

trashblitz

DENVER RESULTS

2020



5 GYRES
SCIENCE TO SOLUTIONS





Project Goals

TrashBlitz is a community based project designed to engage local stakeholders in measuring plastic pollution and other trash across their city - from shorelines to riverbeds to urban neighborhoods - and utilizing the data to generate a relevant action-plan for their city. TrashBlitz provides robust research protocols and a web based app that both measures problem products and brands, and a platform to bring diverse stakeholders together to co-create solutions, to stop plastic pollution at the source.

The Inland Ocean Coalition, Into the Sea, and 5 Gyres launched TrashBlitz in Denver on October 25, 2020, mobilizing over 100 Denverites in collecting information on urban and home waste - categorized by type, material and brand - across the Denver metro area. Volunteers from neighborhoods across Colorado helped collect the data, sampling their own home waste and 30 randomly selected sampling points across Denver over the course of two weeks. The findings, which are designed to be open source (highlights below) show a clear and immediate need to push for policy change that centers around source reduction.



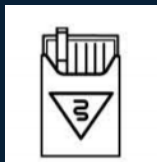
Project Challenges

While ample evidence of the global plastic pollution problem exists, having local data specific to neighborhoods is a powerful way to engage stakeholders and policymakers. The TrashBlitz platform helps to tell the story for local leaders of what's in our backyard, and how can we use this data to solve specific problems.



4,033

Total number of items picked up



Camel

Most picked up brand



Food Wrappers

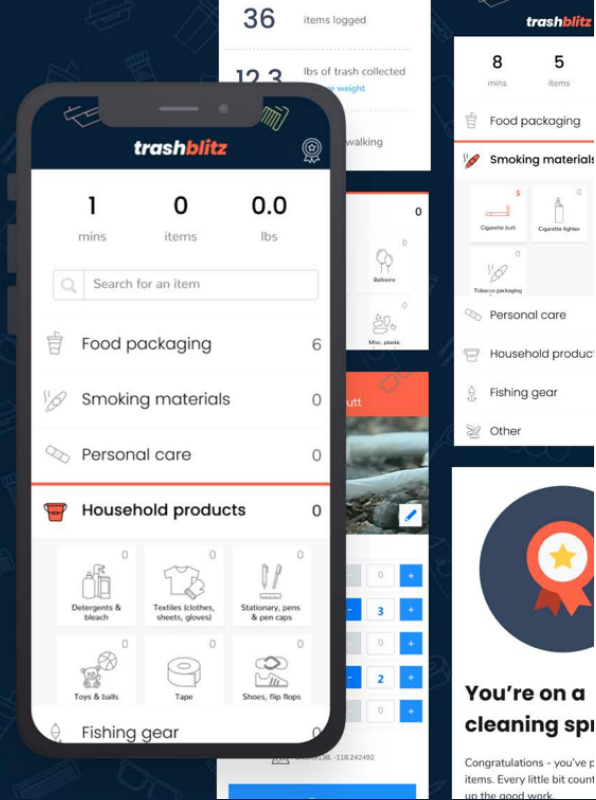
Most picked up item

The Methodology

Utilizing modern technologies, 5 Gyres created a web-based application that could be accessed via mobile to better suit the evolving role of computer based data collection of today. Access through TrashBlitz.org allows users to input trash data as they are collecting it in real time, generating higher quality data and more accurate reporting.

The TrashBlitz data card and web based app (trashblitz.org/methodology) aligns with global NGOs, like Surfrider, to measure plastic pollution and give municipalities, business leaders, and the public, the data they need to generate solutions based on their communities' key problems. This allows us to scale TrashBlitz methods to any city and any watershed across the globe.

We modeled our data collection protocols to align with global standards developed by the UN GESAMP (Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection), a working group 5 Gyres participated in that arose from a need to better harmonize global methods. Having contributed to the GESAMP report, we adapted the linear transects for beaches and riverbanks to roadsides in the urban setting.



Partner



PlasticScore
Zero Waste Dining



Organizations



Community Approach

After completing data collection from 30 sampling sites throughout the city and 14 home audits, participants and partners were invited to come together to discuss the results of outdoor cleanups and home audits and learn about actions that participants can take to support local legislation, reduce their own plastic use, and become involved at the community level. Feedback on the process was provided by participants followed by a discussion about what the results of TrashBlitz Denver show, as well as possible solutions.

COVID-19

Community Barriers

“Unprecedented” -- the word of 2020. The COVID-19 virus brought on additional challenges as we TrashBlitzed' Denver. With those additional challenges, COVID-19 safety protocols were on the forefront when organizing the campaign.

Participants were urged to organize groups only with members of their households and to wear a face mask at all times. We asked Blitzers to wear reusable gloves and encouraged the use of litter grabbers. Additionally, community members participating in TrashBlitz Denver were asked to maintain at least 6 feet of distance from others and to make sure their trash bag was securely tied to protect sanitation workers.

Fortunately, anyone who was not feeling well and unable to participate in outdoor cleanups or not comfortable going out into the public had the opportunity to do the home audit. It is important to campaign hosts that the event was inclusive and inviting to any and all community members, despite a global pandemic.



TrashBlitz Results

Outside Audit

Top 20 Items

Items	count	percent
Fragment	814	25.6%
Food wrapper	436	13.5%
Cigarettes	381	12.0%
Beverage bottles	192	6.05%
Bottle caps/rings	156	4.91%
Reading materials	110	3.46%
Other bottles	93	2.93%
Straws	82	2.58%
Other bags	82	2.58%
Textiles	70	2.20%
Lids	66	2.08%
Cups	62	1.95%
Silverware	54	1.70%
Face masks	38	1.20%
To-go containers	37	1.16%
Zip Ties	35	1.10%
Plastic foam	35	1.10%
Sachet	34	1.07%
Cannabis supplies	32	1.01%
Strapping bands	30	0.94%

Top 10 Materials

Brands	count	percent
Plastic (no #)	1687	53.1%
Paper	453	14.2%
Metal	376	11.8%
Plastic #7	156	4.91%
Plastic #6	92	2.90%
Plastic #1	90	2.83%
Fabric	74	2.33%
Plastic #5	63	1.98%
Glass	45	1.42%
Cardboard	38	1.20%

Top 5 Brands



TrashBlitz Results

Home Audit

Top 20 Items

Items	count	percent
Food wrappers	140	17.1%
Other bottles	91	11.1%
Other bags	86	10.5%
To-go containers	80	9.82%
Fragment	52	6.38%
Containers	46	5.64%
Lids	35	4.29%
Sachet	31	3.80%
Plastic film	26	3.19%
Beverage bottles	19	2.33%
Plastic foam	18	2.21%
Bottle caps/rings	17	2.09%
Grocery bags	16	1.96%
Cups	15	1.84%
Cotton swabs	12	1.47%
Menstrual items	12	1.47%
Cleansers	11	1.35%
Envelopes	11	1.35%
Reading materials	11	1.35%
Band-aids	9	1.10%

Top 10 Materials

Brands	count	percent
Plastic (no #)	395	58.4%
Metal	73	8.96%
Paper	58	7.12%
Plastic #7	53	6.50%
Cardboard	52	6.38%
Plastic #1	46	5.64%
Plastic #5	40	4.91%
Plastic #6	27	3.31%
Glass	20	2.45%
Plastic #2	16	1.96%

Top 5 Brands

IZZE
 SPARKLING JUICE

J.S.A. BANK
 THE NEW TRADITION SINCE 1864

Ricola
 From Switzerland

Starbucks

HERSHEY'S

Izze	18 count, 2.21%
Ricola	14 count, 1.72%
Joseph A. Bank	12 count, 1.47%
Starbucks	10 count, 1.23%
Hershey's	10 count, 1.23%

Feedback

Despite the abundance of national trash datasets, we have seen firsthand the value of having regional datasets showing legislators and local businesses the most prevalent and polluting items in their community. Many Denverites are looking for a way to engage in this particular issue and TrashBlitz has provided that entry point. We will continue to leverage this data to engage participants, partners, legislators and local businesses through the TrashBlitz Denver coalition and use the data collected to push for and support changes throughout our city, county, state and beyond.

Not only did COVID-19 impact the way we conducted TrashBlitz Denver, but it also impacted the waste collected. Over half of participants reported finding single-use personal protection equipment (masks, gloves, ect.) signifying that COVID-19 is not only impacting our daily lives, but the trash escaping into the environment.

When we surveyed participants, 77% of those surveyed reported their experience of participating in TrashBlitz Denver had a significant impact on their attitude and actions towards waste and pollution. 92% reported they are more aware of environmental policy efforts, became more intentional with how they recycle, and/or have changed their consumer habits due to their involvement in TrashBlitz Denver.



Denver-Specific Barriers

The TrashBlitz Denver Committee has identified some solutions to the problem of plastic pollution in Denver:

- 1. Public Sector** - There is a need for greater education and more outreach efforts that consistently and accurately describe the problem of plastic pollution. Change at the cultural level is needed in regards to plastic and its perceived harmlessness and convenience.
- 2. Policy Change** - One of our main goals with TrashBlitz Denver is to utilize the data for policy efforts that would encourage reduction of single-use plastics. This information allows us to provide council or region-specific data for the inland community of Denver.
- 3. Social Justice** - The lack of proper waste infrastructure, along with lack of access (to nature, outreach resources, decision makers, etc) are strongly felt in the Denver area.