PUBLIC UTILITY DISTRICT NO. 1 OF SKAGIT COUNTY

COMMISSIONERS’ WORK SESSION

Agenda
May 7, 2019
4:00 PM

CALL TO ORDER

1. Washington State Health Department Drinking Water Week Commitment to Excellence Award – Emilia Blake

2. 2019 Rate Study Introduction

3. PUD Campus Location Assessment – Discussion

ADJOURNMENT

This work session is open to Commissioners, Management, other District staff, Consultants and the public. It is not the opportunity to give public testimony, but if the Board members request input from individuals in the audience, those people may speak.

The principal purpose of the work session is to allow employees of the District and the Board to communicate with each other and/or the Consultants, answer Board questions, and get the Board’s opinions and input regarding the subject topic(s).
Purpose of Presentation and Discussion

- Review rate setting fundamentals (if desired)
- Review draft revenue requirement results
- Suggest potential rate design changes
Rate Setting 101
Rate Study Road Map – Three Stages

1. Establish Fiscal Policies
   - Define Capital Needs: CIP
   - Revenue Requirement
   - Forecast Operating Costs

2. Allocate Costs by Function
   - Customer
   - M & S
   - Base
   - Peak
   - Fire

3. Define Customer Classes
   - Single Family
   - Multi-Family
   - Commercial/Other

4. Allocate Costs to Customer Classes

5. Design Rates by Class
   - Fixed Charges
   - Variable Charges
   - Special Features?
Key question to answer:

- How much rate revenue is needed?
Components of Revenue Requirement

- O&M Costs
- Rate-Funded Capital Costs
- Existing & New Debt Service
- Required Reserves
- Non-Rate Revenues

Annual Rate Revenue Requirement
Forecast Depends On:

- Assumptions
- Financial policies
- Year-by-year modeling of:
  - **Capital funding strategy** - How do we pay for the CIP?
  - **Annual forecast** - a multi-year version of the budget:
    - Beginning balance, revenues, expenditures, ending balance
**Capital Funding Strategy**

- **Cash (pay-as-you-go)**
  - Higher near-term impact on rates, lower long-term
  - Earn interest instead of paying interest
  - Existing ratepayers pay 100% of initial costs
  - Puts a premium on advance planning

- **Debt Financing**
  - Lower near-term impact on rates, higher long-term
  - Timing – you can build it when you need it
  - Spreads costs between existing and future ratepayers
  - Be careful about using up debt capacity

- **Typical Approach**
  - Cash-financing for routine, foreseeable capital projects
  - Partial debt financing for either new capacity or large, one-time, unforeseen projects
  - To conserve debt capacity, borrowing is a last resort
After the capital funding strategy, we use the forecast model to test the sufficiency of existing rates.

If existing rates would be insufficient, then we determine a pattern of rate increases that covers required costs over the forecast horizon.

- Insufficiency can mean a lack of cash or a lack of debt service coverage.
- We generally aim for a smooth pattern of rate increases.

For Skagit PUD, the revenue requirement forecast has been updated as part of the budget process in recent years, so there might not be big surprises.
Key question to answer:

– Are we charging customer groups equitably?
Steps in Cost of Service Analysis

1. Identify Service Functions
2. Define Customer Classes
3. Allocate Assets & Expenses to Functions
4. Allocate Costs to Customer Classes

Compare Recommended vs. Current Share of Costs
Typical Service Functions

Water System Functions

- Customer
- Meters & services
- Base demand
- Peak demand
- Fire protection
# Typical Customer Classes

<table>
<thead>
<tr>
<th>Class</th>
<th>Characteristics</th>
</tr>
</thead>
</table>
| Single Family Residential (SFR) | - Typically largest customer group  
                                | - Relatively low usage per unit  
                                | - High peak demand  
                                | - Lowest fire flow requirement |
| Multi-family Residential (MFR) | - Lower usage per dwelling unit than SFR  
                                | - Usually master metered  
                                | - Relatively constant use throughout the year  
                                | - Fire flow requirement between SFR & commercial |
| Commercial/Industrial        | - Diversity in use per account  
                                | - Relatively constant usage throughout the year  
                                | - Highest fire flow requirement |
| Parks, Irrigation, & Agriculture | - Often smallest customer classes in terms of accounts  
                                | - Majority of use in peak season  
                                | - No fire flow requirement  
                                | - Economic sensitivity, sometimes blended with commercial |
Sample Usage by Month and Customer Class

- SF
- MF
- COMM
- IRR
Determining Customer Class Cost Shares

- Cost-of-service analysis identifies how costs should be equitably distributed among customer classes

- Cost allocations are based on
  - Industry-standard methodologies
  - Unique usage characteristics (use and demands)
  - Unique facility requirements (planning and design criteria)

- Cost-of-Service Allocation (COSA) cost shares are compared with existing cost shares; needed shifts are identified

<table>
<thead>
<tr>
<th>Class</th>
<th>Existing 2017 Revenue</th>
<th>COSA 2017 Revenue</th>
<th>$ Difference</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>$5,635,687</td>
<td>$5,818,285</td>
<td>$182,598</td>
<td>3.24%</td>
</tr>
<tr>
<td>Multifamily</td>
<td>1,359,847</td>
<td>1,009,157</td>
<td>(350,690)</td>
<td>-25.79%</td>
</tr>
<tr>
<td>Commercial</td>
<td>2,548,590</td>
<td>2,716,682</td>
<td>168,092</td>
<td>6.60%</td>
</tr>
<tr>
<td>Total</td>
<td>$9,544,124</td>
<td>$9,544,124</td>
<td>-</td>
<td>0.00%</td>
</tr>
</tbody>
</table>
Step 3: Rate Design

Key questions to answer:
- How should the bill be calculated?
- Based on what units?
Rate Design - How the Bill is Calculated

- The rate structure must recover the target level of revenue.
- The bill is your primary form of communication with customers.
- The bill is comprised of some combination of fixed and/or variable charges.
- Rate design considers policy goals and characteristics of your particular customer base.
- Rate design requires numerous tradeoffs and policy choices.
## Does Rate Structure Align with Our Objectives?

<table>
<thead>
<tr>
<th>Example Rate Structure Goals</th>
<th>Financial Sustainability</th>
<th>Conservation and Efficiency</th>
<th>Transparency and Simplicity</th>
<th>Fairness and Equity</th>
<th>Affordability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Sufficient and predictable revenue to recover costs</td>
<td>• Promote conservation and efficiency of use</td>
<td>• Easy to understand, explain and administer</td>
<td>• Correlation of rates with costs</td>
<td>• Provide affordable water to “lifeline” users</td>
</tr>
<tr>
<td></td>
<td>• Stable and predictable impacts to customers</td>
<td>• Protect natural resources</td>
<td>• Compatible with billing system / meter reading</td>
<td>• Reflect customer usage patterns and service requirements</td>
<td>• Support economic development / preservation</td>
</tr>
</tbody>
</table>
**Example: Fixed vs. Volume Rates**

**Fixed Charges**
$ per meter equivalent

- Addresses revenue stability
- Typically recovers costs for:
  - Customer/account servicing
  - Meters & services repair / maintenance
  - Fire protection services
  - Portion of peak demand

**Volume Charges**
$ per unit of water use

- Addresses equity & conservation
- Typically recovers costs for:
  - Base use (average annual usage)
  - Portion of peak demand

*Guideline for cost recovery = 40%-50% fixed charges / 50%-60% volume charges*

*Typically higher fixed charge portion for small systems or systems experiencing seasonal influx of tourists*
Example Volumetric Rate Structures

**Uniform Volume Rates**
- Volume charge per unit of water the same for all customers
- Consistent usage patterns of customer base
- Basic introduction to conservation rates
- Stability / simplicity vs. equity / conservation

**Class Specific Volume Rates**
- Volume charge per unit of water varies by customer class
- Diverse usage patterns; service requirements
- Potential inequities for low water users; inadequate pricing signal for high water users

**Increasing “Tiered” Block Rates**
- Volume charge increases at established water use thresholds
- Most appropriate for single family residential class
- Strong year around pricing signal
- Conservation / equity / affordability vs. stability / simplicity

**Seasonal Rates**
- Volume charge varies by season
- Significant seasonal cost variation
- Most appropriate for non-single family residential customers
- Conservation / equity vs. stability / simplicity
Preliminary Revenue Requirement for Skagit PUD
## Existing Skagit PUD Financial Policies

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Target</th>
</tr>
</thead>
</table>
| **Operating Reserve (Revenue Fund Ending Balance)** | Provide liquidity cushion to accommodate cyclical cash flow fluctuations  
• 2.5 months of O&M Expenses + Depreciation Expense  
• Change to 60-90 days |
| **Total Liquidity** | Ensure enough cash to meet unforeseen operating or capital needs  
• 180 days of O&M expenses |
| **Capital Replacement Funding** | Promote ongoing system integrity through reinvestment in the system  
• Current minimum: $3,500,000  
• Suggested minimum: 100% of depreciation (~$5 million) |
| **Debt Service Coverage** | Indicates ability to pay debt service after paying operating costs  
• 2.00 for all revenue bond debt |
Key Assumptions

- Study period 2019-2028
- Projected rate revenue based on 2019 budget figures
- Customer growth:
  - 1.00% for Single Family and Multi-Family Classes
  - No growth assumed for other classes
- 2019 Budget developed used as baseline – the following escalation factors used for future years:
  - General Cost Inflation: 2.50%
  - Labor Cost Inflation: 3.50%
  - Anacortes Rate Inflation: 5.00%
  - Construction Cost Inflation: 3.50%
- Expense budget realization factor of 95%
- New Debt
  - Revenue Bonds: 20 year term, 5.0% interest, 1.5% issuance cost
Two Book Ends for Consideration

- **Book End 1 – Hold Current Rate Strategy – Reduction in Debt Reliance**
  - Assumes higher up front rate increases
  - Increase to cash-funded capital to fund capital program

- **Book End 2 – Inflationary Rate Strategy – Heavier Debt Reliance**
  - Holds rate increases at 3.00% annually
  - Increase to debt issuances to fund capital program
**Key Components – Book End 1**

<table>
<thead>
<tr>
<th>Description</th>
<th>2019-2028</th>
</tr>
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<tbody>
<tr>
<td>Rate Revenue (Existing Rates)</td>
<td>$24.5 mil - $26.1 mil</td>
</tr>
<tr>
<td>O&amp;M Expenses</td>
<td>$14.5 mil - $18.8 mil</td>
</tr>
<tr>
<td>Existing Debt Service</td>
<td>$1.8 mil - $3.2 mil</td>
</tr>
<tr>
<td>New Debt Service</td>
<td>$2.5 mil - $4.7 mil</td>
</tr>
<tr>
<td>Rate Funded Capital</td>
<td>$1.7 mil - $3.8 mil</td>
</tr>
<tr>
<td>Total CIP (2019-2028)</td>
<td>$176,113,145</td>
</tr>
</tbody>
</table>

- **Total CIP of $176.1M** funded by cash from rates, remaining loan proceeds, system development fees and new debt
- **New Debt of $53.1M** from 2020-2025
  - 2020 Revenue Bond: $28.50M
  - 2022 Revenue Bond: $5.85M
  - 2025 Revenue Bond: $18.75M
Key Components – Book End 2

- **Total CIP of $176.1M** funded by cash from rates, remaining loan proceeds, system development fees and new debt
- **New Debt of $92.8M from 2020-2028**
  - 2020 Revenue Bond: $32.0M
  - 2022 Revenue Bond: $8.8M
  - 2024 Revenue Bond: $28.0M
  - 2026 Revenue Bond: $11.9M
  - 2028 Revenue Bond: $12.1M

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<td>New Debt Service</td>
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Revenue Requirement Summary – Book End 1

- Revenue requirements for the years 2019 to 2028 are depicted.
- Each year shows an increase in total revenues after a rate increase.
- Key components include:
  - Cash Operating Expenses
  - New Debt Service
  - Additional Rate Funded Capital
  - Existing Debt Service
  - Routine Capital Funding
  - Total Existing Revenue

Note: The diagram illustrates the growth in revenue requirements with a focus on the increase in total revenues after rate increases.
## Bill Comparisons

### Bill Comparisons (2019-2023)

<table>
<thead>
<tr>
<th>Rate Strategy</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Book End 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rate Strategy</td>
<td>8.00%</td>
<td>5.00%</td>
<td>5.00%</td>
<td>4.50%</td>
<td></td>
</tr>
<tr>
<td>Sample Monthly Residential Bill (5/8” Meter, 7 ccf)</td>
<td>$59.02</td>
<td>$63.74</td>
<td>$66.93</td>
<td>$70.28</td>
<td>$73.44</td>
</tr>
<tr>
<td>Monthly Increase</td>
<td>$4.72</td>
<td>$3.19</td>
<td>$3.35</td>
<td>$3.16</td>
<td></td>
</tr>
<tr>
<td><strong>Book End 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rate Strategy</td>
<td>3.00%</td>
<td>3.00%</td>
<td>3.00%</td>
<td>3.00%</td>
<td></td>
</tr>
<tr>
<td>Sample Monthly Residential Bill (5/8” Meter, 7 ccf)</td>
<td>$59.02</td>
<td>$60.79</td>
<td>$62.61</td>
<td>$64.49</td>
<td>$66.43</td>
</tr>
<tr>
<td>Monthly Increase</td>
<td>$1.77</td>
<td>$1.82</td>
<td>$1.88</td>
<td>$1.93</td>
<td></td>
</tr>
</tbody>
</table>

### Bill Comparisons (2024-2028)

<table>
<thead>
<tr>
<th>Rate Strategy</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Book End 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rate Strategy</td>
<td>4.00%</td>
<td>4.00%</td>
<td>2.00%</td>
<td>2.00%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Sample Monthly Residential Bill (5/8” Meter, 7 ccf)</td>
<td>$76.37</td>
<td>$79.43</td>
<td>$81.02</td>
<td>$82.64</td>
<td>$84.29</td>
</tr>
<tr>
<td>Monthly Increase</td>
<td>$2.94</td>
<td>$3.05</td>
<td>$1.59</td>
<td>$1.62</td>
<td>$1.65</td>
</tr>
<tr>
<td><strong>Book End 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rate Strategy</td>
<td>3.00%</td>
<td>3.00%</td>
<td>3.00%</td>
<td>3.00%</td>
<td>3.00%</td>
</tr>
<tr>
<td>Sample Monthly Residential Bill (5/8” Meter, 7 ccf)</td>
<td>$68.42</td>
<td>$70.47</td>
<td>$72.59</td>
<td>$74.76</td>
<td>$77.01</td>
</tr>
<tr>
<td>Monthly Increase</td>
<td>$1.99</td>
<td>$2.05</td>
<td>$2.11</td>
<td>$2.18</td>
<td>$2.24</td>
</tr>
</tbody>
</table>
Rate Design Choices
## Skagit PUD Existing Rate Design

### Meter Size (all classes):

<table>
<thead>
<tr>
<th>Size</th>
<th>Per Month</th>
<th>Per ccf*</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8&quot;</td>
<td>$29.15</td>
<td></td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>$29.15</td>
<td></td>
</tr>
<tr>
<td>1&quot;</td>
<td>$48.55</td>
<td></td>
</tr>
<tr>
<td>1 1/2&quot;</td>
<td>$96.80</td>
<td></td>
</tr>
<tr>
<td>2&quot;</td>
<td>$154.60</td>
<td></td>
</tr>
<tr>
<td>3&quot;</td>
<td>$289.85</td>
<td></td>
</tr>
<tr>
<td>4&quot;</td>
<td>$482.65</td>
<td></td>
</tr>
<tr>
<td>6&quot;</td>
<td>$965.35</td>
<td></td>
</tr>
<tr>
<td>8&quot;</td>
<td>$1,544.30</td>
<td></td>
</tr>
</tbody>
</table>

### Capital Improvement Surcharge:

- $2.00

### Single Family & Duplex w/ Individual Meters

<table>
<thead>
<tr>
<th>Block</th>
<th>Per ccf*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (0-3 ccf)</td>
<td>$3.21</td>
</tr>
<tr>
<td>2 (4-100 ccf)</td>
<td>$5.06</td>
</tr>
<tr>
<td>3 (101+ ccf)</td>
<td>$2.95</td>
</tr>
</tbody>
</table>

### All Others

<table>
<thead>
<tr>
<th>Block</th>
<th>Per ccf*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (0-3 ccf)</td>
<td>$5.06</td>
</tr>
<tr>
<td>2 (4-100 ccf)</td>
<td>$5.06</td>
</tr>
<tr>
<td>3 (101+ ccf)</td>
<td>$2.95</td>
</tr>
</tbody>
</table>

*1 ccf = 100 cubic feet
Potential Rate Design Changes to Explore

- Consider whether to adjust percentage of revenue from fixed charge vs. volume charge
- Low-income discount rates
  - Low-income senior? Low-income senior or low-income disabled? Low-income only?
  - What percentage of the regular rates? 50%? 75%? 80%?
  - Develop program for renters as well as homeowners?
  - Impact on other rate payers?
- Capital improvement surcharge is currently a flat dollar amount per account. Consider impact of incorporating it into the regular rates, so it is scalable.
Potential Rate Design Changes to Explore

- Research how many customers are in Block 3 (over 100 ccf/mo), consider why they might be paying a lower volume rate than Block 2. Is that rationale still valid?
- Look at results of Cost of Service Allocation (COSA), see if it might be worth considering separate fixed rates for Single family
- Right now, Block 1 (0-3 ccf/month) volume rate is less for single family and duplexes than for others $3.21 vs. $5.06). Compare that with the relative rate burden implied by the cost of service analysis.
Low Income/Senior Discount Program Design

- **Type of benefits:**
  - Discounted rates
  - Utility vouchers (targets renters)
  - Donations (less common)

- **Eligibility:**
  - Seniors – most common age is 62
  - Income – typically locally determined
    - Percentage of federal poverty levels?
    - State or local median income?

- **Cost to administer**
  - Review of applications for qualifications
  - Renewal notifications/reminders
Discount Levels Can Vary

- Discounts vary widely
  - 75% on water and sewer charges (Issaquah)
  - 70% on water, sewer, storm charges (Bellevue)
  - 60% on water, sewer; 33% on storm; 60% on garbage; 15% on electric (Richland)
  - 50% on water, sewer, storm, and garbage (Seattle)
  - 50% on basic water charge (Kirkland)
  - 50% on water, sewer, garbage (Wenatchee)
  - 33% on sewer, 20% garbage, recycling and stormwater (Sedro Woolley)
  - 25% on sewer, 25%-50% on garbage and 25% on storm drainage (Mt. Vernon)
  - 20% on water, sewer, storm, refuse and recycling (Anacortes)
  - 17% on water, sewer and refuse (Oak Harbor)

- Renters (Bellevue, Seattle)
  - Bellevue: rebate check equal to 70% of typical billing for w/s/s services
  - Seattle: monthly credit of about $95 on city light electric utility services bill

- Any feedback or preferences?
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