HARFORD COUNTY, MARYLAND
COMPREHENSIVE UTILITY REVENUE RATE STUDY PRESENTATION
OVERVIEW

HARFORD UTILITIES
Our Mission and System

RATE STUDY DRIVERS & BEST PRACTICES
Rate Study Drivers
Rate Setting History

FINANCIAL SOLUTION
Existing Financial Profile
Proposed Financial Plan

RATE STRUCTURE & BILL IMPACT
Proposed Rate Structure
Monthly Residential Bill Impact

VALUE OF WATER....
Closing Thoughts
PART 1 – HARFORD UTILITIES

OUR MISSION
WHAT DO WE DO?
Our Mission in the Division of Water & Sewer

Protect public health & environment
Protect and sustain economic growth
Manage & maintain infrastructure
Support public safety
Provide direct utility services to approximately 130,000 citizens

We ensure the Health and Safety of our Community
We Deliver Life Critical Services 365 Days of the Year and 24 Hours of the Day

Our services encompass all of the following functions

- Draw Raw Water
- ABINGDON: Treat Raw Water
- Distribute Treated Water
- Protect Source Water
- SOD RUN: Treat Wastewater
- Collect Wastewater
The Assets are Vast, Complex, and Aging

- Buried assets (pipes) and facilities are aging
  - 691 miles of WATER pipes
  - 788 miles of SEWER pipes
- 12 storage tanks
- 53 pumping stations
- Multiple treatment facilities

Many of our assets are well over 40 years and are continuing to age!

We also comply with stringent Federal and State Regulations

Our Management Approach

Skilled Workforce
Advanced Technologies
Effective Planning
What Are the County’s Enterprise Fund Obligations?

**HARFORD UTILITY OPERATES AS AN ENTERPRISE FUND**

- Fully funded by User Fees and Charges
- Growth Pays for Expansion*
- Fund Needs to be Self-Sufficient
- Funds are Dedicated Exclusively to the Utilities

*User fee funded utility needs to maintain a reasonable nexus between Revenues and Costs of Service

*County Policy Requirement
So, How Do We Fund All of Our Operations & Maintenance and Capital Needs?

Operating expenses are primarily funded through
- Retail and wholesale water and sewer charges and surcharges that our customers pay for the services they receive
- Miscellaneous fees for services customers request from the Division of Water & Sewer
- Other revenues such as lease revenues for hosting cellular antennas on tanks

Capital debt expenses are funded primarily through
- One time connection fees and that are assessed when new properties join the system
- Occasional federal/state grants for capital construction
PART 2 – RATE STUDY DRIVERS AND BEST PRACTICES

HISTORICAL CHANGES
COUNTY’S RATE SETTING PRACTICE
INDUSTRY BEST PRACTICES
Our Water and Sewer Utility Operations Have Grown Substantially Since 1995
(1995: The Year The Last Rate Study Was Done)

<table>
<thead>
<tr>
<th>Facts</th>
<th>Year 1995</th>
<th>Year 2015</th>
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<tbody>
<tr>
<td>Number of Customers</td>
<td>28,895</td>
<td>44,139</td>
</tr>
<tr>
<td>Water &amp; Sewer Pipe Assets (Miles)</td>
<td>1,023</td>
<td>1,479</td>
</tr>
<tr>
<td>Service Requests from Customers</td>
<td>8,333</td>
<td>14,622</td>
</tr>
<tr>
<td>Daily Water Prod. (mgd)</td>
<td>8.3</td>
<td>13.1</td>
</tr>
<tr>
<td>Daily Wastewater Treated (mgd)</td>
<td>9.6</td>
<td>13.2</td>
</tr>
<tr>
<td>Total Water/Sewer Employees</td>
<td>146</td>
<td>170</td>
</tr>
<tr>
<td>Total Operating Budget (with Depreciation)</td>
<td>$23.4 Million</td>
<td>$48.7 Million</td>
</tr>
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</table>
Consequently, Revenue Increases Have Not Kept Pace With The Levels of Cost (Revenue Requirement) Increases

What are the Industry’s Rate Setting Best Practices?

Financial standards that drive a “self-sustaining” utility
- Develop annually a 5 to 10 year financial plan (forecast)
- Establish rates to ensure self-sufficiency and equitable cost recovery

What was Harford’s Rate Setting Practice?

Rates increased annually based on “Overall CPI”
- Not based on a comprehensive financial plan
- Did not reflect Harford utility’s cost needs
- Rates Not adjusted for usage decline; slow growth

A CPI based increase has created a significant “Funding Deficit”

CPI = Consumer Price Index
National Survey Indicates Wastewater Charges Are Increasing At A Higher Than CPI Rate


Source: NACWA 2015 Wastewater Survey
PART 3 – FINANCIAL SOLUTION

EXISTING OPERATING FUND FINANCIAL PROFILE

PROPOSED OPERATING FUND FINANCIAL PLAN
Operating Fund Deficit Will grow exponentially If Just a CPI Based 2% Annual Increase is Continued

The road for the Operating Fund ends in FY 2016 as it will be fully depleted!

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</thead>
<tbody>
<tr>
<td>Balance</td>
<td>17.96</td>
<td>10.88</td>
<td>1.97</td>
<td>(7.48)</td>
<td>(18.65)</td>
<td>(35.27)</td>
<td>(54.26)</td>
<td>(74.53)</td>
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</table>

CPI = Consumer Price Index
The Proposed Operating Fund Plan Aligns Service Charge Revenues With The Projected Revenue Requirements

Water & Sewer - Service Charge Revenues
Revenue & Net Revenue Requirement

- Net Revenue Requirement - Service Charges
- Proposed Service Revenue
The Proposed Operating Fund Plan Also Helps Achieve A Fund Balance Of 60 Days Of O&M Reserve By FY 2018

Plan proposes to drastically draw down the fund balance to mitigate the level of revenue adjustments that are necessary in FY 2016 and FY 2017

Water & Sewer - Service Revenues
Projected Operating Fund Balance

60 Days of Annual O&M is the minimum reserve target for this financial plan
Maintaining at least 120 Days of Annual O&M is the industry best practice
PART 4 – RATE STRUCTURE & BILL IMPACT

PROPOSED RATE STRUCTURE
MONTHLY RESIDENTIAL BILL IMPACT
PEER UTILITY BILL COMPARISON
Our Review Of The SERVICE CHARGE Rate Structure Indicates That Adjustments Are Needed

Service Charge: FY 2016 through FY 2020

- Gradually adjust the Base Charge by Meter Size and the volume charge per 1,000 gallons consumed to reach the cost of service levels by FY 2020

Asset Reinvestment Charge: Beginning FY 2018

- Implement a new Asset Reinvestment Charge (ARC) based on Meter Size capacity
  - Aging infrastructure requires timely and consistent levels of asset rehabilitation and renewal, to maintain service integrity & reliability
  - Implementing the ARC in FY 2018 mitigates bill impact in FY 2016 & FY 2017
What Is The Expected Impact On An Average Residential Monthly Bill In FY 2016 (effective Jan 1, 2016)

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Quarterly WATER</th>
<th>Quarterly SEWER</th>
<th>Quarterly TOTAL</th>
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<tbody>
<tr>
<td>1</td>
<td>EXISTING Residential (5/8”)</td>
<td>$46.04</td>
<td>$57.62</td>
<td>$103.66</td>
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<td>2</td>
<td>PROPOSED Residential (5/8”)</td>
<td>$59.84</td>
<td>$81.94</td>
<td>$141.78</td>
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<tr>
<td>3</td>
<td>Increase in Quarterly Charges</td>
<td>$13.80</td>
<td>$24.32</td>
<td>$38.12</td>
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<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Monthly WATER</th>
<th>Monthly SEWER</th>
<th>Monthly TOTAL</th>
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<tr>
<td>1</td>
<td>Increase in Monthly Charges</td>
<td>$4.60</td>
<td>$8.11</td>
<td>$12.71</td>
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- Includes the Purchased Water; BNR; and ENR Charges
Harford’s Proposed Total Quarterly Bill Is Still Lower Than Many Other Neighboring Peer Utilities

National Comparison:

- **ANNUAL WATER BILL**
  - National average: $220
  (Source: AWWA 2012 Financial Survey)
  - Harford County: $239

- **ANNUAL SEWER BILL**
  - National average: $435
  (Source: NACWA 2015 Financial Survey)
  - Harford County: $328
Harford’s Water & Sewer Monthly Bill Is Significantly Lower Than A Discretionary Cable Bill (FY 2016)

- Proposed Monthly Water & Sewer Bill: $47.26
- Monthly Gas & Electric Bill: $144.00
- Monthly Cable TV Bill: $110.00

Harford Division of Water & Sewer strives to provide life critical services balancing customer impact and utility’s system integrity and financial resiliency
In Summary, The Proposed Plan Paves The Way For

**Reliable Service:** Funds 100% of the annual O&M expenditures beginning FY 2016

**Infrastructure Integrity:** Funds 100% of the annual capital needs beginning FY 2016

**Operational Emergencies:** Funds the minimum required 60 days of annual O&M reserves beginning FY 2018

**Economic Development:** Provides adequate capital funds for system expansion to accommodate customer growth during study period

Establish a balanced financial path to fulfill mission critical services to the County’s constituents
Building a world of difference.

Together

BLACK & VEATCH®