Utility Rate Setting

AWC Series Webinars
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What Will You Learn Today?

• **Purpose** – to provide policy-level framework on utility rate setting

• **Goal** – to assist city policy-makers in understanding and setting sustainable utility rates for future generations

• **Outcome** – to increase the number of sustainable utilities among cities
National Trends

2010 AWWA Water & Wastewater Rate Survey

**Annual Change in Rates, 1996-2010**
- Single Family Residence @ 1,000 cubic feet
  - WATER: 4.66%
  - WASTEWATER: 4.90%
  - CPI: 2.49%

**Change in Rates, 2008 to 2010**
- Single Family Residence @ 1,000 cubic feet
  - WATER: 13.00%
  - WASTEWATER: 14.16%
  - CPI: 0.01%
Washington State Trends

AWC 2012 Tax & User Fee Survey

Annual Change in Rates, 2006-2012
Single Family Residence @ 1,000 cubic feet

Annual Change in Rates, 2010-2012
Single Family Residence @ 1,000 cubic feet
Average Residential Rates

AWC Tax & User Fee Survey, Part IV

Average Residential Monthly Rate
(Water use @ 1,000 cf or 7,480 gal)

Water & Sewer:
2006 = $58.19
2008 = $70.70
2010 = $73.03
2012 = $80.80
What is Affordable?

- US EPA sets guidelines for federal revolving loan programs
- Compare to Median Household Income
- Water = 1.5% MHI
- Sewer = 2.0% MHI
Dept. of Ecology MHI Table

**Sewer Samples**

- **Tieton MHI = $32,056, Sewer @ 2% = $53.43**
- **Tukwila MHI = $44,271, Sewer @ 2% = $73.79**
- **Tumwater MHI = $60,585, Sewer @ 2% = $100.98**
- **Walla Walla MHI = $39,397, Sewer @ 2% = $65.66**
Historic Perspective

DEMAND
• More houses
• More bathrooms
• More appliances

FUNDING
• Federal grants
• Low-moderate rates
• Public impression that clean water is inexpensive
Current Outlook

DEMAND
• Per capita – decreasing
• New homes – decreased
• Repair & replacement - increasing

FUNDING
• Loans not grants
• Existing debt
• System replacement
• Upward pressure on rates
How To Thrive

REVIEW & LOOK FORWARD

• Multi-year rate outlook
• Seek opportunities
• Promote conservation
• Continuous improvements
• Inform & involve customers
What is a Sustainable Utility?

• Self-sufficient
• Today’s stewards
• Ratepayer-owned facilities
• Steady over time
• Sustainable for future generations
What are Sustainable Utility Practices?

• Predictable bills for customers
• Predictable revenue & expenditures for utility
• Avoid drastic rate increases
• Plan for future replacement
• Balance between existing and future customers
Who Sets the Rates?

- Rate decisions made by owner-type
  - If City owns the utility, City Council sets rates
  - If City contracts for service, depends on contract
  - If Water/Sewer District or Public Utility District provides service, District Board sets the rates
Annual Budget vs. Rate Review

City Budget
• Required by State law
• How to balance revenue & reserves with expenditures
• Timeframe – 1 or 2 years
• Key - What can be afforded with revenue & reserves?

Rate Review
• Recommended best practice
• What is necessary to provide safe, effective service
• Timeframe – 3 to 6 years
• Key – How to make progress & avoid drastic impact on rates?
Concentrate on the Big Picture

- Review in higher level program categories:
  - Operating expense
  - Debt
  - Capital Funded by Rates
  - Reserves
What Do Rates Pay For?

Varies among utilities

Water Expense - 2012
- Water M&O Expense: 76%
- Existing Debt: 5%
- Capital Repl. Funded by Rates: 19%

Sewer Expense - 2012
- Sewer M&O Expense: 51%
- Sewer Debt: 47%
- Capital Repl. Funded by Rates: 2%
One-Time vs. On-Going Revenue

**One-Time Revenue**
- Connection Charges
- Grants & Loans
- Reserves

**On-Going Revenue**
- Monthly Rates
- Penalties & Late Fees
- Other Services
Match Revenue with Expense

One-Time Costs

- Studies
- Capital Projects

On-Going Costs

- Maintenance
- Operations
- Administration
- Debt
- Replacement
Revenue Sufficiency

REVENUE REQUIREMENTS → OPERATING EXPENSE

- DEBT
- CAPITAL FUNDED BY RATES
- RESERVES

→ MONTHLY RATES
Key Rate Drivers

Develop Six-Year Outlook

- Customer growth
- Average water use
- Cost escalation
  - Labor/benefits
  - General
  - Water purchase
  - Fuel & utilities
- Interest on investments
Largest Operating Expenses

Review Largest Expenses

- Salaries & benefits
- Contracts for purchased water or sewer treatment
- Increase in key costs may be offset by savings in other areas
Debt Repayment

- Map out to recognize opportunities
Opportunities with Existing Debt

WATER - EXISTING ANNUAL DEBT REPAYMENT

- 2004
- 2006
- 2008
- 2010
- 2012
- 2014
- 2016
- 2018
- 2020
- 2022
- 2024
- 2026
- 2028
- 2030
- 2032
Capital Funded by Rates

Consider funding programs instead of single expenditures

- Main replacement program
- Equipment replacement program
- Facility replacement program
- Coordinated projects (tear the street up once)
  - Overlay program, major city projects, stormwater retrofit, bridge/road/highway projects
Increasing or Using Reserves

Testing the bottom line

- Revenue minus expense = increase or use of reserves
- Reserves can be used once
- If savings are used to pay the cable bill, they will not be available for a new roof

### Test of Revenue Sufficiency

| Operating Revenue | - | Operating Expense | Debt Repayment | = | Annual Increase(Use) of Reserves | + | Revenue for Capital | - | Planned Capital | = | Overall Increase(Use) of Reserves |
Test of Revenue Sufficiency

Revenue minus expense = Increase or use of reserves

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<tbody>
<tr>
<td>Operating Revenue</td>
<td>3,168,750</td>
<td>3,171,750</td>
<td>3,161,853</td>
<td>3,164,859</td>
<td>3,167,868</td>
<td>3,170,880</td>
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<td>Operating Expense</td>
<td>2,496,750</td>
<td>2,646,816</td>
<td>2,769,569</td>
<td>2,898,535</td>
<td>3,034,056</td>
<td>3,176,488</td>
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<td>Debt Repayment</td>
<td>569,570</td>
<td>546,114</td>
<td>565,227</td>
<td>516,798</td>
<td>512,429</td>
<td>508,060</td>
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<td>Annual Increase/(Use) of Reserves</td>
<td>102,430</td>
<td>(21,180)</td>
<td>(172,942)</td>
<td>(250,475)</td>
<td>(378,617)</td>
<td>(513,668)</td>
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Cumulative Impact on Rates

- Use of reserves is not a sustainable practice
Test of Rate Sufficiency

- Are rates sufficient to meet annual needs?

[Graph showing Water Revenue vs. Operating Expense & Debt from 2011 to 2017]
Reserves

• Identify target minimum reserves
  – cash flow
  – emergency
  – debt
• Annual contribution or set-asides
• Rate stability
Ending balance with emergency reserve
How to Begin Funding

• If you’re not funding replacement and reserves now, you have several options to begin:
  – Add all at once
  – Ramp up over time
  – Escalate each year to keep up
Rate Structure or Design

- The rate design sends a message to the customers with each bill
- Be sure the message is consistent with the city and utility goals
- Make the rates easy to explain and understand
Customer Classes

- Fair and equitable rates for all
- Each customer within a class must be treated the same
- The definition of customer classes is a policy choice
Basic Rate Design

Common Rate Structures

• Flat rate
  – Does not vary with water use

• Base + volume rate
  – Base rate is fixed (by meter)
  – Volume varies by water use

• Volume rate
  – Varies by water use

Goal

• Strike a balance
  – Fixed & variable costs
  – Predictable customer bills
  – Predictable utility revenue
Volume Rate Types

Common Volume Designs

• Block rates or tiers
  – Rate changes by block or tier
  – Uniform
  – Inclining
  – Declining

• Seasonal
  – Varies by season or peak use
Water Rate Structures

AWC Tax & User Fee Survey

Water Rate Structures - 2012
- Seasonal: 5%
- Flat charge: 14%
- Declining: 6%
- Inclining: 50%
- Uniform Block: 25%

Water Rate Structures - 2010
- Seasonal: 4%
- Flat charge: 17%
- Declining: 10%
- Inclining: 45%
- Uniform Block: 24%
Sewer Rate Structures

AWC Tax & User Fee Survey

Sewer Rate Structures - 2012
- Volume w/ adjusted water use 11%
- Volume w/ actual water use 18%
- Flat Charge 71%

Sewer Rate Structures - 2010
- Volume w/ adjusted water use 9%
- Volume w/ actual water use 17%
- Flat Charge 74%
Policy Choices in Rates

Reflect in rate structure?

- Senior low-income, disabled
- Lifeline rates
- Conservation rates
- Commercial & industrial
- Mixed use
- Inside/outside City
Comparing Residential Rates

Newer facilities are generally on top, then others catch up. Smaller customer base utilities are also toward the top.

Prepare by: Katy Isaksen & Associates, 2012 with information provided on city websites.
Borrowing for Capital

- Complete projects now
- Spread repayment over a number of years
- Increase equity for existing & future customers
- Reduce the impact on rates
- What lenders need
  - System must outlive debt
  - Ensure debt repayment
  - Community acceptance
Typical Methods of Borrowing

• Cities are allowed to sell bonds
  – General obligation, limited general obligation
  – Revenue
  – Local improvement district

• State & federal funding assistance programs
  – Low-interest loans & grants

• Local banks

• Interfund loans
Sustainable Rates
For Future Generations

• Long-term view
• Steady over time
• Predictable for customers & utility
• Equitable among customers
• Balance between existing & future customers
• Promote conservation
• Plan for system replacement
Additional Resources

- APWA – American Public Works Association
- AWC – Association of Washington Cities
- AWWA – American Water Works Association
- EPA – US Environmental Protection Agency
- IACC – Grant & loan funding program info [www.infrafunding.wa.gov](http://www.infrafunding.wa.gov)
- MRSC – Municipal Research & Services Center
- WA COM – WA Dept of Commerce
- WA DOE - WA Dept of Ecology
- WA DOH – WA Dept of Health
- WEF – Water Environment Federation