Update on Stormwater Runoff in the Sewer Service Charge

Rate Fairness Board
December 3, 2019
Erin Franks, Rates Administrator
Agenda

- Background & Goals
- Phased Implementation Plan
- Current Work
  - Estimating Stormwater Runoff & Costs
  - Billing System Modification
  - Finalizing Rate and Credit Structure Proposal
  - Outreach Strategy
Background: San Francisco’s Combined Sewer System

Sanitary Flow
Stormwater Flow

Built for stormwater!
Background: Stormwater Charge

- 2018 Rate Study determined that stormwater management represents about 17% of total wastewater costs
- Stormwater costs currently recovered through sanitary sewer charge - based on water use
- Separate charge recommended to recover stormwater costs, an industry best practice
- Implementation work is currently underway
Background: Aligning Charges to Stormwater Runoff Produced

Sanitary Flow  Stormwater Produced

Property 1

Property 2
Background: Aligning Charges to Stormwater Runoff Produced

- The Stormwater Charge reallocates the stormwater portion of the bill from drinking water *volume* to *area*
- Ensures each customer pays their fair share for the combined sewer system
Background: Wastewater Cost Allocation from 2018 Study

Total Wastewater Costs, $

Flow

Chemical Oxygen Demand

Total Suspended Solids

Fats, Oils, Grease

Customer Service

\[
\frac{\text{Flow}}{\text{Total CCF}} = \text{Flow Rate Component} \\
\frac{\text{Chemical Oxygen Demand}}{\text{Total Pounds}} = \text{COD Rate Component} \\
\frac{\text{Total Suspended Solids}}{\text{Total Pounds}} = \text{TSS Rate Component} \\
\frac{\text{Fats, Oils, Grease}}{\text{Total Pounds}} = \text{FOG Rate Component} \\
\frac{\text{Customer Service}}{\text{Total Accounts}} = \text{Service Charge}
\]
Background: Wastewater Cost Allocation with Stormwater Component

Total Wastewater Costs, $

\begin{align*}
\text{Sanitary Flow} & \div \text{Total CCF} = \text{Sanitary Flow Rate Component} \\
\text{Stormwater Flow} & \div \text{Some Unit} = \text{Stormwater Flow Rate Component} \\
\text{Chemical Oxygen Demand} & \div \text{Total Pounds} = \text{COD Rate Component} \\
\text{Total Suspended Solids} & \div \text{Total Pounds} = \text{TSS Rate Component} \\
\text{Fats, Oils, Grease} & \div \text{Total Pounds} = \text{FOG Rate Component} \\
\text{Customer Service} & \div \text{Total Accounts} = \text{Service Charge}
\end{align*}
Phased Implementation Plan

• Implemented / 2018 Rate Study:
  • Sewer Service Charge for unmetered properties (i.e. vacant/parking lots)
  • Implement grant programs and outreach to customers who are estimated to have high future bill impacts

• Next / 2022 Rate Study:
  • Begin multi-year phase-in of full stormwater charge in wastewater rates for all customers in San Francisco
  • Properties with stormwater management eligible for bill credits
Impermeable = surfaces that allow little or no stormwater infiltration into the ground.  
*Examples: roadways, sidewalks, roofs*

Permeable = surfaces that allow some stormwater to infiltrate into the ground.  
*Examples: open space, gardens, lawns*

Both produce runoff!
Current Work: Estimating Stormwater Runoff & Costs

1. Classify Aerial Image into Permeable and Impermeable Areas

- Permeable Area = 15,000 sf
  - x Unit Cost of $1/1,000 sf
  - = $15

- Impermeable Area = 137,000 sf
  - x Unit Cost of $10/1,000 sf
  - = $1,370

Total Cost to Manage Stormwater = $1,385

2. Assign Areas to Parcel

3. Calculate Charges per Parcel
RFP issued to develop GIS database

- Calculates charges at Assessor parcel level
- Connects to billing system
- Public-facing viewer to communicate with customers
Current Work: Finalizing Rate and Credit Structure Proposal

• Rate design can simplify using tiers or rounding:

<table>
<thead>
<tr>
<th>Tier 1</th>
<th>Total impervious area less than 2,000 square feet - $39.12 annually</th>
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<table>
<thead>
<tr>
<th>Tier 2</th>
<th>Total impervious area between 2,000 and 3,999 sq. ft. - $81.00 annually</th>
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</thead>
</table>

• Credits for stormwater management are based on performance and tie to cost of service
  • Need calculator and evaluation mechanism

<table>
<thead>
<tr>
<th>All Other Properties Annual rate per 1,000 square feet</th>
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<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>2018</strong></td>
</tr>
<tr>
<td>Undeveloped (0-15% impervious)</td>
</tr>
<tr>
<td>Regular</td>
</tr>
<tr>
<td>Low Impact (3)</td>
</tr>
<tr>
<td>Light (16-35% Impervious)</td>
</tr>
<tr>
<td>Regular</td>
</tr>
<tr>
<td>Low Impact (3)</td>
</tr>
<tr>
<td>Medium (36-65% Impervious)</td>
</tr>
<tr>
<td>Regular</td>
</tr>
<tr>
<td>Low Impact (3)</td>
</tr>
<tr>
<td>Heavy (66-85% Impervious)</td>
</tr>
<tr>
<td>Very Heavy (86-100% Impervious) (4)</td>
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</tbody>
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Current Work: Outreach Plan

Fall 2019
Develop clear messaging around purpose, goals, and opportunities

Fall 2019-Ongoing
Engage early with highly impacted customers (private and governmental)

Summer 2021 – Spring 2022
Implement city-wide outreach plan in coordination with rate study