

Flexing Forward

A pet industry report on the first collaborative in-store recycling
program for plastic pet food and treat bags



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EXECUTIVE SUMMARY

According to research conducted on behalf of the Pet Sustainability Coalition (PSC), it is estimated that 300 million pounds of plastic pet food and treat bags are generated in the United States each year. It is also estimated that 99% of this packaging does not currently have an end-of-life solution outside of the landfill. In 2018 PetSmart and PSC commissioned a feasibility report as well as an impact matrix that evaluated dozens of potential packaging efforts ranked by their potential impact to combat this problem. One of the solutions moved forward from this study was launching a return to retail pilot aimed at researching the feasibility of collecting pet food and treat packaging and finding a sustainable end of life solution for the materials collected as PSC pushes the industry moves towards recyclable, compostable, and refillable options with existing established sustainable end of life systems.

Through the financial generosity of Earth Animal, PSC launched Flex Forward in early 2019. Based on the data needs identified in the initial feasibility study, collection goals for the program were established at collecting 5,000 lbs. of petfood and treat packaging. It was estimated this would take at least 6 months, and the team established a goal of starting collections in early 2020. However, due to COVID-19, collections weren't able to start until August 2020. Pet industry distributor Pet Food Experts provided logistical and staff support, as well as access to their retailer network in the Pacific Northwest region of the United States.

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In the 5 months of active collections in the Flex Forward pilot, 127 participating retailers collected 8,356 pounds of pet food and treat packaging, greatly surpassing the initial goal of 5,000 pounds. Meeting the collections target, collections were completed in February 2021.

Through the collections phase of the Flex Forward pilot, many valuable lessons were learned, many available in this report. Moving forward since the end of collections, PSC is working with several recycling, and end of life partners to determine the most sustainable solution for the collected materials. At the same time, PSC is working with the pet industry as a whole to move the industry towards recyclable, compostable, and refillable packaging solutions, which already have established collections and/or processing systems in place.

This report covers the conception, design, and collections phases of the Flex Forward pilot. Recycling and end of life testing is on-going and results of that testing will be released in a future report, hopefully in early 2022. The Flex Forward pilot would not have been possible without the partnership and financial support of pilot sponsor, Earth Animal and the support of pilot partner, Pet Food Experts.

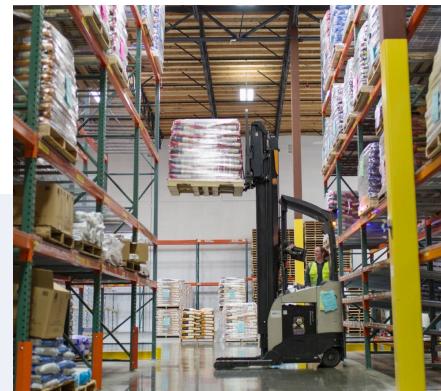


Image Source: petfoodexperts.com

ABOUT THE PET SUSTAINABILITY COALITION

The Pet Sustainability Coalition advances business through profitable environmental and social business practices. Founded in 2013 by eight companies who recognized a need for a collaborative platform to address increasing expectations for sustainable products, PSC now supports almost 200 pet companies to measure, improve, and celebrate their environmental and social performance. PSC also mobilizes its member community to advance sustainable proteins, sustainable packaging, and diversity, equity and inclusion. Learn more at petsustainability.org.

BACKGROUND

According to research conducted on behalf of the Pet Sustainability Coalition (PSC), it is estimated that 300 million pounds of plastic pet food and treat bags are generated in the United States each year. Currently, nearly all of these bags are made by co-extruding and laminating multiple layers of film plastics into a multilayer sandwich structure to form the package. Each layer performs a different functional purpose, and it is nearly impossible to separate layers from each other with the current state of recycling technology. Furthermore, the cost of recycling is more than the value of the materials in the package. As a result, PSC estimates that over 99 percent of all pet food bags in the United States go to the landfill.



A handful of brands have established recycling options with TerraCycle whereby their individual brands of bags can be returned by mail or dropped off at select retail establishments, which then would mail them back to TerraCycle for recycling. Challenges of the TerraCycle model include limitations to which brands are able to participate, cost, and consumer participation.

Alternatively, some bag manufacturers have begun to offer “recycle-ready” bags that are considered to be recyclable in a polyethylene stream, and to date “recycle-ready” bags only have a small percentage of the market in the single digits.

The Pet Sustainability Coalition has a goal to improve the sustainability of pet product packaging. Within this goal, PSC aims to reduce landfill waste and plastic released in the environment by working to support packaging and recycling technologies, design-for-recycling, and the establishment of programs to collect plastic pet food bags for recycling.

In 2018 PetSmart and PSC commissioned a feasibility report from the waste thinktank, Circular Matters as well as an impact matrix that evaluated dozens of potential packaging efforts ranked by their potential impact. This feasibility report modeled what a successful return-to-retail petfood packaging pilot would entail, and helped the Pet Sustainability Coalition estimate costs for completing a pilot and how many retailers would need to be engaged in order to reach an amount of packaging that would be of value to a recycler.



Program Overview

GOALS

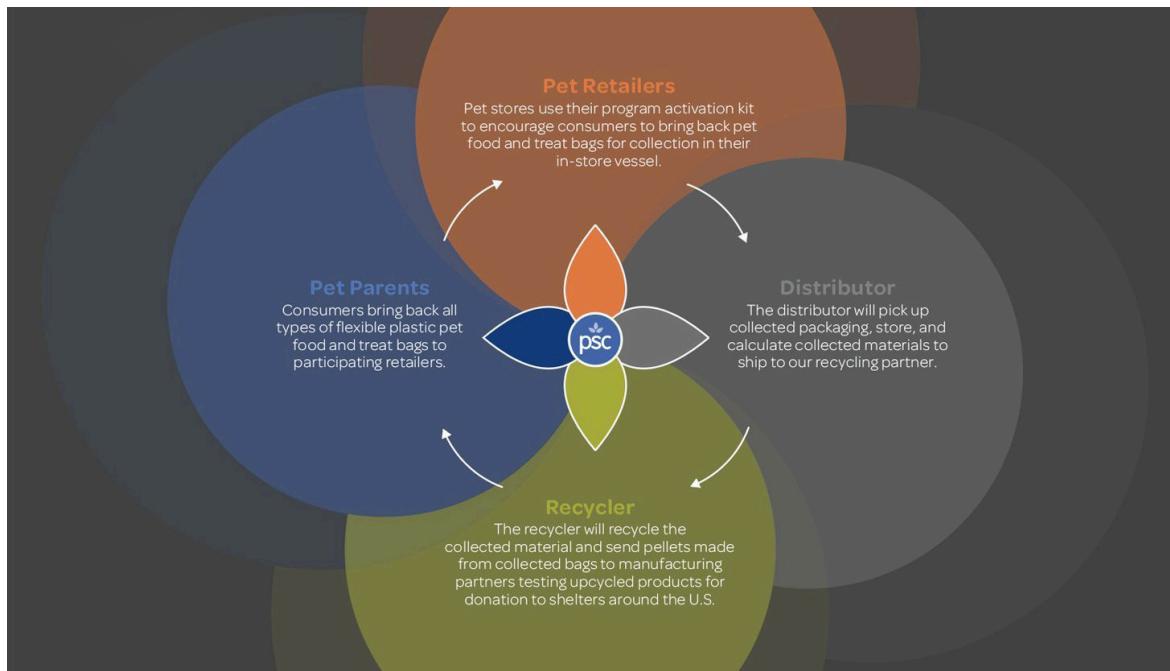
Although there are economic and technological challenges to recycling pet food and treat bags, sending 300 million pounds of packaging to the landfill causes environmental devastation and creates a negative consumer experience for the majority of pet parents who are looking for sustainable packaging. Recovery options for hard to recycle materials are understudied, and pet food bags in particular have unexplored challenges (oils and residues). Opportunities are abundant based on growing volume and continuously advancing end-of-life technology.

After examining dozens of potential opportunities to accelerate sustainable packaging in the pet industry, an in-store recycling program rose to the top. Its ability to deliver novel data on pet food packaging that could inform an industry wide collections program is a driving force.

PSC set out to achieve the following goals through its return to retail pilot program:

1. Estimate collection quantities through a return-to-retail model
2. Determine participation interest and engagement from pet retailers
3. Quantify collection and recycling costs
4. Determine cleaning and sorting requirements for traditional mechanical recycling
5. Model reverse logistics to collect and store used bags from retailers
6. Test and evaluate the suitability of post-consumer pet food bags for a variety of recycling types
7. Identify the best (highest value) markets for post-consumer pet food bags after collection
8. Provide a supply of recycled resin pellets to pet manufacturer(s) to develop potential "new" molded plastic pet products
9. Model an inclusive collections and recycling solution for all brands pet food brands using multi-laminate flexible packaging
10. Collect 5,000 lbs. of pet food packaging waste in order to attract recycling partners





The feasibility study outlined several key components that would be required for a successful pilot including:

1. **A distribution partner:** In order to move collected bags from retail locations to a recycling facility, a distribution partner was essential. Furthermore, the distribution partner needed to have a single warehouse location that served a minimum of 200 locations in order to reach a minimum of 5,000 lbs. of collected bags in an efficient amount of time. PSC's preference was to work with a partner who could collect bags during pre-scheduled deliveries in order to minimize any additional carbon emissions created from trucking collected bags from retailers to a warehouse where the bags could be counted, reported, stored, and then shipped in large quantities.



PSC ICON-level member Petfood Experts (PFX) signed on as the distribution partner for the pilot. Since the beginning of PFX's participation in the Flex Forward pilot they have provided hundreds of hours of team support from dozens of staff members, both in their headquarters in Connecticut, and on the ground in the pilot area of Washington and Oregon.

"Pet Food Experts is fully invested in being an active participant in transforming our industry toward a more sustainable model. The Flex Forward pilot was a unique opportunity to leverage our expertise in moving product to our retail partners and to expand that service to offer easy pick-ups of used petfood and treat bags. PFX is excited that we were able to show up at the starting line and we look forward to collaborating with others as scalable solutions arise."

– Michael Baker, President, Pet Food Experts

2. **Retail Partners:** Using data from existing store take-back collection programs, it was estimated that at average retail store sales rates, the pilot would require at least 250 independent stores or 50 larger big-box style pet specialty stores to collect 5,000 lbs. of used pet food and treat bags in 3-6 months. After partnering with PFX, the cross-organization Flex Forward team recruited retailers at several events and through several channels. Events included an Earth Animal launch event at the Global Pet 2020 tradeshow and a virtual PSC event with approximately 300 attendees in April 2020. Additional recruitment included direct email and blogs working through PFX's communication platforms. To be considered eligible for the pilot, retailers had to be a current PFX customer that was served directly by PFX delivery trucks. At the time of the program's launch, this included 273 retailers, though a few retailers moved in and out of eligibility during the course of the pilot. The pilot aimed to drive participation with 40% of these retailers.



Earth Animal launch event at Global Pet 2020 tradeshow

3. **Recycling Partners:** The ideal recycling partner would have both the appropriate equipment and capabilities for mechanical recycling of the collected bags and would be close in location to the collection region to minimize transportation costs and impacts. PSC sent inquiries to 6 potential recycling partners that met this criteria, and one of the six responded with interest.

Engineered Plastics: Though located in Pennsylvania far from the collection region, the leadership at Engineered Plastics was eager to help find a solution for petfood bags and was motivated more by potential impact than by the market price for collected multi-layer flexible pet food and treat bags. In addition, Engineered Plastics could bring expertise to the pilot, having years of experience recycling post-industrial pet food packaging.

" We strive to help innovate solutions to minimize waste and help the environment. At Engineered Plastics Recycling Solutions, we feel that with our many years of experience we have the potential to find a process that will efficiently recycle pet food and treat bags. This is not by any means an easy task, but we are willing to put in the time and effort to pave the way for a future with less waste."

– Kurt Duska, Sustainability Consultant, Engineered Plastics

4. **Project Coordinator:** In order to orchestrate the communications, operations, and collaborative process, the pilot would require consistent leadership from a single organizing body. The commitment was estimated to be a minimum of a 9-month commitment including preliminary project development, relationship building with all project partners, and project management throughout the planned active collection and testing phases. The Pet Sustainability Coalition contributed between 10 and 30 hours per week of project management support beginning in January of 2020 and continuing through September of 2021.

5. **Fiscal sponsor:** A pilot project of this size and breadth would require a long-term financial partner to afford project coordination, design and development of the collection bins and program materials, development and execution of a retailer engagement strategy, recycling trial costs, and shipping fees. At the same time, in order to maximize the pilot's chance of success, it was imperative to maximize the number of participating retailers. Therefore, to meet the target collection amount, a goal was set to offer this recycling program at zero cost to retailers.



PSC ICON-level member, Earth Animal (EA), was eager to invest in solutions that would be more impactful than their existing packaging collection program that was yielding less than optimal returns and was considered financially unsustainable long term. Earth Animal generously signed on as the pilot's sole financial sponsor and also contributed significant staff support.

"When the sustainability leaders in the pet industry work together, it is a true force for good that can spark dynamic change. Working with PSC and Pet Food Experts in developing the Flex Forward pilot project did just that. By fostering collaboration between varying vendors and retailers, exploring of innovative solutions to real challenges, and providing crucial learning that can inform our next disruptive initiatives, we're convinced real positive change is coming to the pet industry."

– Stephanie Volo, Chief Marketing Officer, Earth Animal

LOCATION

The location selected for the recycling pilot included the Pacific northwest region of the PFX's distribution network. Early data into the demographics of this population showed high interest in participation and high engagement in other waste reduction programs including a pallet re-use program. In addition, PFX's distribution hub in Fife, Washington had successfully modeled a cardboard recovery program in the past and therefore would be fully equipped to implement this program.



TIMING & COVID-19 DELAY

Flex Forward was scheduled to begin active collections in March 2020. At that time, it was estimated that it would take 250 retailers 6 months to collect 5,000 pounds of packaging. However, at the expected time of the launch COVID-19 was sweeping the United States and the planned pilot area went into lockdown, with most of the participating stores being forced to close in-store shopping. PSC, PFX, and Earth Animal determined for the sake of safety of pilot participants, the pilot would be launched when the majority of the stores were able to be open to the public again, and PFX was again able to resume return service. After a delay of 5 months, active collections began in August 2020.

Brand Design Overview



Under the leadership of Earth Animal's marketing team, and with PSC support, the recycling pilot came to life.

PROGRAM NAMING: FLEX FORWARD

As a play on "Pay It Forward", the Flex Forward name was selected and a brand theme was designed. "To us, the name Flex Forward captured everything the program is meant to do. The program's goal is to collect the many forms of flexible packaging in the pet industry and repurpose it as a new beneficial product - moving those flexible plastics forward in their life-cycle. Together with the Pet Sustainability Coalition, we want to harness the energy of the pet space and flex our collective muscle to drive positive impact." Michael Cody, Director of Sustainability, Earth Animal."

MARKETING MATERIAL DESIGN:

Ensuring high quality design and development of Flex Forward assets was a key component to ensure participation from consumers, retailers, and pet food and treat brands.

Assets included, but were not limited to:

- Pilot logos
- Pilot imagery
- Pilot web pages
- Public-facing interactive digital maps listing retail locations
- Collection bins
- How-to videos
- Specially designed and curated social media kits for each stakeholder group including brands, partners, and retailers
- Promotional videos
- Flyers
- Store take-backs cards
- Aisle signage
- Sale-sheets
- Training videos
- Template press releases
- FAQ documents aimed to educate staff at participating retailers and their consumers



COLLECTION BIN

During the design phase, special attention was paid to the collection bin. The bin would need to hold an average week's supply of collected pet packaging, be durable to withstand the 6-month active collection phase, made of sustainable materials, easily filled and emptied, be aesthetically pleasing enough that retailers would want it in their store, and also able to catch the consumer's attention. A tall rectangular sturdy cardboard container made from 100% recycled material was chosen. This design had multiple benefits including:

- Cardboard could be shipped flat and therefore at lower cost (Bins were assembled by the participating retailer through printed instructions and a digital how-to assemble video was included in the digital asset kit for retailers).
- The bin could easily be recycled in established recycling streams at the end of collection
- Bins were low cost to be replaced if damaged without retailers having to wash or clean the bin (extra bins were available by order to all participating retailers).
- A double walled bottom cover ensured durability when around pet accidents or floor mopping.
- Ample area for design elements ensured that the bin was a beautiful addition to any retail store
- Bin lid could be easily removed so that store employees and delivery drivers could easily access collected materials.
- A sturdy back panel gave consumers more information about the pilot, as well as draw the consumer's attention.



COLLECTION BIN LINERS

Each participating retailer was supplied with standard trash bags to collect bags. This allowed collected materials to be easily transported back to the distribution center by delivery drivers, as well as extended the life of the collection vessel. The supplied trash bags were 100% recyclable and could be recycled along-side the collected bags. This meant that the collected materials would not have to be separated at the recycling facility. Extra bags were available by order to the participating retailers.

RETAIL TRACKING STICKERS

When modeling the success and any future possible expansion of the Flex Forward pilot, it was important to be able to track how much material was being collected from each store. However, delivery drivers served many different stores on any one given day, and bags of collected materials could easily be confused once on the truck. Therefore, retailers were asked to label each bag with provided stickers that included their store tracking number.

Lesson Learned

Using paper stickers on each bag increased contamination in the waste stream because paper should not enter the plastics recycling stream.

Marketing & Promotions



PSC, Earth Animal, and Pet Food Experts collaboratively promoted the Flex Forward pilot program with the following goals:

1. Educate and increase awareness of the packaging waste footprint within the pet industry.
2. Excite retailers both to encourage participation by those in the pilot region, and those across the U.S. for future engagement potential.
3. Demonstrate collaborative action to lay the groundwork for potential future sustainable efforts.

PSC PROGRAM MARKETING

With a strong B2B audience, and active media partners, PSC integrated Flex Forward as a key topic across all marketing channels including digital e-mail, social media (59 total paid and unpaid posts across Facebook, LinkedIn, and Instagram), events, webinars, industry presentations, trade ads, and press releases. The initial cadence of marketing began at around 3x per week to encourage retailer participation and then decreased after 4 months to 1-2x per week. Program news was featured by most pet trade media companies including Pet Food Industry, Pets Plus Magazine, GlobalPets, Pet Business, Pet Product News, and Pet Food Processing.

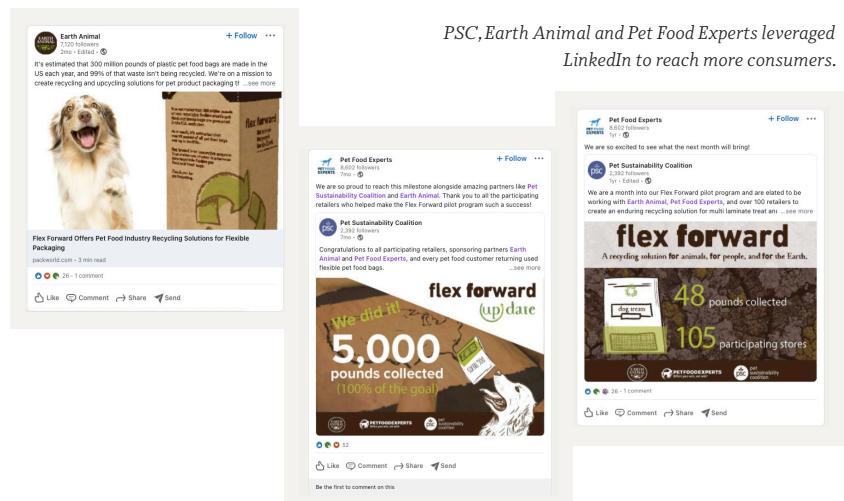
PSC created a program landing page with information on the program and an interactive map of participating retail locations.

EARTH ANIMAL PROGRAM MARKETING

With a strong consumer audience, Earth Animal leveraged their channels to reach as many consumers as possible with a goal of educating and encouraging pet parents in the pilot region to bring packaging back to retailers.

PET FOOD EXPERTS PROGRAM MARKETING

With a strong retailer and brand audience, PFX focused its marketing on retailer education and participation as well as brand education and awareness. PFX leveraged their sales team to work directly with retail partners as well as publishing two articles in the highly successful PFX blog.



Collections Process & Analysis



Image Source: mudbay.com

RETAIL RECRUITMENT AND ENGAGEMENT

Recruitment: Initial recruitment was led by the Pet Food Experts team to leverage their existing communication platforms and retailer relationships. PFX recruited retailers through a series of emails, blogs, and by encouraging their sales team to recruit retailers during existing meetings.

Of the total of 273 of eligible stores in the pilot region, 127 elected to participate, or about 46%. Within the pilot region, 3 retailers had 16+ storefronts including All The Best (16 stores), Pet Pros (18 stores), and Mud Bay (61 stores), though not all stores within these multi-store businesses participated. The remaining participating retailers had between 1-3 locations.



Once signed up for the program, PSC communicated with participating retailers through direct email beginning with a weekly cadence, then bi-weekly. PSC offered live virtual training to retailers and provided updates on the program. Of the three large multi-store (16+ locations) retailers that participated in the Flex Forward pilot, one scheduled and held a staff training session. PSC offered 7 additional live virtual training sessions throughout the 5 months of the collection period; these sessions only attracted a total of 5 individual attendees.

Engagement: PSC defined successful retail participation to be any retailer that requested 2 or more pickups of customer returned pet food and treat bags. To maximize successful retail participation, PSC sent consistent direct emails every two weeks to participating retailers that included information on the total number of pounds collected as well as a leader board of retailers who were collecting the most bags. The emails also included reminders about the digital assets they had been sent and examples of retailers using digital assets in consumer promotions.

Direct email to participating retailers had the following average engagement rates over the active collection phase:

- **Open rate:** 50.32%
- **Click rate:** 7.89%

Retailers with more than 15 stores were also sent weekly totals for their participating stores, broken down by location.



COLLECTION RATE – CONSUMER PARTICIPATION RATE

According to PSC research, existing return-to-retail recycling programs for carryout sacks, bags, and plastic wrap experience a return rate of 5-10 percent of all of these kinds of packaging produced. Many factors contribute to this return rate success including: total store sales volume, consumer awareness of the program, and how willing people are to save pet food bags until the time they return them. In the initial feasibility study, return rates were estimated to range from 3.2 pounds per week for a small independent retailer assuming a 5 percent return rate.

Over the course of the entire collections phase of the pilot, averaged 2.29 lbs. per week. However, by the final 8 weeks of collection, each store was averaging 3.9 lbs. of packaging collected per week. As documented in the chart below, notable increases in collections happened in weeks 8, and again in weeks 11 and 19. The following observations likely led to lower collections than estimated in the first 12 weeks of active collections:

1. Store consumer foot traffic was down due to COVID-19 safety concerns, likely stockpiling of packaging was taking place.
2. Time was needed for consumers to change their behavior and to remember to bring back packaging in-store.
3. Retailers were in crisis due to the pandemic and had many competing priorities which likely decreased their ability to promote the take-back program to their customers.

**Due to staff shortages, as well as reemerging concerns about COVID-19, packaging was not weighed and entered into the tracking document every week of January and February 2021, however that has been taken account in the below chart.*

WEEK	TOTAL LBS COLLECTED PER WEEK	TOTAL LBS COLLECTED BY ALL STORES PER WEEK/PER STORE	TOTAL LBS COLLECTED BY ALL STORES PER WEEK
1 - 8/3/20	0	0	0
2 - 8/10/20	9	0.070	9
3 - 8/17/20	17	0.134	26
4 - 8/24/20	17	0.134	43
5 - 8/31/20	50	0.394	93
6 - 9/7/20	55	0.433	148
7 - 9/14/20	56	0.440	204
8 - 9/21/20	151	1.189	355
9 - 9/28/20	134	1.056	489
10 - 10/5/20	92	0.724	581
11- 10/12/20	272	2.141	853
12 – 10/19/20	273	2.150	1,126
13 – 10/26/20	347	2.732	1,473
14 - 11/2/20	317	2.496	1,790
15 - 11/9/20	241	1.900	2,031
16 - 11/16/20	264	2.078	2,295
17 - 11/23/20	281	2.212	2,576
18 - 11/30/20	203	1.600	2,779
19 - 12/7/20	552	4.346	3,331
20 - 12/14/20	578	4.551	3,909
21 - 12/21/20	1,191	9.378	5,100
24 - 1/18/21 (4 weeks)	1,073	2.112	6,173
26 - 2/1/21 (2 weeks)	1,108	4.362	7,281
27 - 2/8/21	1,058.45	8.334	8,339.45
Pilot Wrap Up	16.55	—	8,356



Further research would be needed in future pilots to determine average collection rate per store under normal consumer shopping patterns and without the implications of COVID-19. However, data from the Flex Forward collections pilot suggests that independent pet stores (with motivated staff leadership, and customers) could expect to collect around 5-10 pounds of pet food and treat packaging/week once their collections program is established.

The average pet food and/or treat bag is estimated to weigh 0.1 lbs. or 1.6 oz. The total pounds of collected pet food and treat bags at the end of the collections phase was 8,356 pounds or an estimated total of 83,560 total food and treat bags. (*This is conservative as the average weight is assuming equal collection of both pet food and treat bags and initial inspection of the collected packaging seemed to indicate more treat bags collected than food bags.)

Bags Collected



ENDING ACTIVE COLLECTION PHASE

By the fourth month of collections, the rate of over 500 pounds of packaging was collected each week. by, The Flex Forward pilot team knew the goal to collect 5,000 pounds of used pet food and treat bags would be reached shortly. After five months of active collections, PFX, Earth Animal, and PSC set an end-date for active collections that would ensure the target collection amount while also giving retailers ample time to communicate with their teams and consumers about collections ending.

ENDING COLLECTIONS – RETAILER FEEDBACK

Another round of educational materials was developed to educate retailers about the completion of the active collection phase including:

- 3 live training sessions available to all participating retailers on the pilot, progress, and next steps. Four total individual retailers attended any of the three sessions
- Customized live training sessions to the three retailers with 15+ locations. Two of three participating retailers with 16+ stores participating took advantage of this offer
- Branded in-store signs and flyers for participating retailers with the collections end-date

COLLECTED MATERIAL DATA

In total, the Flex Forward recycling pilot collected 8,356 pounds of plastic petfood and treat packaging. Within the total collected material it is estimated that:

- 807 bags full of smaller used petfood and treat packages were collected from retailers
- 26 gaylords were required to store the collected materials
- At least 44,565 individual pet food and treat bags were collected
- At least 400 different kinds of food and treat bags were collected
- Between 50 and 75 different brands were represented in the materials collected

Retailer Feedback



Image Source: petpros.net

SURVEY OVERVIEW

Near the completion of the active collection phase of the Flex Forward pilot, participating retailers were asked to complete a feedback survey. To encourage participation, \$50 Grubhub gift cards were auctioned off and a total participation rate of 71% was achieved.

The survey included 34 questions and included general questions about the retailer's operations, quantitative questions asking about their experiences, as well as several open-ended opportunities to provide written feedback.

RESULTS OVERVIEW

Overall, retailer feedback on the Flex Forward collections pilot was very positive. Retailers reported that their employees and consumers were excited about the program and that they were provided with the tools and support needed to be effective participants. However, several areas for improvement were also noted including additional signage about what materials were and were not accepted, and strong disappointment about the need to end the collections phase as consumers were actively participating.

Areas the pilot excelled:

Over 91% of the participating retailers expressed positive feedback about the physical assets provided to support the pilot, such as fliers and stickers, and reported they used the assets throughout the collection phase.

87.1% of survey responses answered that their customers were very excited about the opportunity to bring back their pet food bags to be recycled.

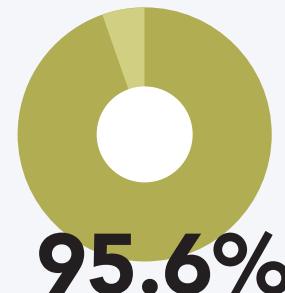
82.8% of all responses answered that their store employees were very excited to get involved in the Flex Forward pilot.

89.4% of the responses found the bi-weekly emails very valuable, valuable, or somewhat valuable.

On a scale of 1-5, **over 80% of all responses** listed the collection vessel as either 4 or 5 in the categories of ease of set-up, durability, design, and size.

92.2% of all responses answered that they were very likely to participate in another pilot similar to Flex Forward.

95.6% of all responses answered "Absolutely" (70%) or "Yes" (25.6%) to the question: *Do you believe that the Flex Forward program provided value for your business?*



of participants felt confident that the Flex Forward program provided value for their business



ROOM FOR IMPROVEMENT:

- The most commonly reported negative feedback from retailers was disappointment around the program ending. Retailers reported that customers and employees really rallied behind the idea of recycling their pet food bags and became upset and confused about why collections ended. Many felt that the pilot they did not receive adequate communication that the program was temporary.
- There was also significant feedback from retailers about not being aware of the many benefits available through the pilot such as training, consumer facing ads and maps, social media templates, FAQs and more.
- Retailers asked for more signage and consumer education materials defining what could and could not be put in the collection bin.

Earth Hero Awards



To honor outstanding contributions to the Flex Forward pilot, the Pet Sustainability Coalition named four "Earth-Hero" award recipients. These awards were publicly announced at a Sustainable Packaging Soiree, a virtual event with free attendance to the industry on Feb 22, 2021.

AWARD HONOREES INCLUDED



Independent pet retailer **Best Friend Nutrition**, in Sequim, WA was awarded the "Top Independent Retailer" Earth Hero Award, for collecting the most used packaging from their customers of any individual store. The company was awarded the "Top Independent Retailer" Earth Hero Award. **Cynthia Linden**, Owner of Best Friend Nutrition accepted the award on behalf of her company. Linden spoke briefly by video: "I just want to thank everyone involved, and the community especially. Taking one small step small in the right direction is a huge for the industry."



Washington state multi-store retailer **Pet Pros** collected the most used bags of any multi-store group in the pilot program. Accepting the award on behalf of Pet Pros was **Georgann McConn**, General Manager/Controller. It was noted that the Lake Stevens location of Pet Pros collected the second largest amount of packaging after winner Best Friend Nutrition. "This award really belongs to our store teams. I am so proud of how they embraced it, and how our customers embraced it as well. This pilot is a critical and important step for the industry," said McConn.



Earth Animal, a pet food brand, sponsored the pilot project, and provided strategy, guidance and leadership for the project. Accepting the award for Earth Animal was **Michael Cody**, Head of Digital Marketing and Sustainability at Earth Animal. "The best part of the Flex Forward program is that it is a collaboration between all these organizations. It has been an incredible experience," said Cody.



Pet Food Experts, a pet food distributor supporting independent retailers coast to coast, provided logistical support. The company distributed collection boxes, trained participating retailers, and returned the collected used bags to a central location. The distributor then shipped the bags to the material testing location. **Alison Bledsoe**, Operations Coordinator at Pet Food Experts, accepted the award. Said Bledsoe, "Thank you for the opportunity. This has been a really exciting experience for the PFX team. To take such an active role in this phase of the project was amazing. It was very eye opening to see the amount of packaging that was collected in such a short time. It is great to see such participation among the entire pet community."





Multilaminate Plastic Pet Food & Treat Recycling Trials

Image Source: petfoodexperts.com

The collections phase of the Flex Forward pilot was an overwhelming success. Equally important is the journey to find a sustainable solution for the collected materials. It is not in the best interest of the pet industry, or the planet, to continue to collect materials if a more sustainable solution to landfilling cannot be found. Therefore, while still collecting materials, the Flex Forward team started the next phase of the pilot, Recycling Trials.

There are several types of recycling processes, often classified as either "mechanical" or "chemical" recycling. The goal when exploring any recycling pilot is to identify the optimal recycling process that provides the highest value or use for the materials while minimizing environmental impact and costs. To further elaborate, please find the below definitions of recycling.

Mechanical recycling of plastics refers to the processing of plastics waste into secondary raw material or products without significantly changing the chemical structure of the material. Processes included in mechanical recycling typically include sorting, grinding, melting, etc. Mechanical recycling is what is usually thought of when considering traditional recycling.

Chemical recycling is a broad term incorporating many different technologies. At its core, chemical recycling aims to convert plastic waste into chemicals. In technologies classified as chemical recycling, the chemical structure of the plastic polymer is changed and converted into chemical building blocks including monomers that are then used again as a raw material in chemical processes. Chemical recycling encompasses any reprocessing technology that directly affects the formulation of the polymeric waste or the polymer itself and converts them into chemical substances and/or products whether for the original or other purposes, excluding energy recovery. These technologies are new, emerging, they tend to be expensive, and there are not currently many at a large enough scale to handle waste on the scale of the entire pet industry. Chemical recycling is sometimes referred to as "advanced recycling."

Initial Findings

Several different recycling options are being explored, both mechanical and chemical. The results of the recycling trials are planned to be released in late 2021 or early 2022. As of July 01, 2021, one mechanical recycling trial has been completed with the following results:

- The materials collected were shockingly free of residue. One of the pilot's recycling partners, a 40-year veteran of the plastics recycling industry commented that the bags appeared to have never been filled with food or treats.
- The variety of pet food and treat packaging collected was staggering. The initial sorting team estimates that over 400 different kinds of packaging were collected by more than 50 different brands.
- Contamination was relatively low. While large amounts of the packaging collected were materials not considered recyclable in traditional recycling methods (metallized bags, bags made from unidentifiable materials, etc.) the materials collected not in scope of the pilot's aims was very low, estimated at a less than 5% contamination rate.
- High levels of variability in the types and sizes of bags collected created a challenge for mechanical recycling.



Next Steps



Flex Forward was one of several efforts by the Pet Sustainability Coalition to advance sustainable packaging solutions within the pet industry. Based on the collection results and the initial inspection of the collected materials, PSC will take a dual approach to develop long-term and short-term solutions that can address the industry's waste footprint.

Long term solutions: Pet food and treat bags are hard to recycle because they consist of many different layers of different types of packaging and the composition of bags across different brands is also highly variable. If the pet industry is able to shift toward a single type of material used by all pet food brands and manufacturers, our packaging could be widely accepted at other national in-store recycling programs. Mono-material recyclable packaging is rapidly advancing in the pet industry and is a viable long-term solution that would redirect pet food packaging from going to landfill, to successful recycling. These materials are being offered in the pet industry today, additional efforts to encourage adoption of the new materials to decrease the cost is a primary solution that the Pet Sustainability Coalition will drive forward.

Short-term solutions: As the industry moves toward a recyclable single material solution, the Pet Sustainability Coalition will continue to identify solutions for the 300 million pounds of packaging in the market today that is going to a landfill.

To determine the feasibility of expanding an in-store recycling program to additional regions, nationally, or outside of the United States, PSC will:

- **Complete testing** of the remainder of the collected materials including additional mechanical and chemical recycling trials.
- **Undergo financial modeling** – PSC is beginning the process of financial modeling for this pilot. This consists of gathering costs associated with the program pre-launch design phases, collections, shipping, sorting, processing, safety testing, manufacturing processes, and more. While this process will continue through the rest of the testing phases of Flex Forward, this information will help inform our feasibility study when considering next steps with the Flex Forward pilot.
- **Ensure environmental impact modeling** – PSC is also beginning the process of modeling the environmental impact of this program. This consists of gathering information on the environmental impact of shipping, processing, landfilling some of the materials, testing, and ideally manufacturing these materials versus landfilling. While this process will continue through the rest of this pilot, it will also help inform our feasibility study when considering next steps with the Flex Forward pilot.
- **Leverage knowledge from pilot toward improvement** – Many lessons were learned as part of the Flex Forward pilot which will be used to improve any expanded program. From advanced sorting knowledge to signage and promotions improvements, to reverse logistics and labor requirements, the pet industry is poised better than ever to roll out a larger program at scale. This has hopes of engaging consumers, retailers and brands to demonstrate responsible practices like never before.

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