2015 Earth Day Festival
Waste Audit

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**Event:** 2015 Earth Day Festival

**Event Host:** PSU Environmental Club

**Event Date, Time, and Location:** April 22^{nd}, 2015 from 11am-3pm in the PSU Park Blocks

**Event Description:** The PSU Earth Day Festival is a student-led event dedicated to celebrating our home, the Earth. They will collaborate with our campus, local, and regional communities in a week-long showcase of achievements and progress in renewable technologies, ecological stewardship and social justice. The range of events will include music, art, work parties, speakers, workshops, and other opportunities for sharing and participation.

**Campus Sustainability Office Mission:** CSO fosters partnerships across departments and disciplines that nourish institutional stewardship of our environment and support a growing culture of sustainability within PSU. We aim to align operations, policies, and planning with University conservation and sustainability goals. CSO values reciprocal communication, striving both to educate as well as respond to the campus community.

**PSU Green Event Guidance:** CSO provides event waste management services at PSU. When an event has food present or disposables are being distributed in excess, event organizers contact CSO at recycles@pdx.edu for assistance. We work with the organizers to provide the proper waste receptacles and, if available that day, employees and/or volunteers to manage waste collection throughout the event, ensuring maximized diversion.

**Methods:** For the Earth Day Festival, five waste stations were created throughout the park blocks (Figure 1). Four encompassed in the SMSU park block and one located near the library. All other nearby stand-alone garbage collection was blocked off with cardboard and a paper sign displaying the message, “Please use waste stations. Thanks! –PSU Recycles” (Figure 3). Garbage containers were dumped before the event began so there was no pre-event contamination.

**Problems on CSO end/Areas for improvement:**

- Signage was not very effective and had little effect on proper waste disposal (Figure 2). This is an area for much improvement and proves to be one of our biggest challenges.
- Signs blocking stand-alone garbage collection were moved in two locations. These were the same two locations that had problems the previous year.
- At least two more waste monitors would have helped ease the process, but I would prefer one per station throughout the event.

**Possible areas for improvement next year on E-Club end:**

- Discourage the use of brochures, pamphlets, and other forms of disposable advertising.
- Discourage disposable giveaways.
- Utilize the Portland State University Green Events Guide

**Positive observations:**

- No containers were overflowing. One of each container type was perfect for each waste station.
- Event participants were very willing to discuss alternatives to their disposable containers.
Notes:

- **Compost**: Largest amount of waste by far at 55.6 pounds. It weighed over twice as much as the second highest form of waste with pizza boxes (18.8 pounds) included in compost\textsuperscript{6} total.
- **Commingle**: Third highest amount of waste at 16 pounds. A good portion of the weight was due to cardboard from Yerba Mate boxes.
- **Glass**: Smallest amount of waste collected from event at 6.2 pounds. More than I was expecting, but each bottle was roughly one pound so there was only about 6 glass bottles disposed of.
- **Landfill**: Second largest amount of waste at 25 pounds. It is difficult to say what the majority of the weight came from. A good amount may have been unfinished coffee inside disposable containers. A better portion was most likely plastic clamshells, plastic cups, plastic utensils, and plastic film.
- I checked with all the food carts to see where they dump their waste. All carts said they put their waste in the dumpster near Montgomery or take it with them. While this is mostly true I did see a few items put into containers by cart operators. Example: Glass sauce bottle, metal olive oil container. These items were not included in the audit totals.
- Waste noted:
  - A lot of the waste was compost (food and fibers). A good portion was plates, crusts, and napkins from pizza served, but a better portion came from food carts in the park blocks. This waste was not generated by the event but was possibly consumed by event attendees\textsuperscript{7}.
  - “Does your meal come with a side of devastation” brochures from Farm Animal Rights Movement (FARM) (Figure 4). I never found any of these in the recycling, but I discovered these brochures in the garbage and frequently on the ground at the festival.
  - Dixie cups from a festival participant. They appeared to be all paper and not lined with plastic, but to be safe I put these in the landfill. I do not know a better option for the event participant to use, and I will research the product to confirm if it can be composted in the future.
  - “Compostable” plastic cups from the smoothie cart (event participant). While they are technically compostable we decided not to accept these types of plastics for composting at the event. Since they are not served at PSU I could not confirm if they are BPI certified and therefore accepted by the compost facility that takes our waste.
  - Ice cream wrappers from Umpqua Bank ended up in every type of waste collection. The ice cream ended up in the landfill collection frequently after almost no consumption.

**Summary of Event Waste Collection**: 99% of waste that could be diverted\textsuperscript{8} was diverted to compost, commingle, and glass recycling. There was 0% contamination in all diverted waste because of constant hand sorting throughout the entirety of the event. The last 1% (estimated) is any liquids (or liquid-like substances) such as coffee, ketchup, other sauces, hummus, and things that could not be separated from landfill waste. The majority of the waste produced was most likely from those purchasing food from food carts not affiliated with the festival and those who brought food/packaging from home or somewhere else around PSU campus.
(Above) Figure 1: Waste station map

(Below) Table 1: Waste locations and weights

<table>
<thead>
<tr>
<th>Location</th>
<th>Compost (lbs)</th>
<th>Landfill (lbs)</th>
<th>Commingle (lbs)</th>
<th>Glass (lbs)</th>
<th>Total (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Station 1</td>
<td>23.6*</td>
<td>2.4</td>
<td>0.4</td>
<td>2.4</td>
<td>28.8*</td>
</tr>
<tr>
<td>Waste Station 2</td>
<td>2.4</td>
<td>4.4</td>
<td>2.4</td>
<td>1</td>
<td>10.2</td>
</tr>
<tr>
<td>Waste Station 3</td>
<td>13.8</td>
<td>6.2</td>
<td>9</td>
<td>1.8</td>
<td>30.8</td>
</tr>
<tr>
<td>Waste Station 4</td>
<td>6</td>
<td>5.2</td>
<td>2</td>
<td>1</td>
<td>14.2</td>
</tr>
<tr>
<td>Waste Station 5</td>
<td>9.8</td>
<td>6.8</td>
<td>2.2</td>
<td>0</td>
<td>18.8</td>
</tr>
<tr>
<td></td>
<td>55.6*</td>
<td>25</td>
<td>16</td>
<td>6.2</td>
<td>102.8*</td>
</tr>
</tbody>
</table>

*Weight includes the addition of 18.8 pounds of compostable pizza boxes. They were not disposed of at Waste Station 1, but this was the nearest waste station to where they were collected.
Graph 7: Totals by Type

- Compost: 36%
- Commingle: 16%
- Pizza Boxes: 18%
- Glass: 6%
- Landfill: 24%

(Above) Figure 2: Waste Station Setup
**Terminology Definitions:**

1. **Waste Station** – A setup including one container of each type: commingle recycling, glass recycling, compost, and landfill.

2. **Stand-alone** – Individual container that should be matched with complementary containers to maximize diversion.

3. **Contamination** – The presence of items that do not belong.

4. **Disposable** – Something designed for one time use.

5. **Participant** – Vendor, club, or organization member who is part of event activities, presentations, etc.

6. **Compost** – (in terms of waste collection and not the breakdown process) a conglomeration of food, compostable fibers, and BPI (Biodegradable Products Institute) certified plastics.

7. **Attendee** – Anyone who attends the event but is not directly involved in event organization and function.

8. **Divert** – To prevent resources from ending up in a landfill.