital Expense Surcharge: $10.00
  - Volume Charge: $5.50/1,000 gallons (>1,500 gal)
Shawnee County Public Works and Audit-Finance Dept. Review

- Took PEC Recommendations as a starting point
  - Get rates at least to inflationary level
  - Not all at once - incremental steps
- Developed Five Varying Alternatives
- Selected Scenario with following attributes:
  - Keeps rates lower for fixed-income/low water usage customers
  - Gets rates to inflationary-level costs over four-year period
  - Provides for inflationary increases after implementation
- Met with SID Board previously to discuss rates:
  - Not thrilled but understood the need
  - Want to protect homes and area environment
  - How much and when?

Shawnee County Public Works and Audit-Finance Recommended Rates

- Based Upon 5,000 gallons of usage
- 2016 ($31.01)
  - Base Charge: $12.95/month (1,500 gallons)
  - Capital Expense Surcharge: $0.00
  - Volume Charge: $5.16/1,000 gallons (<1,500 gal)
- 2017 ($34.74)
  - Base Charge: $14.89/month (1,500 gallons)
  - Capital Expense Surcharge: $0.00
  - Volume Charge: $5.67/1,000 gallons (<1,500 gal)
- 2018 ($38.97)
  - Base Charge: $17.13/month (1,500 gallons)
  - Capital Expense Surcharge: $0.00
  - Volume Charge: $6.24/1,000 gallons (<1,500 gal)
- 2019 ($43.74)
  - Base Charge: $19.69/month (1,500 gallons)
  - Capital Expense Surcharge: $0.00
  - Volume Charge: $6.87/1,000 gallons (<1,500 gal)
## Municipal Wastewater Rates Comparison
### Mechanical Treatment Plants

#### Assumed Monthly Usage (in increments of 1000 gal/mo)

<table>
<thead>
<tr>
<th>Community</th>
<th>Base Rate Rank</th>
<th>Base Rate</th>
<th>Incremental Volume Rate Charge</th>
<th>Normalized $/1000 gal</th>
<th>Incremental Rank</th>
<th>Total Monthly Bill @ 5000 gal/month</th>
<th>Overall Rank</th>
<th>Rates Effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basehor</td>
<td>23</td>
<td>$0.00 no base charge</td>
<td>$11.43 per 1,000 gal</td>
<td>$11.43</td>
<td>1</td>
<td>$57.15</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>Holton</td>
<td>1</td>
<td>$31.73 first 1,000 gal</td>
<td>$5.75 per 1,000 gal</td>
<td>$5.75</td>
<td>3</td>
<td>$54.73</td>
<td>2</td>
<td>2013</td>
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<tr>
<td>Lansing</td>
<td>12</td>
<td>$15.75 base charge</td>
<td>$4.75 per 750 gal</td>
<td>$6.33</td>
<td>2</td>
<td>$47.42</td>
<td>3</td>
<td>2014</td>
</tr>
<tr>
<td>Hiawatha</td>
<td>5</td>
<td>$22.03 base charge</td>
<td>$29.84 per 1,000 cubic feet</td>
<td>$3.99</td>
<td>15</td>
<td>$41.98</td>
<td>4</td>
<td>2013</td>
</tr>
<tr>
<td>Bonner Springs</td>
<td>15</td>
<td>$13.97 base charge</td>
<td>$5.32 per 1,000 gal</td>
<td>$5.32</td>
<td>4</td>
<td>$40.57</td>
<td>5</td>
<td>2014</td>
</tr>
<tr>
<td>Paola</td>
<td>3</td>
<td>$23.00 base charge</td>
<td>$0.33 per 100 gal</td>
<td>$3.30</td>
<td>19</td>
<td>$39.50</td>
<td>6</td>
<td>2014</td>
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<tr>
<td>Osawatomie</td>
<td>2</td>
<td>$26.08 base charge</td>
<td>$0.25 per 100 gal</td>
<td>$2.52</td>
<td>23</td>
<td>$38.58</td>
<td>7</td>
<td>2013</td>
</tr>
<tr>
<td>Garnett</td>
<td>11</td>
<td>$16.00 base charge</td>
<td>$4.25 per 1,000 gal</td>
<td>$4.25</td>
<td>9</td>
<td>$37.25</td>
<td>8</td>
<td>2004</td>
</tr>
<tr>
<td>Ottawa</td>
<td>6</td>
<td>$19.25 base charge</td>
<td>$2.64 per 100 cubic feet</td>
<td>$3.53</td>
<td>17</td>
<td>$36.90</td>
<td>9</td>
<td>2014</td>
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<tr>
<td>Lawrence</td>
<td>20</td>
<td>$10.78 base charge</td>
<td>$5.22 per 1,000 gal</td>
<td>$5.22</td>
<td>5</td>
<td>$36.88</td>
<td>10</td>
<td>2014</td>
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<tr>
<td>Independence</td>
<td>9</td>
<td>$18.52 base charge</td>
<td>$3.47 per 1,000 gal</td>
<td>$3.47</td>
<td>18</td>
<td>$35.87</td>
<td>11</td>
<td>2014</td>
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<tr>
<td>UG-KCK</td>
<td>16</td>
<td>$13.50 base charge</td>
<td>$3.05 per 100 cubic feet</td>
<td>$3.05</td>
<td>14</td>
<td>$33.89</td>
<td>12</td>
<td>2014</td>
</tr>
<tr>
<td>Pittsburg</td>
<td>7</td>
<td>$19.20 first cft</td>
<td>$2.67 per 100 cubic feet &gt; 200 cft</td>
<td>$3.69</td>
<td>16</td>
<td>$32.13</td>
<td>13</td>
<td>2012</td>
</tr>
<tr>
<td>Tonganoxie</td>
<td>14</td>
<td>$14.36 first 1,000 gal</td>
<td>$4.20 per 1,000 gal</td>
<td>$4.20</td>
<td>10</td>
<td>$31.16</td>
<td>14</td>
<td>2014</td>
</tr>
</tbody>
</table>

### Sherwood (Proposed 2016)
- **Sherwood (Current)**
- **Sherwood (Current)**
- **Sherwood (Current)**

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<tr>
<th>Community</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Coffeyville</td>
<td>10</td>
<td>$17.75 first 2,000 gal</td>
<td>$4.19 per 1,000 gal &gt; 2,000 gal</td>
<td>$4.19</td>
<td>11</td>
<td>$30.32</td>
<td>16</td>
<td>2014</td>
</tr>
<tr>
<td>Topeka</td>
<td>21</td>
<td>$9.12 base charge</td>
<td>$4.09 per 1,000 gal</td>
<td>$4.09</td>
<td>13</td>
<td>$29.57</td>
<td>17</td>
<td>2015</td>
</tr>
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</thead>
<tbody>
<tr>
<td>Sherwood</td>
<td>19</td>
<td>$11.26 first 1,500 gal</td>
<td>$4.69 per 1,000 gal &gt; 1,500 gal</td>
<td>$4.69</td>
<td>7</td>
<td>$27.68</td>
<td>18</td>
<td>2000</td>
</tr>
<tr>
<td>Fort Scott</td>
<td>8</td>
<td>$19.08 first 2,000 gal</td>
<td>$1.76 per 700 gal &gt; 2,300 gal</td>
<td>$2.35</td>
<td>20</td>
<td>$25.87</td>
<td>19</td>
<td>2014</td>
</tr>
<tr>
<td>Chanute</td>
<td>13</td>
<td>$14.64 base charge</td>
<td>$1.58 per 100 cubic feet</td>
<td>$2.11</td>
<td>21</td>
<td>$25.20</td>
<td>20</td>
<td>2012</td>
</tr>
<tr>
<td>Leavenworth</td>
<td>22</td>
<td>$9.08 first 200 ccf</td>
<td>$3.09 per 100 cubic feet</td>
<td>$3.13</td>
<td>12</td>
<td>$23.56</td>
<td>21</td>
<td>2013</td>
</tr>
<tr>
<td>Atchison</td>
<td>4</td>
<td>$22.87 first 5,000 gal</td>
<td>$4.50 per 1,000 gal &gt; 5,000 gal</td>
<td>$4.50</td>
<td>8</td>
<td>$22.87</td>
<td>22</td>
<td>2013</td>
</tr>
<tr>
<td>Sabetha</td>
<td>18</td>
<td>$11.36 base charge</td>
<td>$2.06 per 1,000 gal</td>
<td>$2.06</td>
<td>22</td>
<td>$21.66</td>
<td>23</td>
<td>2004</td>
</tr>
</tbody>
</table>

### Summary
- **Min:** $0.00
- **Max:** $31.73
- **Average:** $16.97

<table>
<thead>
<tr>
<th></th>
<th>$0.25</th>
<th>$21.66</th>
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<tr>
<td><strong>Min:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average:</strong></td>
<td>$4.23</td>
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</tr>
</tbody>
</table>
Rate vs. Time

Inflation Rate* calculated using the current Consumer Price Index published Monthly by the Bureau of Labor Statistics

Future Rate Growth Indexed to Annual Inflation %, as needed

Inflation impacts on Rates 2000 thru 2015

Current Rates Unchanged for 15 years

Shawnee County
Proposed Rate Adjustment

$27.68

$31.01

$34.74

$38.97

$43.74

YEARS

DOLLARS (£)
