Billing System and Utility Bill Calculation Overview
Neighborhood Committee

Presentation by:
Paul VonderMeulen, Superintendent, IT Division
Matt Menkhaus, Contact Center Supervisor, Commercial Services Division
Beverly Engram, Division Manager, MSD
Agenda

- Billing System Overview
- Utility Bill Explanation
- Utility Bill Calculation
Meter to Payment Business Functions

- Manage Customer Account Data
- Read Meters
- Consumption & Manage Rates
- Prepare & Deliver Bills
- Process & Record Payments
- Manage Credit & Collections
- General Ledger & Revenue Analysis
- Customer Service & Contact Center
Meter Reading

- Automatic Meter Reading (AMR) from Neptune Technology Group
- Water meters equipped with a radio device
- Drive by system picks up the meter readings via radio signal
- 240K+ meters read monthly
Account Management

- Oracle Customer Care & Billing (Aug 2016)
- Manages Customers, Accounts, Rates, Consumption, Receivables, etc.
- Bill calculation processing
- Moved from Quarterly Billing to Monthly Billing in Jan 2018
Billing and Payments

- FIS Global prints and mails bills and letters (3.3M bills & letters annually)
- FIS Global produces electronic bills (720K annually)
- FIS Global processes payments via the Web, automated phone system, and Lobby ($460M collected, 2.5M payments)
- Fifth Third processes paper checks via lockbox services (started Mar 2019)
Customer Service

- Customer phone calls are managed via Aspect Unified IP platform (918 calls per day)

- Other customer contact channels: email, letters, fax. (60 emails per day)

- Aspect outbound dialer: bill reminders (3000 calls per week)
Utility Bill Explanation

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# Greater Cincinnati Water Works

## Current Bill Detail

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Charges</td>
<td></td>
</tr>
<tr>
<td>Water Base Charge</td>
<td>$6.94</td>
</tr>
<tr>
<td>Water Usage (5.750000 ccf)</td>
<td>$16.04</td>
</tr>
<tr>
<td>Sewer Charges</td>
<td></td>
</tr>
<tr>
<td>Sewer Base Charge (3 ccf)</td>
<td>$40.42</td>
</tr>
<tr>
<td>Sewer Usage (2.750000 ccf)</td>
<td>$16.17</td>
</tr>
<tr>
<td>Stormwater Charge</td>
<td>$8.20</td>
</tr>
<tr>
<td>Adjustments</td>
<td>$0.00</td>
</tr>
<tr>
<td>Previous Bill</td>
<td>-$82.05</td>
</tr>
<tr>
<td>Payments Received</td>
<td></td>
</tr>
<tr>
<td>Total Charges</td>
<td>$87.77</td>
</tr>
</tbody>
</table>

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**SEWER BACKUP?**

Report your sewer backup to MSD 24/7 within 24 hours of discovery

513-352-4900

or online at [SBU.MSDGC.ORG](http://SBU.MSDGC.ORG)

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**Access Code:** 7010400000

**Website:** [myscw.org](http://myscw.org)

**Address:** 4747 Spring Grove Avenue, Cincinnati, Ohio 45232

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**Metropolitan Sewer District of Greater Cincinnati**

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**SBU Sewer Backup Response Program**
### Service From February 01, 2019 to March 04, 2019 (Days of Service: 31)

<table>
<thead>
<tr>
<th>Meter Number</th>
<th>Previous Reading</th>
<th>Current Reading</th>
<th>Current Usage</th>
<th>Reading Type</th>
<th>Unit of Measure</th>
<th>Meter Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>178442</td>
<td>147955</td>
<td>148530</td>
<td>575</td>
<td>Actual</td>
<td>CUFT</td>
<td>5/8</td>
</tr>
</tbody>
</table>

### Stormwater Details

<table>
<thead>
<tr>
<th>PREMISES</th>
<th>BOOK/PLAT/PARCEL</th>
<th>ARN</th>
<th>IDF</th>
<th>ERU</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 ANY AVENUE</td>
<td></td>
<td>8</td>
<td>.25</td>
<td>1</td>
</tr>
</tbody>
</table>
Utility Bill Calculation

- Manage Customer Account Data
- Read Meters
- Consumption & Manage Rates
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Water Charges

Water Base Charge

- According to meter size

<table>
<thead>
<tr>
<th></th>
<th>5/8”</th>
<th>¾”</th>
<th>1”</th>
<th>1½”</th>
<th>2”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside Cincinnati</td>
<td>$6.72</td>
<td>$8.25</td>
<td>$10.38</td>
<td>$25.34</td>
<td>$32.87</td>
</tr>
</tbody>
</table>

- Rate for 30 days, prorated

- Example:
  - Service 2/01/19-3/04/19 (31 days)
  - $6.72 / 30 days = $0.224 per day
  - $0.224 x 31 days = $6.94

Water Usage

- According to meter readings
- Readings typically in unit of measure called CUFT (cubic feet)
- Usage billed in unit of measure called CCF (one hundred cubic feet)

<table>
<thead>
<tr>
<th>MONTHLY WATER USE IN CCF’S</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRST 20</td>
</tr>
<tr>
<td>$2.79</td>
</tr>
</tbody>
</table>

- Example:
  - Current read - Previous read = Usage
  - 148530 CUFT - 147955 CUFT = 575 CUFT
  - 575 CUFT = 5.75 CCF
  - 5.75 CCF x $2.79 per CCF = $16.04
Stormwater Charges

- Collected from all property owners in the city. The only exempted properties are undeveloped land and street rights-of-way.

- **Class A**: 1 "Equivalent Runoff Unit" (ERU)
  - One and two-family residential properties, **up to 10,000 sq ft** in land area, pay about $5.75 monthly, specifically **$69.00 for 365 days**, prorated
  - Example: Service for 31 days = $69.00 / 365 days X 31 days = $5.86

- **Class B**: 1 ERU x 1.40
  - One and two-family residential properties, **over 10,000 sq ft** in land area, pay about $8.05 monthly, specifically **$96.60 for 365 days**, prorated
  - Example: Service for 31 days = $96.60 / 365 days x 31 days = $8.20

- **Class C**: Depends on land use and total square footage of lots or parcels
  - All non-residential property types, including three and four-family apartments, institutional, commercial, industrial and agricultural, and others
Stormwater Class C Calculation

\[(\text{Area Range Number}) \times (\text{Intensity Development Factor}) \times (\text{charge per 1 Equivalent Runoff Unit})\]

- **Area Range Number** is a number assigned based on the total square footage of lots or parcels.
- **Intensity Development Factor (IDF)** is an indication of the runoff coefficient or percentage of impervious coverage on or in a lot or parcel of real property.

**Example: Commercial parcel with 0.172 acres (7492 sq ft) over 28 days**

- \(\text{ARN} = 4; \text{IDF} = 0.85; 4 \times 0.85 = 3.4 \text{ ERU}; 1 \text{ ERU for 28 days} = \$69.00/365 \times 28 = \$5.29\)
- \((3.4 \text{ ERU}) \times (1 \text{ ERU for 28 days}) = (3.4 \text{ ERU}) \times (\$5.29) = \$17.99\)
Sewer Base Charge

- Service fee according to the size of the water meter, based on 30 days of service
- If billing period has more or less than 30 days, the fee is prorated
- Includes the first 3 CCF of usage each month
- Example:
  - Service 2/01/19 - 3/04/19 (31 days)
  - $39.12 / 30 days = $1.304 per day
  - $1.304 x 31 days = $40.42
Sewer Usage

- Applied to all customers who use more than 3 CCF in the monthly billing period

- Residential customers have a "Winter Average".

- Usage on Winter bills (January, February, March) equals actual amount of water usage

- Usage on Non-Winter bills (April through December) equals amount of water usage or amount of Winter Average, whichever is less

- Commodity charges applied to usage after the first 3 CCF

Example for April 2019 bill:
- Service 3/04/19 - 4/03/19 (30 days)
- Metered water usage: 7.00 CCF
- Sewer Usage Charge = (Winter Average - usage covered in base charge) x commodity rate per CCF
- Sewer Usage Charge = (5.736 CCF – 3 CCF) x $5.879 per CCF = $15.84
Thank You!
Questions?

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