Council Presentation

Proposed Solid Waste, Wastewater, Water Utility Rate Updates

November 19, 2019
Rate Update Working Team

- Public Works Staff – Solid Waste, Wastewater and Water
- Consultant On Board – NBS out of Davis, CA
- Public Works Utilities Rate Advisory Group Support
  - Allie Figura – City Manager’s Advisory Group/Educator
  - James Crockett – Educator
  - Michele Goedert – Commercial Property Manager
  - Sami Kader – Waterworks Engineers
  - Kenny Breedlove – Restaurateur and Real Estate Agent
  - Janice Cunningham - Consultant
  - 6 Meetings Plus – Overview, Rate 101, Financial Plans, Draft Rates, Input
- Draft Cost of Service Study
- City Manager Review
- Website and Social Media Posts
- Open House – November 4, 2019
Solid Waste Utility Rate Study

Redding Public Works Department
Solid Waste Demand in the City

- Fiscal Year 2018-19
  - **34,200 Customer Accounts** - 82% total residential: single and multi family accounts
  - Annual Waste Wheeler Pickups:
    - Over 1.5 million Grey (garbage) can pickups per year
    - Total over 3 million cans annually including Green Waste & Recycling
  - **Total Waste Collected: 93,700 Tons plus 34,400 Tons of Recyclables (Diversion)**
  - Annual Commercial Pickups Drop Boxes/Containers: 193,000
  - 1,534 Curb Miles of Street Sweeping (832 Commercial Miles and 702 Residential Miles)
  - Number of Vehicles Entering Facility: 121,562
Public Works – Solid Waste Rate Update

Historical Solid Waste Service Demands

<table>
<thead>
<tr>
<th>Year</th>
<th>Diversion</th>
<th>Tonnage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>26,996</td>
<td>76,839</td>
</tr>
<tr>
<td>2010-11</td>
<td>28,838</td>
<td>77,400</td>
</tr>
<tr>
<td>2011-12</td>
<td>25,142</td>
<td>75,182</td>
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<tr>
<td>2012-13</td>
<td>25,687</td>
<td>74,517</td>
</tr>
<tr>
<td>2013-14</td>
<td>25,001</td>
<td>76,129</td>
</tr>
<tr>
<td>2014-15</td>
<td>24,667</td>
<td>79,508</td>
</tr>
<tr>
<td>2015-16</td>
<td>25,146</td>
<td>83,147</td>
</tr>
<tr>
<td>2016-17</td>
<td>25,378</td>
<td>89,353</td>
</tr>
<tr>
<td>2017-18</td>
<td>28,153</td>
<td>88,213</td>
</tr>
<tr>
<td>2018-19</td>
<td>34,355</td>
<td>93,711</td>
</tr>
</tbody>
</table>
Solid Waste Operational Staff

• **91 Employees** (includes West Central Landfill):
  - 1 Deputy Director
  - 4 Public Works Supervisors
  - 4 Admin Staff
  - 11 Clerks/CSR’s
  - 53 Collection Drivers
  - 6 Transfer Truck Operators
  - 4 Building & Facilities Mechanics
  - 3 Hazardous Waste Specialists
  - 5 Heavy Equipment Operators
Fleet vehicles (104 Pieces)
  - 38 Collection Vehicles
    - 20 Residential
    - 9 Commercial
    - 4 Roll Off
    - 5 Transfer Trucks and 5 Trailers
  - 23 Admin & Support Vehicles
  - 15 Pieces of Yellow Iron
  - 1 Grinder and 1 Trommel
  - 26 Pieces at West Central
Financial Overview 2019-20
Snapshot...

- **Revenue** - $20.6 million
  - Rate Revenue - $17 Million
  - Fee Revenue (transfer station fees, etc.) - $2.1 Million
  - Other Revenue (Recycling, Compost Sales, Etc.) $1.5 Million

- **Expenditures** - $22.6 million

Redding Public Works Department
Public Works – Solid Waste Rate Update

Financial Plan

- 10-Year Financial Plan Developed:
  - FY 2018/19 Actuals & FY 2019/20 Budget used
  - Related AG Input Incorporated

<table>
<thead>
<tr>
<th>RATE REVENUE REQUIREMENTS SUMMARY</th>
<th>Budget</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sources of Solid Waste Funds</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rate Revenue Under Prevailing Rates</td>
<td>$16,905,190</td>
<td>$16,960,702</td>
</tr>
<tr>
<td>Fee Revenue</td>
<td>2,059,130</td>
<td>2,127,868</td>
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<tr>
<td>Other Revenue</td>
<td>1,547,160</td>
<td>1,552,180</td>
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<tr>
<td>Interest Earnings (in O&amp;M, Capital and Debt Reserves)</td>
<td>161,740</td>
<td>122,017</td>
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<tr>
<td><strong>Total Sources of Funds</strong></td>
<td>$20,673,220</td>
<td>$20,762,768</td>
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</tbody>
</table>

**Uses of Solid Waste Funds**

Operating Expenses:

- Solid Waste Administration | $2,532,420 | $2,896,710 | $2,779,980 | $2,868,580 | $2,960,200 |
- Residential Collection Expenses | 3,303,070 | 3,384,720 | 3,387,790 | 3,436,180 | 3,537,400 |
- Roll-Off Collection Expenses | 1,076,000 | 1,104,290 | 1,134,450 | 1,168,510 | 1,203,520 |
- Resource Recovery Expenses | 5,274,040 | 5,132,830 | 5,283,640 | 5,446,740 | 5,598,490 |
- Transfer Station Expenses | 2,681,350 | 2,822,780 | 2,812,560 | 2,898,000 | 2,985,970 |
- Hazardous Household Waste Expenses | 453,920 | 522,890 | 557,770 | 554,640 | 572,060 |
- Street Sweeping Expenses | 1,225,600 | 1,222,860 | 1,234,960 | 1,250,550 | 1,266,650 |
| **Subtotal: Operating Expenses** | $20,136,650 | $20,512,810 | $20,610,470 | $21,209,110 | $21,821,640 |
| **Other Expenditures:** |        |          |            |            |            |
| Rate-Funded Capital Expenses | 51,000 | 1,035,000 | 243,450 | - | - |
| **Subtotal: Other Expenditures** | $51,000 | 1,035,000 | 243,450 | - | - |
| **Total Uses of Solid Waste Funds** | $20,187,650 | $21,547,810 | $20,853,920 | $21,209,110 | $21,821,640 |
| **plus: Revenue from Rate Increases** | - | 286,329 | 1,168,333 | 1,788,027 | 2,432,755 |
| **Annual Surplus/(Deficit)** | $485,570 | ($498,714) | $1,179,063 | $1,574,710 | $1,750,248 |
| **Net Revenue Req't. (Total Uses less Non-Rate Revenue)** | $16,419,620 | $17,745,745 | $17,007,128 | $17,289,975 | $17,819,424 |
| **Total Rate Revenue After Rate Increases** | $16,905,190 | $17,247,031 | $18,186,191 | $18,864,685 | $19,569,673 |
| **Projected Annual Rate Increase** | 0.00% | 3.00% | 3.00% | 3.00% | 3.00% |
| **Cumulative Increase from Annual Rate Increases** | 0.00% | 3.00% | 6.00% | 9.27% | 12.55% |
Public Works – Solid Waste Rate Update

Cost of Service Highlights

- General – Complete Cost of Service Study
- Allocation to Residential, Commercial, Roll-Off

### Summary of Solid Waste Cost Allocations

<table>
<thead>
<tr>
<th>Acct.</th>
<th>Budget Category</th>
<th>Residential</th>
<th>Commercial</th>
<th>Roll-Off</th>
<th>Transfer Station</th>
<th>Basis for Allocation</th>
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</thead>
<tbody>
<tr>
<td>550</td>
<td>Admin.</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>Avg. % of Tonnage &amp; No. of Accounts</td>
</tr>
<tr>
<td>551</td>
<td>Residential Collection</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td>Customers served</td>
</tr>
<tr>
<td>552</td>
<td>Commercial Collection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Customers served</td>
</tr>
<tr>
<td>553</td>
<td>Roll-Off Collection</td>
<td></td>
<td></td>
<td>✔</td>
<td></td>
<td>Customers served</td>
</tr>
<tr>
<td>556</td>
<td>Resource Recovery</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>✔</td>
<td>Avg. of Resid/Comm Accts. &amp; Recy. tons</td>
</tr>
<tr>
<td>557</td>
<td>Transfer Station</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>Annual T.S. Tonnage</td>
</tr>
<tr>
<td>558</td>
<td>Household Hazardous Waste</td>
<td>✔</td>
<td></td>
<td>✔</td>
<td></td>
<td>6,886 Resid. vs. 186 Comm. HHW customers</td>
</tr>
<tr>
<td>559</td>
<td>Street Sweeping</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td>Miles of Streets Swept (46 Res./54 Comm.)</td>
</tr>
<tr>
<td>Less Non-Rate Rev.</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>Allocated As All Operating Costs</td>
<td></td>
</tr>
</tbody>
</table>

### Summary of Current vs. Proposed Rate Revenue

<table>
<thead>
<tr>
<th>Current vs. Proposed Budget</th>
<th>Residential</th>
<th>Commercial</th>
<th>Drop Box</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Current Rates (FY 2019/20 Budget)</td>
<td>$9,075,093</td>
<td>$6,038,564</td>
<td>$1,847,045</td>
<td>$16,960,702</td>
</tr>
<tr>
<td>Proposed Rates (FY 2019/20)</td>
<td>$9,041,985</td>
<td>$6,721,902</td>
<td>$1,705,638</td>
<td>$17,466,524</td>
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</table>

<table>
<thead>
<tr>
<th>Percent Change</th>
<th>Residential</th>
<th>Commercial</th>
<th>Drop Box</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Rates - % of Total</td>
<td>54%</td>
<td>30%</td>
<td>11%</td>
<td>100%</td>
</tr>
<tr>
<td>Proposed Rates - % of Total</td>
<td>52%</td>
<td>38%</td>
<td>10%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Redding Public Works Department
Solid Waste Utility – Key AG Input

- Key AG Input
  - Financial Plan
    - CIP – Do not Include Expansion Projects
      - Look to Bond Out Year Improvements or Reserves
    - Reserve Levels – Keep Current Levels at 90 Days Min Plus Capital (7% of Assets) and Rolling Stock ($1.7 Million)
      - May Fund Organics Recycling and Trash Amendment
  
- Rate Design
  - Maintain Level of Service
  - Green Waste Collection 2\textsuperscript{nd} Cart (approx. 6,800 carts) – Keep Current Rate
  - Cannabis Waste – Provide New Fee
## Public Works – Solid Waste Rate Update

### Proposed Residential Rate

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residential Wheeled Cart Monthly Rate</strong></td>
<td></td>
<td></td>
<td>3.00%</td>
<td>3.00%</td>
<td>3.00%</td>
<td>3.00%</td>
</tr>
<tr>
<td>45-Gal Container</td>
<td>$22.36</td>
<td>$23.16</td>
<td>$23.85</td>
<td>$24.57</td>
<td>$25.30</td>
<td></td>
</tr>
<tr>
<td>64-Gal Container</td>
<td>$23.37</td>
<td>$24.20</td>
<td>$24.93</td>
<td>$25.68</td>
<td>$26.45</td>
<td></td>
</tr>
<tr>
<td>96-Gal Container</td>
<td>$25.01</td>
<td>$25.90</td>
<td>$26.68</td>
<td>$27.48</td>
<td>$28.30</td>
<td></td>
</tr>
<tr>
<td>Additional Green Waste Container</td>
<td>$4.00</td>
<td>$4.00</td>
<td>$4.00</td>
<td>$4.00</td>
<td>$4.00</td>
<td></td>
</tr>
<tr>
<td>Landfill Monitoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Automated Cart Special Collection Rate (per cart)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45-gallon</td>
<td>$11.18</td>
<td>$11.58</td>
<td>$11.93</td>
<td>$12.28</td>
<td>$12.65</td>
<td></td>
</tr>
<tr>
<td>Same Day (50% of monthly fee)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Same Day (65% of monthly fee)</td>
<td>$14.53</td>
<td>$15.05</td>
<td>$15.50</td>
<td>$15.97</td>
<td>$16.45</td>
<td></td>
</tr>
<tr>
<td>64-gallon</td>
<td>$11.69</td>
<td>$12.10</td>
<td>$12.46</td>
<td>$12.84</td>
<td>$13.22</td>
<td></td>
</tr>
<tr>
<td>Same Day (50% of monthly fee)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Same Day (65% of monthly fee)</td>
<td>$15.19</td>
<td>$15.73</td>
<td>$16.20</td>
<td>$16.69</td>
<td>$17.19</td>
<td></td>
</tr>
<tr>
<td>96-gallon</td>
<td>$12.51</td>
<td>$12.95</td>
<td>$13.34</td>
<td>$13.74</td>
<td>$14.15</td>
<td></td>
</tr>
<tr>
<td>Same Day (50% of monthly fee)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Same Day (65% of monthly fee)</td>
<td>$16.26</td>
<td>$16.84</td>
<td>$17.34</td>
<td>$17.86</td>
<td>$18.40</td>
<td></td>
</tr>
</tbody>
</table>

1. Residential Service includes trash, recycling, and green waste containers.

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Redding Public Works Department
Public Works – Solid Waste Rate Update

Proposed Commercial/Roll-Off

- Cost of Service Based – Number of Lifts/Volume/Container

- Commercial – 11.3 percent cost **increase** overall
  - 13 container types (Front Load Compactors and Commercial Containers) – numerous pick up options
    - All will see between 4 and 9 percent increase.

- Roll-Off – 7.7 percent cost **decrease** overall
  - Roll-Off Compactors will see 0 to 6 percent increase
  - Roll Offs will see from 1 percent increase to 3 percent decrease
Public Works – Solid Waste Rate Update

Key Drivers to Increase

- Keeping up with Inflation
- Maintain Current Level of Service
- Maintain Existing Reserves for Regulatory Actions/Future Expansion
  - Trash Amendment to Water Quality Basin Plan
  - Organics Recycling
Charges from other Divisions (Internal Services)

**Notable Annual Charges:**
- $2,141,820 Fleet
- $963,970 Utility Customer Service
- $753,500 Streets (Road Maintenance)
- $498,290 Litter Abatement/Code Enforcement
- $86,660 NPDES
- $117,098 Storm Drain Trash Removal
Public Works – Solid Waste Rate Update

Revenue Requirements

Solid Waste Revenue Requirements vs. Revenue Under Existing and Recommended Rate Increases

Redding Public Works Department
10 City Comparison

10-City Regional Solid Waste Mo. Bill Comparisons (FY'19/20)
Single Family Residential (96 Gal including refuse, recycling & yard waste)

<table>
<thead>
<tr>
<th>City</th>
<th>Monthly Bill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fairfield</td>
<td>$22.66</td>
</tr>
<tr>
<td>Folsom</td>
<td>$25.01</td>
</tr>
<tr>
<td>Woodland</td>
<td>$25.50</td>
</tr>
<tr>
<td>Redding (Proposed)</td>
<td>$25.72</td>
</tr>
<tr>
<td>Vacaville</td>
<td>$25.19</td>
</tr>
<tr>
<td>Roseville</td>
<td>$34.41</td>
</tr>
<tr>
<td>Chico</td>
<td>$35.09</td>
</tr>
<tr>
<td>10 City Average</td>
<td>$40.55</td>
</tr>
<tr>
<td>Turlock</td>
<td>$41.70</td>
</tr>
<tr>
<td>Davis</td>
<td>$46.47</td>
</tr>
<tr>
<td>Tracy</td>
<td>$51.85</td>
</tr>
<tr>
<td>Lodi</td>
<td>$51.85</td>
</tr>
</tbody>
</table>

Average: $40.55

Redding Current: $25.72
Redding Proposed: $25.72

^ Indicates Private Solid Waste Service Provider
Wastewater Rate Study

Redding Public Works Department
Public Works – Wastewater Rate Update

Wastewater Utility Demand

- Wastewater Service Area
- Demand:
  - Expressed as Household Equivalents
    - HE = 240 gallons per day
  - Redding Service Area – 43,150 HEs
    - 54% Single Family
    - 21% Multiple Family
    - 25% Commercial/Industrial/Public Facility
Collection and Treatment

- **Collection System:**
  - 38,182 Connections – 92 Percent Residential
  - 435 miles of collection system pipe and 17 lift stations
  - Pretreatment Program – Food Service, Industrial, Vehicle Cleaning

- **Treatment:**
  - Clear Creek WWTP – 9.4 mgd (dry) to 40 mgd (wet)
  - Stillwater WWTP – 3.6 mgd (dry) to 14.4 mgd (wet)
Public Works – Wastewater Rate Update

Wastewater Utility Staffing

- 41 Employees – 4 Seasonal
- Wastewater Utility Manager

Collection System
- Supervisor, 14 collection maintenance staff, 2 temporary positions
  - Lift Station, Viewing, Cleaning, Construction

Two Wastewater Treatment Plants
- 2 supervisors, 12 operators, 3 laboratory technicians, 2 electrical technicians, 1 facility mechanic, and 2 seasonal landscape maintenance staff

Industrial Waste Pretreatment
- Supervisor, 3 industrial waste analysts

Wastewater Compliance
- 1 compliance coordinator
Public Works – Wastewater Rate Update

Collection System Needs

- **Replacement**
  - $24 million through 2025, $37 million to 2030
  - Magnolia St. Area – $3.5 million (11,600 feet)
  - Bechelli Ln.– $1.5 million (2,600 ft. replace)

- **I/I Control**
  - $9.3 million through 2025
  - Lake Blvd./Magnums – $2.5 million (23,000 ft. lining)

- **Large Diameter**
  - Westside Interceptor - $5.7 million (3,200 ft. new)
  - Lake Redding Interceptor - $7.8 million
  - Buenaventura Sewer - $5.1 million

- **Locust Lift Station - $1 million**
  - Upgrade/originally constructed in 1963
Public Works – Wastewater Rate Update

Treatment System Needs

- **Disinfection**
  - UV project at SWWTP – $6.3 million
  - UV project at CCWWTP– $9.9 million

- **Biosolids**
  - Current Masterplan update
    - Drying facility
    - Land application
      - Acquire land (+300 acres)
      - Annual maintenance

- **Maintenance**
  - SWWTP – $400,000/yr.
  - CCWWTP– $600,000/yr.
Redding Rate Pressures

- Regulatory - Effluent to Sacramento River
  - High Treatment Standards
  - Recent Treatment Plant Upgrades – ahead of the curve
  - Maintenance Levels - Large Nor Cal Target – CSPA, River Watch

- Land Use – 60 square miles, 90,000 population
  - City system dating to 1800s.
  - Large Collection System Inventory
  - Annexation – Inherited Old Pipes
  - 2 treatment plants to manage

Replacement Length Per Year, mi

<table>
<thead>
<tr>
<th>Year</th>
<th>Expiring Pipe</th>
<th>Recommended Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>2020</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2025</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>2030</td>
<td>3</td>
<td>7</td>
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<tr>
<td>2035</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>2040</td>
<td>5</td>
<td>9</td>
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<td>2045</td>
<td>6</td>
<td>10</td>
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<td>2050</td>
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<td>11</td>
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<td>2055</td>
<td>8</td>
<td>12</td>
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<td>2060</td>
<td>9</td>
<td>13</td>
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<td>2065</td>
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<td>14</td>
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<td>2070</td>
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<td>15</td>
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<tr>
<td>2075</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>2080</td>
<td>13</td>
<td>17</td>
</tr>
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</table>

5-year period ending

Redding Public Works Department
Public Works – Wastewater Rate Update

Total Capital Needs

Annual Sewer Capital Expenditures
Fiscal Years 2018/19 - 2029/30

Redding Public Works Department
Public Works – Wastewater Rate Update

Debt Service Pressure

Annual Sewer Debt Service
Fiscal Years 2018/19 - 2029/30

Fiscal Year Ending June 30

Redding Public Works Department
Public Works – Wastewater Rate Update

Financial Overview 2019-20

- Revenue - $30.7 million
  - Rate Revenue - $29.8 million
  - Fee Revenue - $0.9 million
- Expense - $31.6 million
10-Year Financial Plan Developed:

- FY 2018/19 Actuals & FY 2019/20 Budget used
- Results with Recommended Rate Increases

<table>
<thead>
<tr>
<th>Summary of Sources and Uses of Funds and Net Revenue Requirements</th>
<th>Budget FY 2018/19</th>
<th>Budget FY 2019/20</th>
<th>Budget FY 2020/21</th>
<th>Budget FY 2021/22</th>
<th>Budget FY 2022/23</th>
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<tbody>
<tr>
<td>Sources of Sewer Funds</td>
<td>$28,961,550</td>
<td>$29,056,653</td>
<td>$29,154,571</td>
<td>$29,255,304</td>
<td>$29,358,541</td>
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<tr>
<td>Rate Revenue Under Prevailing Rates</td>
<td>$15,143,480</td>
<td>$15,245,120</td>
<td>$15,960,750</td>
<td>$16,387,235</td>
<td>$16,825,237</td>
</tr>
<tr>
<td>Non-Rate Revenues</td>
<td>$7,666,240</td>
<td>$4,463,740</td>
<td>$4,463,740</td>
<td>$4,463,740</td>
<td>$5,788,071</td>
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<tr>
<td>Interest Earnings</td>
<td>(11,040)</td>
<td>$280,300</td>
<td>$195,210</td>
<td>$254,862</td>
<td>$249,204</td>
</tr>
<tr>
<td>Total Sources of Funds</td>
<td>$28,950,510</td>
<td>$29,327,761</td>
<td>$29,340,628</td>
<td>$29,501,095</td>
<td>$29,598,757</td>
</tr>
<tr>
<td>Uses of Sewer Funds</td>
<td>$22,459,720</td>
<td>$27,597,781</td>
<td>$25,708,118</td>
<td>$27,675,368</td>
<td>$27,943,573</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>$6,490,790</td>
<td>$1,629,981</td>
<td>$3,632,510</td>
<td>$1,825,727</td>
<td>$1,655,184</td>
</tr>
<tr>
<td>Debt Service</td>
<td>(1,162,266)</td>
<td>(2,379,013)</td>
<td>(3,652,934)</td>
<td>(4,986,799)</td>
<td>(4,986,799)</td>
</tr>
<tr>
<td>Rate-Funded Capital Expenses</td>
<td>(350,000)</td>
<td>(300,000)</td>
<td>(300,000)</td>
<td>(300,000)</td>
<td>(300,000)</td>
</tr>
<tr>
<td>Total Use of Funds</td>
<td>$22,820,760</td>
<td>$27,726,672</td>
<td>$25,822,061</td>
<td>$27,729,577</td>
<td>$28,003,356</td>
</tr>
</tbody>
</table>

1. Total Use of Funds less non-rate revenues and interest earnings. This is the annual amount needed from sewer rates.
Public Works – Wastewater Rate Update

Key AG Input

- Key AG Input
  - Financial Plan/Masterplan/CIP
    - I&I/Aging Infrastructure – Maintain
    - Cleaning/Viewing/Etc. Maintenance – Continue
    - Treatment Plant Staffing – Budget
    - Private Lateral Program – Do Not Continue
    - Reserve Levels – Maintain 90 Days plus Capital ($8M), Debt ($4M) and Rolling Stock
  - Rate Design:
    - Residential Rates – Fixed Rate (no variable component)
    - Commercial Food Prep Rate – Stay the Course
# Public Works – Wastewater Rate Update

## Proposed Rates

<table>
<thead>
<tr>
<th>SEWER RATE SCHEDULE</th>
<th>Current Rates&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Proposed Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FY 2019/20</td>
<td>FY 2020/21</td>
</tr>
<tr>
<td><strong>Annual Rate increases as shown in Financial Plan:</strong></td>
<td>4.00%</td>
<td>4.00%</td>
</tr>
<tr>
<td>Monthly Service Charges:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Family Dwelling ($/residence)</td>
<td>$54.86</td>
<td>$57.05</td>
</tr>
<tr>
<td>Multi Family Dwelling ($/unit)</td>
<td>$40.59</td>
<td>$42.21</td>
</tr>
<tr>
<td>Standard Commercial billed monthly ($/ccf)</td>
<td>$5.64</td>
<td>$5.87</td>
</tr>
<tr>
<td>Standard Commercial calculated annually ($/# HE)&lt;sup&gt;2&lt;/sup&gt;</td>
<td>$54.86</td>
<td>$57.05</td>
</tr>
<tr>
<td>Commercial Food Preparation billed monthly ($/ccf)</td>
<td>$11.28</td>
<td>$11.73</td>
</tr>
<tr>
<td>Commercial Food Preparation calculated annually ($/# HE)</td>
<td>$109.72</td>
<td>$114.11</td>
</tr>
</tbody>
</table>

---

[Graph showing projected annual rate increases](#)
Public Works – Wastewater Rate Update

Key Drivers to Increase

- Keep up with Inflation
- Maintain Collection System I&I Improvements – Pipe Replacement/Lining
- Maintain CSPA Driven Level of Service – Cleaning, Viewing, Etc.
- Meet Debt Service on Treatment Plant Upgrades
- Regulatory Impacts - Biosolids
Public Works – Wastewater Rate Update

10 City Rate Comparisons

10-City Regional Wastewater Bill Comparisons (Monthly)
Single Family Residential (FY 2019/20)

* Water and/or Wastewater services provided by multiple agencies. For Cities with a volumetric component, 800cf/month was used based on Average Winter Water Consumption.

Redding

Average
Water Utility – Demand

- **Water Supply** – approx. 41,000
  - Sac River – 21,000 Acre Feet
  - Spring Creek Conduit – 6,140 AF
  - ACID Contract – 4,000 AF
  - 17 Wells – Approx 10,000 AF

- **Customer Base:**
  - Service Area: City Limits +- 
  - 29,896 Customers

- **Water Use** – 24,700 Acre Feet
  - Sacramento River – 10,300 Acre Feet
  - Spring Creek (Whiskeytown) – 6,700 Acre Feet
  - Enterprise and Cascade Wells – 7,700 Acre Feet
Public Works – Water Utility Rate Update

Water Utility – Demand

2018 WATER DELIVERY

Redding Public Works Department
Public Works – Water Utility Rate Update
Water – Historical Demand

TOTAL YEARLY CONSUMPTION

YEAR

ACRE FEET

1995 1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017

0 5,000 10,000 15,000 20,000 25,000 30,000 35,000
Public Works – Water Utility Rate Update

Treatment and Distribution

• **Treatment**
  • Foothill (42%) and Buckeye (27%)
  • 17 Wells – (31%)
  • 11 Pump Stations and 12 Reservoirs
  • **Staffing:** Plant Manager
    • 11 Full-Time Employees
    • Facility Staffed 24/7

• **Distribution:**
  • 555 miles of water main
  • 29,896 Service Connections
  • 4,700 Fire Hydrants, 13,000 Valves
  • 2,800 Back Flow Assemblies
  • **Staffing** – Supervisor
    • 16 Full-Time Employees
Production Needs

- **Water Treatment** - $6.2 Million
- **Wells – Enterprise and Cascade**
  - 2020-2025:
    - One New Well - $2.1 million
    - Well Head Treatment - $10 million
- **Pump House 1**
  - Begin Construction 2025(?) ~ $23,500,000
- **Storage**
  - 2020 to 2030 – $10.2 million
    - Replace Buckeye Older Reservoir (circa 1949)
    - Replace Hill 900 Reservoirs (circa 1959)
- **Pressure Management – Booster Pumps/PRV**
  - East/West Water Management - Cypress PS ($1 Million)
Distribution System Needs

- **Key Pipe Replacement Projects:**
  - **Current Age Related Replacements**
    - Bechelli Lane - $2 million
  - **Current Growth/Capacity Projects**
    - Lake Blvd. (2) - $7 million

- **Projected Costs**
  - 2020 to 2025 Current Needs
    - $18 million total
    - $13 million for aging pipe replacement
  - 2025 to 2035
    - $60 million total
    - $50 million for aging pipe replacement
Distribution System Needs

Aging pipe replacement program recommendation per Master Plan

![Graph showing recommended schedule for pipe replacement over decades with associated costs.](image)
Public Works – Water Utility Rate Update

Capital Pressure

Annual Capital Improvement Program Expenditures
Fiscal Years 2019/20 - 2029/30

Redding Public Works Department
Public Works – Water Rate Update

Financial Overview 2019-20

- **Revenue** - $23.5 million
  - Rate Revenue - $16.4 million
  - Fee Revenue - $1.0 million

- **Expenditures** - $24.2 million

- **System Improvement** - $4.8 million
- **Interest on Long-term Construction Loans** - $0.2 million
- **Principal on Long-term Construction Loans** - $0.6 million
- **Equipment, Chemicals, Testing, Vehicles** - $3.3 million
- **Billing, Building Maint, IT, Fleet, ILMS, GIS, City Support, ET** - $4.2 million
- **Personnel and Benefits** - $2.9 million
- **Electricity** - $2.1 million
- **Retirement** - $0.7 million

Redding Public Works Department
10-Year Financial Plan was Developed:
- FY 2018/19 Actuals & FY 2019/20 Budget used

### Summary of Sources and Uses of Funds and Net Revenue Requirements

<table>
<thead>
<tr>
<th></th>
<th>Budget</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sources of Water Funds</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rate Revenue Under Prevailing Rates</td>
<td>$22,557,780</td>
<td>$22,866,991</td>
</tr>
<tr>
<td>Other Operating Revenue</td>
<td>508,490</td>
<td>565,793</td>
</tr>
<tr>
<td>Interest Earnings</td>
<td>118,530</td>
<td>415,435</td>
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<tr>
<td><strong>Total Sources of Funds</strong></td>
<td>$23,184,800</td>
<td>$23,848,219</td>
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<tr>
<td><strong>Uses of Water Funds</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>$15,095,122</td>
<td>17,203,674</td>
</tr>
<tr>
<td>Debt Service</td>
<td>342,061</td>
<td>355,895</td>
</tr>
<tr>
<td>Rate-Funded Capital Expenses</td>
<td>-</td>
<td>2,546,505</td>
</tr>
<tr>
<td><strong>Total Use of Funds</strong></td>
<td>$15,437,183</td>
<td>$20,106,074</td>
</tr>
<tr>
<td><strong>Surplus (Deficiency) before Rate Increase</strong></td>
<td>$7,747,617</td>
<td>$3,742,144</td>
</tr>
<tr>
<td>Additional Revenue from Rate Increases</td>
<td>-</td>
<td>3,894,154</td>
</tr>
<tr>
<td><strong>Surplus (Deficiency) after Rate Increase</strong></td>
<td>$7,747,617</td>
<td>$7,626,299</td>
</tr>
<tr>
<td><strong>Projected Annual Rate Increase</strong></td>
<td>0.00%</td>
<td>4.00%</td>
</tr>
<tr>
<td><strong>Cumulative Rate Increases</strong></td>
<td>0.00%</td>
<td>4.00%</td>
</tr>
<tr>
<td><strong>Net Revenue Requirement</strong></td>
<td>$14,810,163</td>
<td>$19,124,847</td>
</tr>
<tr>
<td><strong>Total Rate Revenue (Current &amp; Add’l.)</strong></td>
<td>$22,557,780</td>
<td>$26,751,145</td>
</tr>
<tr>
<td><strong>Debt Coverage With Rate Increase</strong></td>
<td>23.6</td>
<td>23.6</td>
</tr>
</tbody>
</table>

1. Total Use of Funds less non-rate revenues and interest earnings. This is the annual amount needed from water rates.
Public Works – Water Utility Rate Update

Water Utility – Key AG Input

- **Financial Plan**
  - **Capital Program**
    - Source Capacity – Increase
    - Pipe Replacement – Continue
    - Pump House 1 Replacement – Continue
    - Foothill Water Treatment Plant – Continue
  - **Operations**
    - Staffing – maintain Proforma – evaluate biennially
  - **Reserve Levels**
    - Operational Reserve – 120 Days
    - Capital Reserve – 5% of expenses
    - Pump House 1 – 6% of revenue
    - Rolling Stock - $500K min

- **Rate Design**
  - Fixed vs. Variable – Adjust to Actual? – Not Now
  - Drought Rate – Use Reserves
### Public Works – Water Utility Rate Update

#### Cost of Service

<table>
<thead>
<tr>
<th>Classification Component’s</th>
<th>Fixed and Variable Cost Allocations</th>
<th>Alternative #1 - Current Rate Design (40% Fixed / 60% Variable)</th>
<th>Alternative #2 - Net Revenue Requirements (45% Fixed / 55% Variable)</th>
<th>Alternative #3 - Net Revenue Requirements (64% Fixed / 36% Variable)</th>
<th>Alternative #4 - Net Revenue Requirements (71% Fixed / 29% Variable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commodity-Related Costs</td>
<td>Variable</td>
<td>$13,986,486 60.0%</td>
<td>$12,820,945 55.0%</td>
<td>$8,391,892 36.0%</td>
<td>$6,760,135 29.0%</td>
</tr>
<tr>
<td>Capacity-Related Costs</td>
<td>Fixed</td>
<td>6,859,894 29.4%</td>
<td>8,025,434 34.4%</td>
<td>12,454,488 53.4%</td>
<td>14,086,245 60.4%</td>
</tr>
<tr>
<td>Customer-Related Costs</td>
<td>Fixed</td>
<td>2,464,430 10.6%</td>
<td>2,464,430 10.6%</td>
<td>2,464,430 10.6%</td>
<td>2,464,430 10.6%</td>
</tr>
<tr>
<td>Net Revenue Requirement</td>
<td>$23,310,810 100%</td>
<td>$23,310,810 100%</td>
<td>$23,310,810 100%</td>
<td>$23,310,810 100%</td>
<td>$23,310,810 100%</td>
</tr>
</tbody>
</table>

#### Residential Water Bill Comparison

<table>
<thead>
<tr>
<th>Current vs. Proposed 2019/20 Rates (5/8” Meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFR Bill - Current Rates</td>
</tr>
<tr>
<td>SFR Bill - Alt. #1 (40% Fixed)</td>
</tr>
<tr>
<td>SFR Bill - Alt. #2 (45% Fixed)</td>
</tr>
<tr>
<td>SFR Bill - Alt. #3 (68% Fixed)</td>
</tr>
<tr>
<td>SFR Bill - Alt. #4 (71% Fixed)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monthly Bill</th>
<th>Average Winter Bill (8 ccf/mo.)</th>
<th>Average Annual Bill (21 ccf/mo.)</th>
<th>Average Summer Bill (36 ccf/mo.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>$32.57 $33.12 $34.69</td>
<td>$51.10 $51.30 $51.41</td>
<td>$72.47 $72.27 $70.53</td>
</tr>
<tr>
<td>21</td>
<td>$40.62 $42.85</td>
<td>$51.10 $51.30 $51.41</td>
<td>$72.47 $72.27 $70.53</td>
</tr>
<tr>
<td>36</td>
<td>$63.86 $61.61</td>
<td>$63.86 $61.61</td>
<td>$63.86 $61.61</td>
</tr>
</tbody>
</table>
## Public Works – Water Utility Rate Update

### Proposed Rates

<table>
<thead>
<tr>
<th>Water Rate Schedule</th>
<th>Current Rates</th>
<th>FY 2019/20</th>
<th>FY 2020/21</th>
<th>FY 2021/22</th>
<th>FY 2022/23</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fixed Service Charge</strong></td>
<td></td>
<td>4.00%</td>
<td>4.00%</td>
<td>4.00%</td>
<td>4.00%</td>
</tr>
<tr>
<td>Monthly Fixed Service Charge - Standard Meters:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5/8 inch</td>
<td>$21.17</td>
<td>$22.15</td>
<td>$23.04</td>
<td>$23.96</td>
<td>$24.92</td>
</tr>
<tr>
<td>3/4 inch</td>
<td>$28.04</td>
<td>$29.61</td>
<td>$30.79</td>
<td>$32.02</td>
<td>$33.30</td>
</tr>
<tr>
<td>1 inch</td>
<td>$41.77</td>
<td>$44.52</td>
<td>$46.30</td>
<td>$48.15</td>
<td>$50.08</td>
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<tr>
<td>1.5 inch</td>
<td>$76.09</td>
<td>$81.79</td>
<td>$85.06</td>
<td>$88.47</td>
<td>$92.01</td>
</tr>
<tr>
<td>2 inch</td>
<td>$117.27</td>
<td>$126.52</td>
<td>$131.59</td>
<td>$136.85</td>
<td>$142.32</td>
</tr>
<tr>
<td>3 inch</td>
<td>$227.10</td>
<td>$245.81</td>
<td>$255.64</td>
<td>$265.87</td>
<td>$276.50</td>
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<tr>
<td>4 inch</td>
<td>$350.66</td>
<td>$380.00</td>
<td>$395.20</td>
<td>$411.01</td>
<td>$427.45</td>
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<tr>
<td>6 inch</td>
<td>$693.88</td>
<td>$752.77</td>
<td>$782.88</td>
<td>$814.19</td>
<td>$846.76</td>
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<tr>
<td>8 inch</td>
<td>$1,105.75</td>
<td>$1,200.08</td>
<td>$1,248.08</td>
<td>$1,298.01</td>
<td>$1,349.93</td>
</tr>
</tbody>
</table>

### Commodity Charges for All Water Consumed

| Uniform Rate | $1.43 | $1.41 | $1.47 | $1.53 | $1.59 |

### Projected Increases to Rate Revenue

- 2020: 4.00%
- 2021: 4.00%
- 2022: 4.00%
- 2023: 4.00%
- 2024: 6.50%
- 2025: 6.50%
- 2026: 6.50%
- 2027: 6.50%
- 2028: 10.00%
- 2029: 10.00%
- 2030: 10.00%

Fiscal Year Ending June 30
Public Works – Water Rate Update

Key Drivers to Increase

- Quality/Reliability
- Keep up with Inflation - Operations
- Add Source Capacity - Wells
- Maintaining Pipe Replacement Program
- Maintaining PH1 and Foothill Upgrades
- Regulatory
  - SB 606 & AB 1668 – Urban Water Use Targets/Conservation
  - PFAS & UCMR 4 Testing – Unregulated Contaminates
Public Works – Water Utility Rate Update

Required Revenue

Water Revenue Requirements vs. Revenue Under Existing and Increased Rates
Recommended Rate Scenario

Fiscal Year Ending June 30

2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

- Reserve Funded Capital Expenses
- Rate Funded Capital Expenses
- Rolling Stock Expenses
- Debt Service
- O&M Expenses
- Revenues under Existing Rates
- Revenues under Increased Rates
Nor Cal Comparisons

Nor-Cal Regional Water Bill Comparisons (Monthly)
Single Family Residential (5/8" Meter & 21 ccf/month)

21 ccf/month is based on Average Annual Water Consumption

- Anderson: $25.41
- Red Bluff: $31.63
- Bella Vista WD: $43.30
- Redding (Current): $51.10
- Redding (Proposed 4%): $51.80
- Yreka: $63.74
- Nor-Cal Average: $67.04
- Eureka: $84.66
- Shasta Lake: $86.17
- Arcata: $150.29

Redding

Average
Public Works – Water Utility Rate Update

10 City Comparisons

10-City Regional Water Bill Comparisons (Monthly)
Single Family Residential (3/4" Meter & 21 ccf/month)*

* The 21 ccf/month based on Average Annual Water Consumption.
** Water and/or Wastewater services provided by multiple agencies.

Redding

Average

Monthly Bill

Tracy $41.20
Folsom $42.10
Lodi $46.84
Redding (Current) $51.10
Redding (Proposed 4%) $51.72
Turlock $51.80
Roseville $52.51
Vacaville $54.56
10 City Average $59.92
Fairfield $63.94
Redding $118.28
Davis $78.39
Woodland $131.49
Solid Waste, Wastewater, Water

Combined Utility Comparisons

Redding Public Works Department
Nor Cal Comparisons

Nor-Cal Regional Bill Comparisons (Monthly)
Single Family Residential (Water, Wastewater & Solid Waste)
10 City Comparison

10-City Regional Bill Comparisons (Monthly)
Single Family Residential (Water, Wastewater & Solid Waste)

- Total Solid Waste (96 gal.)
- Total Wastewater (8 ccf/month)
- Total Water (21 ccf/month)

* Water and/or Wastewater services provided by multiple agencies.

Redding

Average

$109.79
$120.75
$127.05
$129.52
$130.97
$134.75
$137.16
$141.45
$152.44
$153.58
$188.30
$211.99
$219.36

Chico *
Folsom *
Tracy
Roseville
Redding (Current)
Redding (Proposed %)
Turlock
Fairfield
Vacaville
10 City Average
Lodi
Davis
Woodland
Alternatives to Increases…?

- CIP – Slow Down on Pipe Replacement – Risky…
  - Water Main Breaks and Sanitary Sewer Overflows
  - Source Water – PH 1 and Wells
  - No CIP in Solid Waste

- Level of Service
  - Regulatory Induced Maintenance Levels
  - Improved Distribution and Treatment Levels of Service
  - MSW (Gray) – Code Requires Weekly Pickup
  - Green/Blue Alternate Weeks – Diversion Goals, Etc.

- Contract Services to Private Sector
  - Privatization Study - City Services Compare Favorably
  - Other Related Costs Covered – Street Sweeping, Litter Abatement, Pavement Impact Mitigation, Water Quality

- More Risk with Using Reserves – Future Rate Shock…
Public Works – Rate Update

Next Steps

- Council ActionTonight
  - Approve Prop 218 Notice of Proposed Rate Increase
  - Set a Public Hearing for February 4, 2020
  - Mail Protest Notices to property owners and tenants

- February 4, 2020 - Hold Public Hearing and Tally Protests