SPU Waste Prevention & Recycling Programs

Presentation to the Customer Review Panel
November 9, 2016
Presentation Outline

• **Background** - Seattle's vision and goals for waste prevention and recycling

• **Current status** - progress to date and plans going forward

• **Next up** - program focus and progress needed in future years

• **Challenges ahead**

• **Input** that we will seek from Panel
Background - Fulfilling Our Promise in Solid Waste

Saving resources to save money and reduce environmental impacts:

• **Being efficient** - Reducing waste and diverting resources to reduce disposal costs and keep rates down

• **Forward looking** - Strong planning to leverage the right mix of services, outreach, incentives and requirements

• **The best place to live** – Seattleites love their recycling and composting services, and also appreciate the environmental benefits
Background – Setting the Vision

A national leader for over 25 years:

• Vision and guidance in a series of Solid Waste Plans
  • 1989 *On the Road to Recovery*
  • 1998/2004 *On the Path to Sustainability* (and update)
  • 2013 *Keeping up the Pace to Zero Waste*

• **2013 Plan sets vision and programs for a decade**
  • Provides blueprint for waste prevention and recycling programs and initiatives for 2012-2022
  • Sets goals to reduce or divert 60% of our waste by 2015 and 70% by 2022

• **2013 Plan adopted by City Council**, and specifically the 60% & 70% goals, in February 2013
Current status – Where are we?

• Implementing over 100 programs and initiatives for waste prevention and recycling from the Solid Waste Plan
• Over 75% of programs or initiatives partially or fully completed by 2016
• **Total waste generation** below residential and economic growth
• 2015 **diversion at 58%**, just below 2015 plan goals
Status - City Tons & Diversion

City Overall

<table>
<thead>
<tr>
<th>Disposed Tons</th>
<th>Recycled Tons</th>
<th>Target Rate</th>
<th>Recycle Rate</th>
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</thead>
</table>

Year | Disposed Tons | Recycled Tons | Target Rate | Recycle Rate |
-----|---------------|---------------|-------------|--------------|
2000 | 750,000       | 150,000       | 0.5         | 0.2          |
2001 | 700,000       | 100,000       | 0.6         | 0.3          |
2002 | 650,000       | 80,000        | 0.65        | 0.4          |
2003 | 620,000       | 70,000        | 0.65        | 0.45         |
2004 | 590,000       | 60,000        | 0.7         | 0.5          |
2005 | 570,000       | 55,000        | 0.75        | 0.55         |
2006 | 550,000       | 50,000        | 0.75        | 0.55         |
2007 | 530,000       | 45,000        | 0.8         | 0.6          |
2008 | 500,000       | 40,000        | 0.85        | 0.65         |
2009 | 470,000       | 35,000        | 0.85        | 0.65         |
2010 | 440,000       | 30,000        | 0.85        | 0.65         |
2011 | 410,000       | 25,000        | 0.85        | 0.65         |
2012 | 380,000       | 20,000        | 0.85        | 0.65         |
2013 | 350,000       | 15,000        | 0.85        | 0.65         |
2014 | 320,000       | 10,000        | 0.85        | 0.65         |
2015 | 290,000       | 5,000         | 0.85        | 0.65         |

60.0%
Status – Single-family Sector

Single Family

- Disposed Tons
- Recycled Tons
- Target Rate
- Recycle Rate


0 50,000 100,000 150,000 200,000 250,000 300,000

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8
Status – Multifamily Sector

Multi-Family

Disposed Tons | Recycled Tons | Target Rate | Recycle Rate


42.5%
Status - Commercial Sector

Disposd Tons
Recycled Tons
Target Rate
Recycle Rate

Disposed Tons
Recycled Ton
Target Rate
Recycle Rate

0 50,000 100,000 150,000 200,000 250,000 300,000 350,000 400,000
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8

63.4%
Status - Self Haul Sector

Self-Haul

- Disposed Tons
- Recycled Tons
- Target Rate
- Recycle Rate

2000 to 2015: Disposed Tons and Recycled Tons with a peak of 32.9% in 2015.
Next up - Tons for 70% Goals

Tons Recycled

- **Actual 2015**
- **Tons needed to reach 2022 Goal**

- **Single Family**
- **Multi Family**
- **Self Haul**
- **Commercial**

Tons needed calculated on 2015 generation using “70% Scenario” sector specific goals. Self Haul light green assumes
Next up - Residential Focus to Reach 70%

New residential recycling diversion by 2022:

- Expanded organics participation and enforcement (26,000 tons)
- Expanded recycling participation and enforcement (8,600 tons)
- Increased product stewardship/prevention in textiles, retail bags, latex paint, etc. (3,000 tons)
- Initial ramp up of pet waste/diaper service (2,400 tons)
Next up - Commercial & Self-haul Focus to Reach 70%

New commercial recycling diversion by 2022:

• Expanded organics participation, enforcement and food ware (34,900 tons)
• Expanded recycling participation, enforcement, audits, and additional bans (23,100 tons)

New self-haul recycling diversion by 2022:

• Expanded recycling participation, enforcement, audits, and additional bans (15,800 tons)
• Floor sort of construction waste loads (12,600 tons)
How did We Determine the 70% Goal and Programs?

Program modeling built on prior data and forecast outcomes:

• *What’s left in garbage?*
  Sort the waste - to target materials and sectors

• *What will it take to capture (recycle) these targets?*
  Price and analyze most cost-effective approaches

• *What is the lowest cost overall approach?*
  Model combined outcomes with *Prevention and Recycling Potential Assessment (PRPA)*
Model Process *(Program Example)*

**Set Programs**

<table>
<thead>
<tr>
<th>Program</th>
<th>Program Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Old</td>
<td>Curbside Recycle SQ</td>
</tr>
<tr>
<td>3</td>
<td>Backyard Yard in city bins</td>
</tr>
<tr>
<td>4</td>
<td>Backyard food in city bins</td>
</tr>
<tr>
<td>5</td>
<td>Grasscycling</td>
</tr>
<tr>
<td>6</td>
<td>Backyard yard waste not in city bins</td>
</tr>
<tr>
<td>7</td>
<td>Backyard food not in city bins</td>
</tr>
<tr>
<td>8</td>
<td>SF Status Quo 2008 Yard and Food Waste</td>
</tr>
<tr>
<td>12 New</td>
<td>Textile Market Development - SF</td>
</tr>
<tr>
<td>15</td>
<td>Pet Waste &amp; Diapers - SF</td>
</tr>
<tr>
<td>16</td>
<td>Plastic bag ban - SF</td>
</tr>
<tr>
<td>19</td>
<td>Increase SF Res Ban Enforcement</td>
</tr>
<tr>
<td>20</td>
<td>Reusable bag campaign - SF</td>
</tr>
<tr>
<td>41</td>
<td>Restore Education - SF</td>
</tr>
<tr>
<td>42</td>
<td>Product Stewardship - SF</td>
</tr>
<tr>
<td><strong>New</strong></td>
<td></td>
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<tr>
<td>SBP</td>
<td>Residential organics ban single family</td>
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</tbody>
</table>

**Results**

Garbage Composition 2020

- **PLST** 20%
- **OOR** 51%
- **FOOD** 3%
- **MISC** 8%
- **MWP** 2%
- **NP** 0%
- **OALU** 1%
- **FOER** 2%
- **OGLS** 0%
Recycling Savings – Back of the Envelope

- SPU pays appx $55 per ton to load, haul and dispose of garbage
- SPU pays appx $50 per ton to load haul and process organics
- SPU pays appx $10 per ton to load and process recyclables (net of market values)
- Additional collection savings and positive revenue lag
Recycling Savings 2013 - 2023

Net Benefits and Tons avoided through recycling

$0


Net Benefits Tons avoided through recycling

Net Benefits

Tons avoided through recycling

Seattle Public Utilities
Looking Forward - Challenges

• **Customer evolution** - Ramping up to successful service of and participation for thousands of new residents, especially multifamily.

• **Program evolution** – Increasing assistance and enforcement assistance to reach all customers.

• **Services evolution** – Minimizing contamination as services expand and participation increases. Investments for potential new pet waste/diaper services.

• **Infrastructure evolution** – Opportunity for future garbage sorting facility (to remove high value materials) but limited facility and capital capacity.
Looking forward - SBP Review

SPU is confirming waste prevention and recycling investments (and savings) for 2018-2023
• Targeted outreach, assistance, and enforcement
• Disposal and collection savings
• Potential future waste service and/or facilities

Input from Customer Review Panel in early 2017

(SPU will update our Solid Waste Plan in 2018)