

S. 984 Break Free from Plastic Pollution Act of 2021



ACKNOWLEDGEMENTS

This report is a collaborative team effort from a team of environmental science and policy graduate students at Columbia University's School of International and Public Affairs. We would like to acknowledge our advisors Dr. Robert Cook and Professor Adrian Hill for all their guidance.

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SYNOPSIS CONTENTS

01.	Executive Summary	04
02.	The Plastic Problem	06
03.	Break Free from Plastic Pollution Act	08
04.	Extended Producer Responsibility	10
05.	Program Design	12
	Federal Packaging Agency	13
	Plastic Pollution Program	14
	Contractors	16
06.	Evaluating Success	
	Desired Outcomes	17
	Metrics	18
	Who is Keeping Track	19
08.	Conclusion	20
07.	Appendix	21
08.	References	25

Our dependence on single-use plastics, if left unchanged, will lead to a world saturated with plastic pollution with nobody willing to clean it up. Plastic is cheap, durable, and convenient, and these properties have made it a ubiquitous material in the everyday lives of Americans. The United States generates over 42 million tons of plastic waste per year, while only 9% of it is recycled (Parker, 2020; Geyer, Jambeck, & Law, 2017). Over 8 million tons of plastic waste end up in our oceans each year, where marine animals consume it; when people eat these animals, they are directly exposed to toxins contained in plastics. Plastic production disproportionately impacts low-income and communities of color because production facilities are frequently constructed near them; this is linked to significantly higher rates of respiratory illnesses and cancer (Brender et al., 2011). The U.S. currently lacks the infrastructure to support its waste management needs, a problem which the Break Free From Plastic Pollution Act of 2021 seeks to address.

This Bill outlines a comprehensive policy framework for tackling the plastic pollution crisis, including banning single-use plastic bags and utensils and implementing a National Beverage Container Program. One of the bill's key policy tools is an Extended Producer Responsibility (EPR) framework which seeks to correct market failures in the plastics industry by shifting the burden of waste management onto plastic producers. This report outlines one method by which an EPR framework could be implemented in the U.S. Requiring producers to take on financial responsibility for end-of-life management will incentivize a transition to more sustainable product design and reduced plastic production.

While producers are primarily responsible for implementing improvements in production and waste management, the Environmental Protection Agency (EPA) will oversee these operations. The Bill requires that EPR be facilitated by Producer Responsibility Organizations (PROs), which are non-profit groups organized by product type and funded by membership fees collected from plastic producers. To oversee the PROs, this report outlines the creation of two new offices in the EPA: the Federal Packaging Agency (FPA) and the Plastic Pollution Program (PPP). The total estimated budget for these two branches will be \$6.1 million, less than 1% of the EPA's annual budget. In contrast, producers will spend billions to carry out their mandated duties under EPR. This demonstrates how producers—not the government—are financially responsible for program implementation.

The first year of this program will focus on hiring essential EPA team members, conducting research on how best to organize PROs, establishing a database for the Federal Packaging Registry, and coordinating the initial formation of PROs. Organizing and overseeing the PROs is a massive endeavor that will take years to fully operationalize. This report details what can be accomplished in the first year to establish an effective EPR system that brings about drastic changes in the plastic industry.

The implementation of an Extended Producer Responsibility framework will enable increased transparency and accountability from producers throughout the plastic life cycle. Society already pays the high costs associated with excessive plastic production and consumption, particularly low-income communities who often face disproportionate health risks by living in proximity to production and disposal facilities. Shifting the burden of waste management from government and society onto producers will facilitate a transition to a more sustainable future. Tackling the ongoing plastic pollution crisis is not an easy task, but the Break Free From Plastic Pollution Act uses powerful policy tools that could result in significant benefits for both human and environmental health by fundamentally changing how Americans interact with plastic products.



TERMINOLOGY

GLOSSARY

Covered product

A food service product, packaging, certain single-use products, some beverage containers.

ACRONYMS

CPI	Consumer Price Index
EPR	Extended Producer Responsibility
EPA	Environmental Protection Agency
FPA	Federal Packaging Agency
FTE	Full-time Equivalent
OECA	Office of Enforcement and Compliance Assurance
ORCR	Office of Resource Conservation and Recovery
PPI	Producer Price Index
PPP	Plastic Pollution Program
PRO	Producer Responsibility Organization

THE PLASTICS PROBLEM



Plastic is cheap, durable, and convenient, and these properties have made it a ubiquitous material in the everyday lives of Americans. Despite these positives, plastic also contains elements that pose threats to human and ecosystem health in both its production and end-of-life management. As the rate of plastic consumption far outpaces the rate at which it decomposes, the abundance of plastic has led toxins to saturate the environment and pollute our air, water, and soil.

Since the invention of synthetic plastic in 1907, 8.3 billion tons have been manufactured, and 6.3 billion tons of this have become plastic waste. Approximately 40% of plastic is used for packaging materials which account for roughly $\frac{1}{2}$ of the annual plastic waste generated in the United States (Geyer, Jambeck, & Law, 2017). The U.S. is the world's largest producer of plastic waste, generating 42 million tons per year. Only 9% of plastic waste is recycled, while one-third is exported to countries with high rates of mismanagement, and the remaining 40% is landfilled (Parker, 2020; EPA, 2017). More than 80% of marine plastics come from land-

based activities, including mismanaged waste that ends up in rivers (Ranniger, 2021).

Both the production and end-of-life management phases of the plastics lifecycle have polluting impacts. The extraction and refinement of the fossil fuels that are used to make plastic emit hazardous air pollutants and greenhouse gases. Plastic production disproportionately impacts low-income and communities of color, as production facilities are often constructed next to them. These communities face significantly higher rates of respiratory illnesses and cancer as a result of living next to refineries, oil wells, pipelines, and petrochemical plants, all of which are essential to the production of plastics (Brender et. al., 2011).

Over 8 million tons of plastic waste wind up in our oceans each year, resulting in over 100,000 marine animal fatalities as a result of getting tangled in plastics or starving because of the toxic and indigestible waste they consume (UNESCO, 2021).

Plastics do not biodegrade, they simply break down into smaller pieces called microplastics. When animals consume microplastics, the toxins they contain leach into their bodies and eventually bioaccumulate up the food chain. This can result in detrimental health effects for humans including endocrine disruption or an increased likelihood of cancer (Wang et al., 2020).

**“ ONLY 9%
OF PLASTIC
WASTE IS
RECYCLED ”**

Addressing the Plastic Problem

At present, the United States does not have the infrastructure to support its waste management needs. The Recycling Partnership estimates that a \$17 billion investment is needed over 5 years to develop an effective recycling system in the US (Bandhauer, et al., 2021). To address this problem, the Break Free From Plastic Pollution Act of 2021 was introduced in the Senate on March 25, 2021 by Senator Jeff Merkley (D-OR), and in the House of Representatives on March 26, 2021 by Representative Alan Lowenthal (D-CA-47). Using an array of policy mechanisms, this bill will impact the daily lives of Americans by altering the ways in which we use and dispose of plastic products.



BREAK FREE FROM PLASTIC POLLUTION ACT OF 2021



To address the environmental and human health impacts of plastics, the Break Free From Plastic Pollution Act of 2021 offers a comprehensive policy framework for addressing the plastic pollution crisis. The bill outlines a network of interconnected solutions that target plastic pollution issues, divided into the following five sections. This report focuses mainly on Part I, incorporating elements from Part III.

01

Products in the Marketplace

Outlines the assignment of new responsibilities for plastic producers, designates clear timelines for their compliance, and establishes penalties for non-compliance. In addition to establishing a National Beverage Container Program, the main policy tool included in this section is the creation of an Extended Producer Responsibility (EPR) framework. EPR seeks to correct the market failures that have resulted in the plastic waste management crisis by placing the burden of waste management on producers. Implementation of the EPR framework is the focus of this report, and so will be explored in depth in the coming pages.

02

Reduction of Single-Use Products

Establishes a ban on single-use plastic bags and utensils at the point of sale beginning on January 1, 2023. Exceptions to this ban may be made for certain materials essential for medical purposes.

03

Recycling and Composting

Outlines new guidelines for the producers of covered products regarding the design of products and materials used in production, and mandates a standardized labelling system to streamline end-of-life management. This component of the bill mandates specific benchmarks, including that by 2040 producers of plastic beverage containers must use at least 80% post-consumer recycled content in their packaging. Under this part of the bill, manufacturers are encouraged to “design for the environment” to reduce the environmental impact of covered products, and fines are put in place to penalize producers who do not meet such requirements.

04

Local Government Efforts

Clarifies that this bill does not negate any existing local or state laws that may have more stringent regulations regarding the collection and recycling of covered products. It also establishes a program which will leverage smart technology and social media to provide technical assistance to local and state governments to identify areas of pollution and implement source reduction solutions.

05

Reduction of Other Sources of Plastic Pollution

Seeks to manage the many miscellaneous sources of plastic pollution, including fishing gear losses, microplastics, and laundry machine filtration. This section notably establishes a Microplastics Pilot Program to fund research into potential technologies for removing existing microplastics from the environment.

EXTENDED PRODUCER RESPONSIBILITY (EPR)

Extended Producer Responsibility for plastic packaging is one of the main components of the Break Free From Plastic Pollution Act. EPR will change the traditional narrative that consumers are responsible for the end of life management of plastic waste. It will, among other things, require plastic producers to fund the management of the plastic they produce and to ensure that adequate facilities exist to manage the end of life of their plastic. This will result in billions of dollars being invested in recycling infrastructure and in increased equitable access to waste management facilities. The resulting increased cost of plastic will disincentivize the production of plastic, leading to less plastic being created in the first place.

Implementing a National EPR System for Plastic Packaging

Establishing Producer Responsibility Organizations (PROs)

The Extended Producer Responsibility framework will be facilitated by Producer Responsibility Organizations (PROs). As mandated in the bill, PROs are 501(c)(3) non-profit organizations formed based on packaging category. Any plastic producer whose products are distributed in the United States, and makes more than \$1 million in annual revenue (adjusted for changes in the Consumer Price Index) or produces at least 1 ton

of covered products each year, is responsible for establishing or joining a PRO and complying with the EPR framework. If more than one PRO is established per category, the EPA will establish an entity to coordinate among them. Producers who manufacture more than one category of covered product must join multiple PROs, one for each category of product.

PRO Funding and Responsibilities

The organizations will be funded by collecting membership fees from participating producers. PROs will determine the membership fees based on various factors including the amount of plastic each producer produces. These fees will be used for various PRO responsibilities including reimbursing municipalities for the costs of plastic waste management and operating plastic litter clean ups. PROs will also ensure the establishment of adequate facilities for management of its members' waste and collect data on the functioning of the program.

In addition, by December 31, 2027 producers must meet strict performance standards: 65% of all covered products (except paper) must be recycled, 75% of all new beverage containers and paper covered products must be recycled, and 50% of all new industrially-compostable covered products must be composted. By February 2023, each PRO is required to submit a Product Stewardship Plan to the EPA that outlines how they propose to meet the aforementioned targets, and this report must be made publicly accessible via a web report of their efforts.

75%

**NEW PLASTIC CONTAINERS
AND PAPER COVERED
PRODUCTS MUST BE
RECYCLED**

65%

**ALL COVERED PRODUCTS
MUST BE RECYCLED**

50%

**NEW INDUSTRIALLY
COMPOSTABLE COVERED
PRODUCTS MUST BE
COMPOSTED**



Oversight

The PROs will be overseen by the Environmental Protection Agency (EPA). The EPA will collect packaging information and conduct audits every two years to verify compliance with the legislative targets. Should any producers not comply with the provisions outlined in the bill, they will be fined accordingly.

EPR Impacts

Requiring producers to pay membership fees to cover the management costs of the plastic they produce and fining them for non-compliance will raise the cost of manufacturing plastic products, leading to more efficient and sustainable product design, reduced plastic production, and a reduction in the use of plastic products and packaging as innovative alternatives become more attractive and economically viable.

In the next section we discuss a proposed implementation plan for the first year of EPR. The first year will mainly be focused on setting

up the necessary structures to run the program. We will focus on issues related to implementation of EPR on the federal level, rather than the eventual activities of PROs.

Maine's EPR Bill

In July of 2021, Maine passed a bill to implement a state level EPR framework for packaging. Like the Break Free From Plastic Pollution Act, the goal of Maine's EPR bill is to reduce packaging waste and increase recycling rates. It runs on a similar framework, where producers pay a central organization for the costs of managing the packaging they produce. These funds are then distributed to municipalities to reimburse recycling and waste management costs, invested in recycling infrastructure, and used for recycling education for Maine's citizens. This bill is still in the early stages of implementation, so it is too soon to draw conclusions from it as to its effectiveness. However, as the first EPR for plastic packaging bill in the US, it will be interesting to see how it unfolds, and what lessons can be learned from it. (Maine Department of Environmental Protection)

PROGRAM DESIGN

Producer Responsibility Organizations (PROs) will be organized according to plastic product type. This will result in the creation of dozens of PROs around the country, representing hundreds of plastic packaging producers. To oversee and audit these organizations we propose the creation of two new branches of the EPA at the federal level. The first branch is the Federal Packaging Agency (FPA). The FPA will be housed under the Office of Resource Conservation and Recovery (ORCR) which has existing mandates to reduce waste, promote the use of sustainable materials, expand recycling initiatives, and manage regulation around landfills. The second branch is the Plastic Pollution Program (PPP). This branch will be housed under the Office of Enforcement and Compliance Assurance (OECA). The OECA is focused on making sure that laws and regulations are enforced across the EPA. The creation of these branches will result in the addition of 36 full-time staff in total in the early years of the program (See Appendix I for staffing charts).

In addition to the hiring of more full-time staff, we will hire contractors to provide technical and administrative support, carry out research and development, audit, and conduct market research. We will mostly rely on contractors in the first year while we are still establishing the new branches.

The first year cost of this program is estimated to be \$6.1 million, which is less than 1% of the EPA's 2020 budget. This covers staffing, database establishment, and initial capital expenses. It relies on existing EPA structures, such as shared service centers, to keep the cost down (See Appendix II for a breakdown of the budget).

\$6.1M

EPA FIRST YEAR BUDGET



Federal Packaging Agency

The Federal Packaging Agency has two main responsibilities. The first is to create and maintain the Federal Packaging Registry, and the second is to collect and aggregate data from the PROs and municipalities. The registry and aggregated data will be used to ensure that the program is running effectively. These responsibilities will be carried out by 19 FTE staff divided between the Packaging Registry team (9) and the Reporting and Program Targets team (9) respectively, and overseen by a Branch Director. 32% of the total budget is allocated to packaging data management, which covers most of the activities of the FPA. Most of the first year activity of this branch will be dedicated to hiring managers and database engineers, creating a database that will become the Federal Packaging Registry, and compiling a report on the current state of plastic production and end-of-life waste management practices in the U.S. as mandated in the Bill (See Appendix III for the first year calendar).

Federal Packaging Registry

The Federal Packaging Registry will be a database of all covered products used by companies operating within the United States. This will include data on material types, amounts produced, recyclability and compostability, and eventually data on waste management as well. Contractors will be hired within the first year to help two hired database engineers create the database, and subsequent growth and maintenance of the register will be the responsibility of the Packaging Registry team. The registry will be used to approve and track packaging materials used by consumer goods companies, resulting in greater ease of enforcement. This is a complex database that must be able to collect large amounts of data in various forms in a way that is accessible to many different users, such as regulators and PRO members.

Data Collection

The FPA will also collect and aggregate reporting from PROs to monitor their progress towards the recycling, composting, and reuse targets in their product stewardship plans. These reports will be compiled into annual reports and sent to the Plastic Pollution Program (PPP). The PPP will use these reports along with data received directly from municipalities on their covered product waste management to audit the PROs.

Germany's Central Agency Packaging Register

In Germany, the Central Agency Packaging Register (Zentrale Stelle Verpackungsregister) manages the implementation of extended producer responsibility for packaging. The register, like the Federal Packaging Agency, monitors compliance with recycling regulations and publicly reports data on packaging producers. It also provides financial support to encourage more sustainable packaging (Stiftung Zentrale Stelle Verpackungsregister, N.D.). The register was introduced into Germany's existing EPR program in 2019 to increase transparency and aid compliance monitoring efforts (Bünemann et. al., 2020).

**THE FEDERAL
PACKAGING REGISTRY
WILL BE A DATABASE
OF ALL COVERED
PLASTIC PACKAGING
USED BY COMPANIES
OPERATING WITHIN THE
UNITED STATES**

Plastic Pollution Program

The Plastic Pollution Program will work closely with the FPA to oversee the Producer Responsibility Organizations and ensure compliance with their responsibilities as outlined in the Bill. 36% of the program budget is dedicated to oversight of the PROs, covering most of the activities of the PPP. This office will consist of 17 FTE employees divided into three teams: the Product Stewardship Team (6), the Grants Distribution Team (5), and the Auditing Team (5). All three teams will be overseen by the PPP Branch Director. Most of the first year of this program will be dedicated to setting up the offices and assembling a team, but there are some short-term goals that fall largely to the Product Stewardship Team.

Product Stewardship Plans

The Bill mandates that PROs must submit five-year Product Stewardship Plans for approval by February 2023. Product Stewardship Plans require PROs to submit a lot of information, including but not limited to: a list of the parties covered by the plan, how membership fees will be structured and collected, how waste products will be collected, how performance targets will be met, plans for meeting design-for-the-environment and labeling requirements, plans for recycling market development, and how the PRO will work with and fund existing waste management processes and infrastructure (Act, 59-62). In order to meet this deadline, the Product Stewardship Manager and a team of contractors will first conduct research and compile a report on best management practices for the PROs by the end of month 8 of the program. This report will detail how many PROs must be established to fully implement an EPR framework, and an estimate of how many producers will be included in each PRO. The number of PROs will be determined in consultation with producers and will change over time as the program develops. This report will guide the creation of the PROs, and the Product Stewardship Team will then oversee the development of each PRO's Product

Stewardship Plan. Following submission of these plans, the Product Stewardship Team will have 90 days to review and approve the plans, and PROs will have 60 days following approval to implement the plan.

Grants Program

Beyond Product Stewardship Plans, within the first year the Plastic Pollution Program will establish a grants program to fund research into plastic alternatives and innovative waste management practices. For the first year, existing EPA staff on the extramural grants program--outside the PPP--will be responsible for creating the call for grant applications. The first round of applications will be accepted during month 7, and grants distribution will begin in month 9 following a month of application review. After the first year, the Grants Distribution Team will be hired and grant recipients will be responsible for regular reporting of their progress to this team. 24% of the program budget is allocated to research and development, largely dedicated to grants distribution. Developing sustainable alternatives to plastic is essential to shifting the U.S. market away from its current reliance on single-use plastics, and changing waste management practices will help ensure the responsible disposal of current and future waste materials.

To accomplish these first-year goals, much of the program's resources will be dedicated to programmatic activities while gradually building the permanent capacity of the office. Existing EPA employees in other offices will be brought in to work part-time on this project in addition to some of their existing responsibilities. Additionally, contractors will be brought in to conduct research on best practices to establish the PROs, plastic alternatives, and waste management innovations (See Appendix III for the first year calendar).

Looking Forward

Beyond the first year, the main job of the Plastic Pollution Program is to oversee the PROs and ensure they are meeting legislative targets for waste management and designing for the environment. The Auditing Team will conduct bi-annual audits of each PRO to ensure they adhere to their Product Stewardship Plans and are on track to meet performance targets as outlined in the Bill. The Auditing Team will also review the annual FPA reports on EPR to facilitate cross-branch communication and collaboration. The Grants Distribution Team will continue running the grants program, expanding the areas of research to include policy mechanisms that can support EPR. The Product Stewardship Team will work closely with the PROs to facilitate and track the progress of Product Stewardship Plan implementation. After five years, this team will also work with PROs to develop new Product Stewardship Plans. The Plastic Pollution Program will grow in size as PROs are established and require more oversight, and may eventually require the establishment of a new division, the Office of EPR, under the umbrella of the Office of Enforcement and Compliance Assurance within the EPA (See Appendix IV for potential future organization chart).



Contractors

Much of the first year will be dedicated to programmatic activities rather than staffing the entire office, so outside experts will initially be contracted to ensure the completion of first-year goals. Contractors can also provide valuable expertise in achieving the long-term goals of the program. Contractors will assist in four key areas: technical and administrative support, auditing, research and development, and market research. To secure this expertise, \$1 million of the first year budget is allocated to cover contractor and consulting fees. This capacity from contracting will help the program get a running start and ensure that the deadlines in the Bill can be met.

TYPES OF CONTRACTORS

Technical and Administrative Support

Contractors will first be brought in to create the FPA database, which must be done immediately upon the establishment of the program to facilitate the rest of its activities. Contractors will also help with operations and maintenance services as the program goes on, reducing the need for hiring full-time employees to manage these components.

Auditing

Contractors will periodically conduct on the ground verification of the data reported to the PPP. They will ensure that the data reported is accurate and there are no significant discrepancies between PRO activities and what was reported.

Market Research

As the program goes on, contractors will be hired to conduct surveys and utilize other methods to analyze the impact of EPR, the public's perception of the program, and evaluate the program's performance. This will help the EPA staff adjust as necessary to ensure the greatest chance of program success.

Research and Development

Contractors will conduct research and compile a report on PRO best management practices within the first 8 months of the program. Contractors will also later conduct research on plastic alternatives and the latest technology in product development and waste management. Additionally, consultants will be hired to evaluate the grants distribution program and ensure these funds are allocated efficiently.

EVALUATING SUCCESS

Desired Outcomes

One of the primary desired outcomes of EPR is reduced plastic production. EPR will incentivize producers to reduce their use of plastic, either through improved packaging design or through use of plastic alternatives. This should in turn lead to an increased market for and lower costs of plastic alternatives. Conversely, a potential adverse outcome is a sudden increase in the price of plastic, which would then be passed on to consumers.

Another primary target is increased access to waste management facilities, and recycling facilities in particular. EPR will require producers to ensure that there is convenient, equitable access for all U.S. residents to facilities that will manage the end of life of their products. Producers must also develop plans to ensure that 65% of all covered products are recycled, 75% of beverage containers and paper-covered products are recycled, and 50% of all industrially-products are composted by December 31, 2027. This will

mean less plastic ends up in landfills and oceans.

Plastic prices are predicted to increase under EPR because producers are now responsible for the waste management and social costs related to plastic, and they will pass these added costs onto consumers. The benefit of this is that it will drive down demand for plastic. However, it is a problem when this rise is too sudden and primarily burdens consumers. The burden may also disproportionately affect low-income people who spend a larger portion of their income on goods such as food (Chambers and Collins, 2016). If that food is packaged in plastic, as many foods are in the US, then its price is likely to go up, increasing the economic burden on the consumer. The consumer price index and producer price index of plastic packaging will be monitored to assess whether this price increase is primarily affecting consumers or producers.



Metrics

The FPA will collect the following metrics to determine EPR's effect on plastic use and production:

- type of material being produced
- type of materials sold
- type of material being deposited in landfills
- how much packaging is collected through various waste collection methods
- how much packaging is processed through each end-of-life waste processing method

The following metrics will provide information on accessibility of waste management facilities:

- geographic distribution of collection and drop-off sites
- distance of treatment and collection facilities to population centers
- hours the collection centers are open
- frequency of collection availability
- customer satisfaction and accessibility

Finally, the following metrics will help determine EPR's economic effects:

- Consumer Price Index (CPI)
- Producer Price Index (PPI) for Rubber and Plastic Products
- the number of "green patents" filed for alternatives to plastic



Who Is Keeping Track

Municipalities already provide data to the Office of Resource Conservation and Recovery (ORCR) on the types and qualities of materials entering the waste-to-landfill stream. The ORCR also tracks the breakdown of waste collection according to waste management and processing streams.

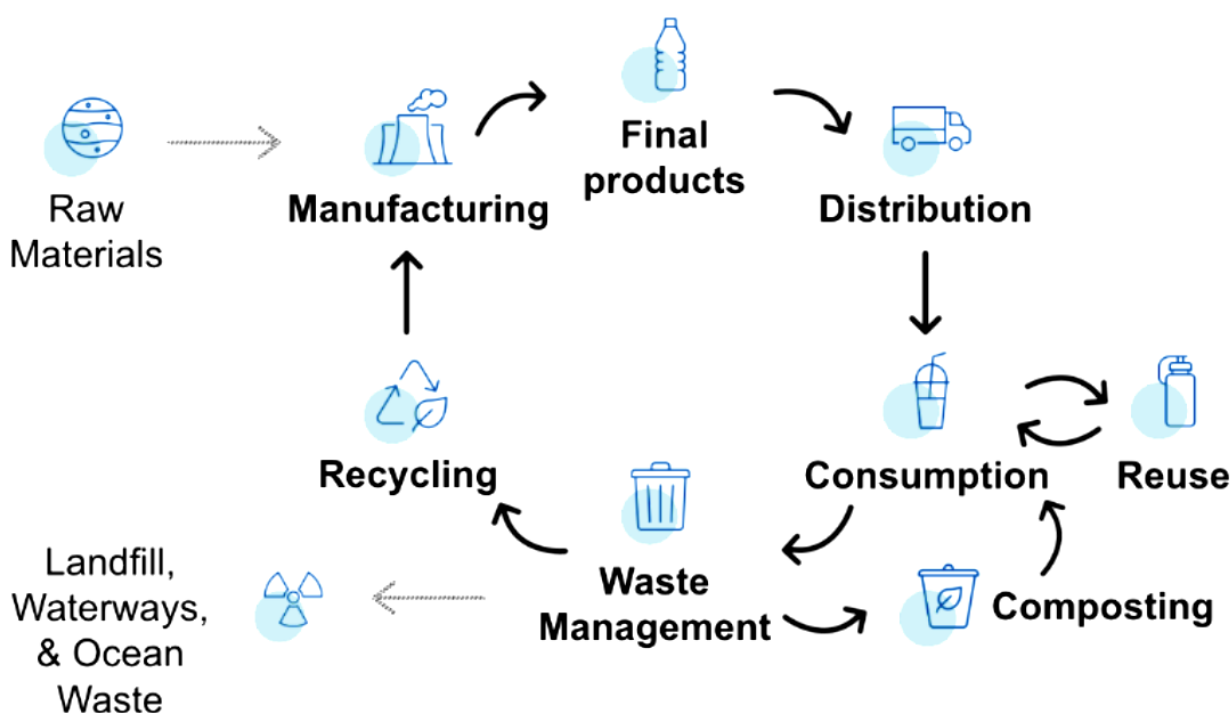
Individual producers will share data on production and sales of covered products with their PRO. The PRO will then aggregate these metrics to determine the quality and quantity of materials entering the marketplace. PROs will also be responsible for monitoring the implementation of improved waste management operations. This will include reporting on the operations and accessibility of collection infrastructure, and geospatial data on available waste collection and management facilities. In addition, PROs will set up customer service centers to better understand customers' waste management needs. This will be essential to building a comprehensive, equitable network for waste management.

PROs and municipalities will send performance measure reports to the FPA on a monthly basis.

The FPA will also gather CPI and PPI data from existing bodies that maintain and distribute these indices. The FPA will meet with the PPP to review monthly reports, and they will share monthly reports with the public on their website. A maximum civil penalty of \$70,117 per violation per day will be imposed on producers who fail to comply with the mandates in the bill. These penalties will go towards the Reduction, Recycling, and Litter Cleanup Trust Fund established by section 9512 of the Internal Revenue Code of 1986.

The Iterative Process

The FPA will work closely with PROs and municipalities to understand their current capabilities and support their efforts to increase production of plastic alternatives and increase waste management capacity. Scaling production and waste management to meet the program targets will require a significant investment of capital, and knowledge transfer. Monthly reporting will assess the impact of investments against performance targets, and provide opportunities to share knowledge on best practices across PROs and municipalities.



CONCLUSION

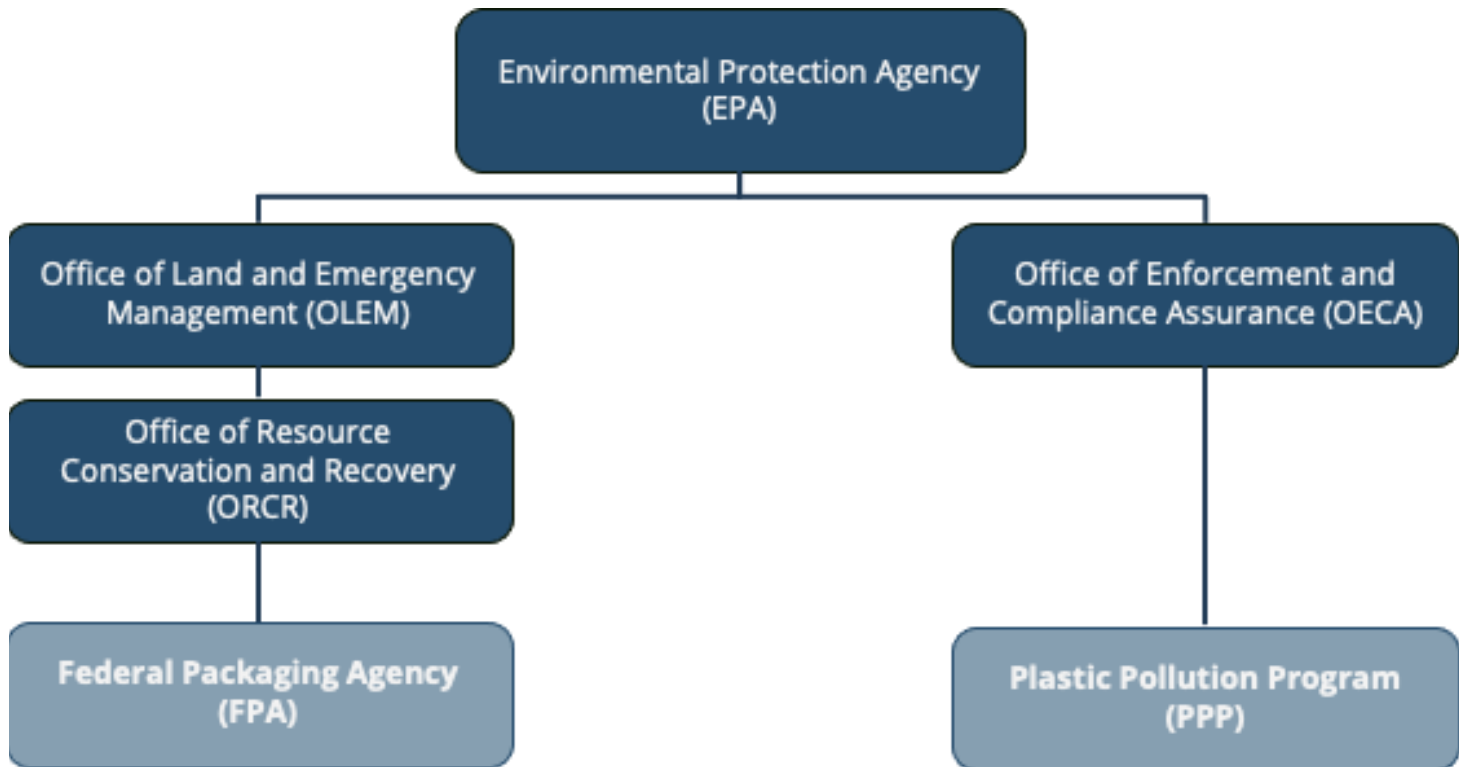
To address the ongoing plastic waste crisis, the Break Free From Plastic Pollution Act of 2021 emphasizes the role of an Extended Producer Responsibility (EPR) framework. EPR shifts the burden of responsibility for plastic waste management from governments and society onto plastic producers in order to incentivize decreased plastic production and increased sustainable product design. To implement Extended Producer Responsibility, Producer Responsibility Organizations will be formed, organized by product type, and overseen by two new branches in the Environmental Protection Agency.

The first branch this program creates is the Federal Packaging Agency (FPA), housed under the existing Office of Resource Conservation and Recovery. This branch is responsible for creating and maintaining the Federal Packaging Registry which collects and tracks data on approved packaging and waste management practices in the U.S. from both PROs and municipalities. The FPA will also collect and aggregate this data to monitor progress toward recycling, composting, and reuse targets as stated in PRO product stewardship plans. These regular reports will be compiled into bi-annual reports that the Plastic Pollution Program (PPP) will use to audit PROs. The PPP will work closely with the FPA to ensure PROs are adhering to both legislative targets and those outlined in the product stewardship plans. The data collected from PROs into the Federal Packaging Registry, as well as the iterative reporting process outlined in these two offices, will aid greatly in tracking and promoting progress toward legislative goals. The PPP will also administer a grants program to fund research into plastic alternatives and innovative waste management practices. For the first year, contractors and current EPA staff will be brought in to ensure the quick implementation of programmatic goals.

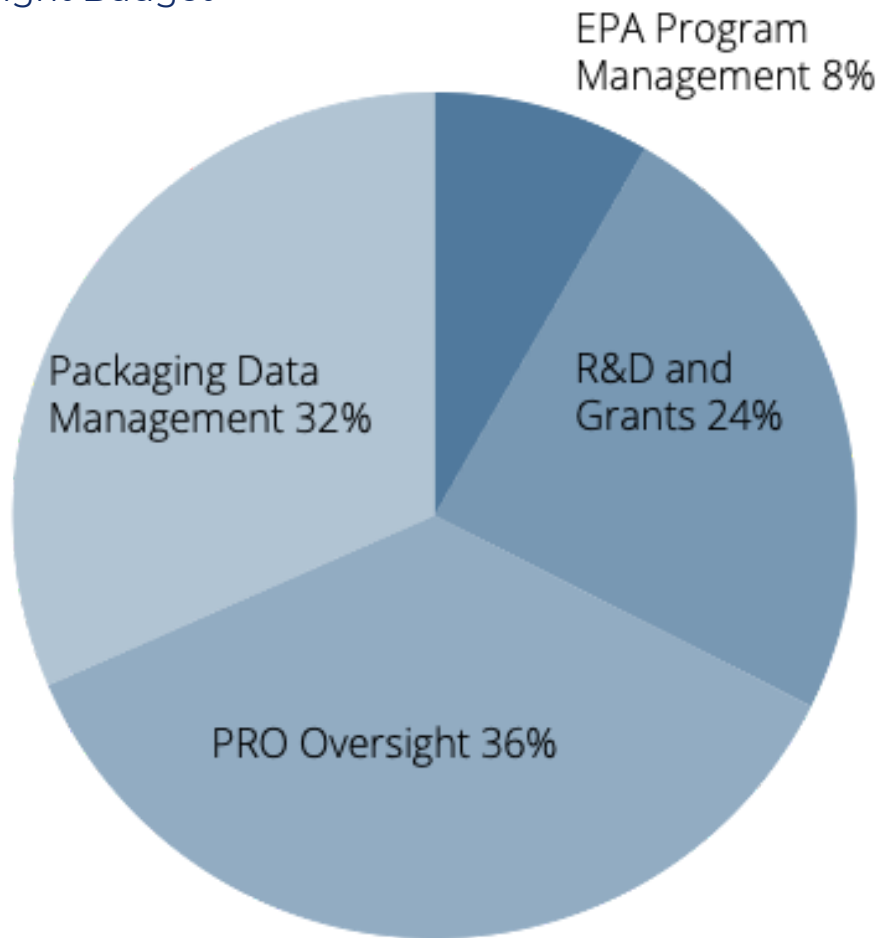
The overarching goals of this program are to reduce the amount of plastic produced each year and to increase equitable access to waste management and particularly recycling facilities. Achieving these targets will require close oversight of Producer Responsibility Organizations and regular communication between these new EPA offices and producers. While the massive societal transition that the EPR framework seeks to bring about will take years to manifest, the first year of this program lays the groundwork for such a change. This program will change the everyday lives of Americans for the better, and if successfully implemented will facilitate the creation of a more sustainable future where plastic producers are held directly accountable for their polluting impacts.

APPENDIX

I. New Branch Establishment

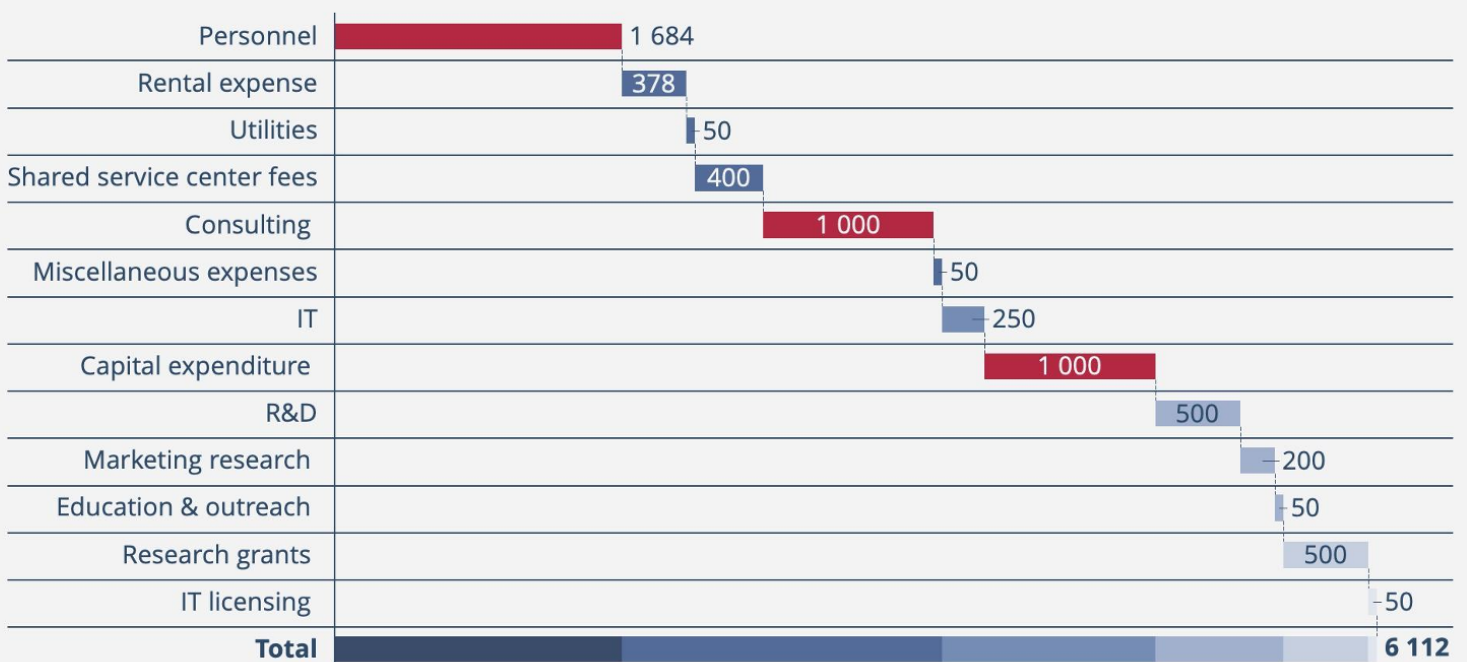


II. EPA Oversight Budget

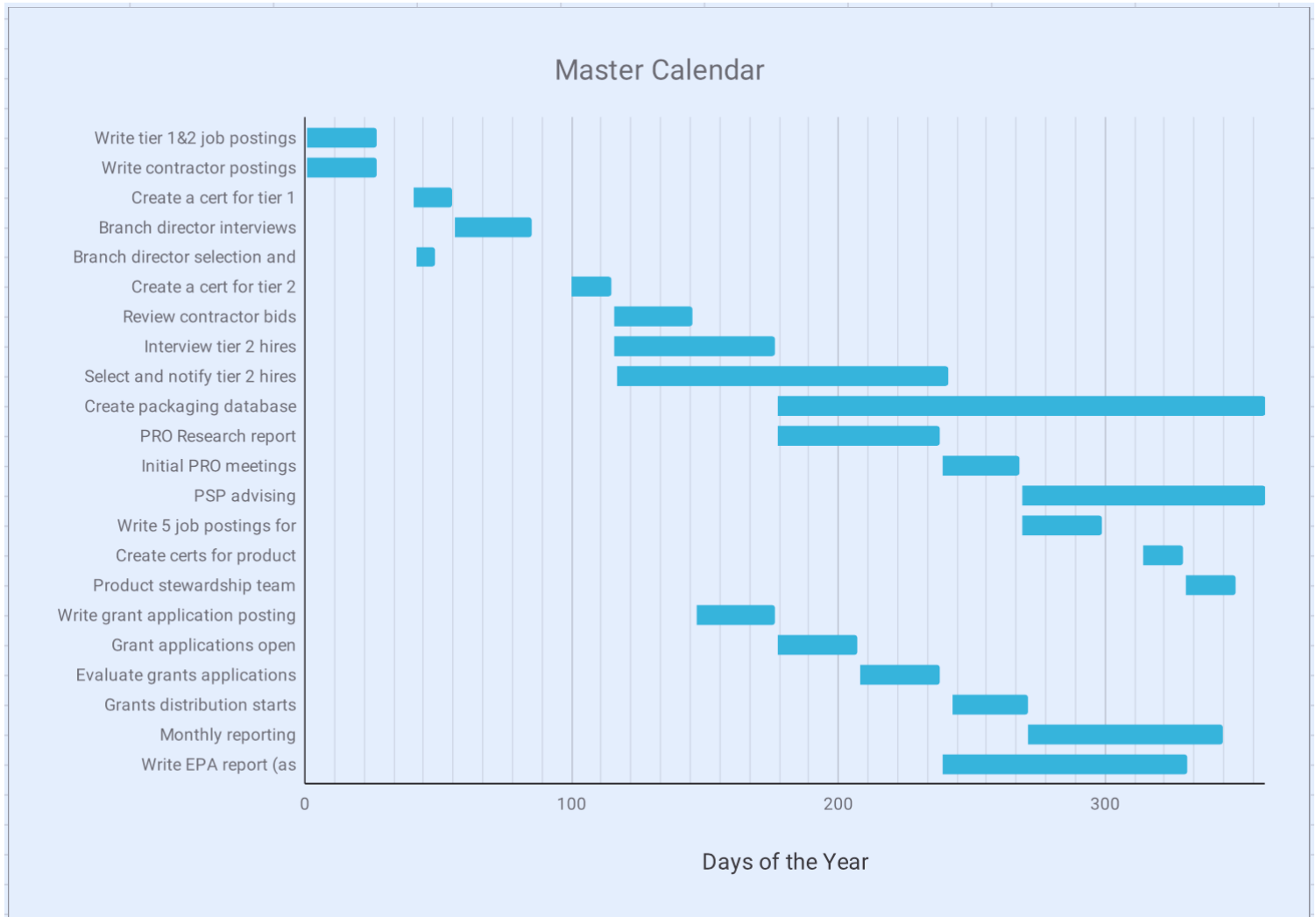


Line item budget

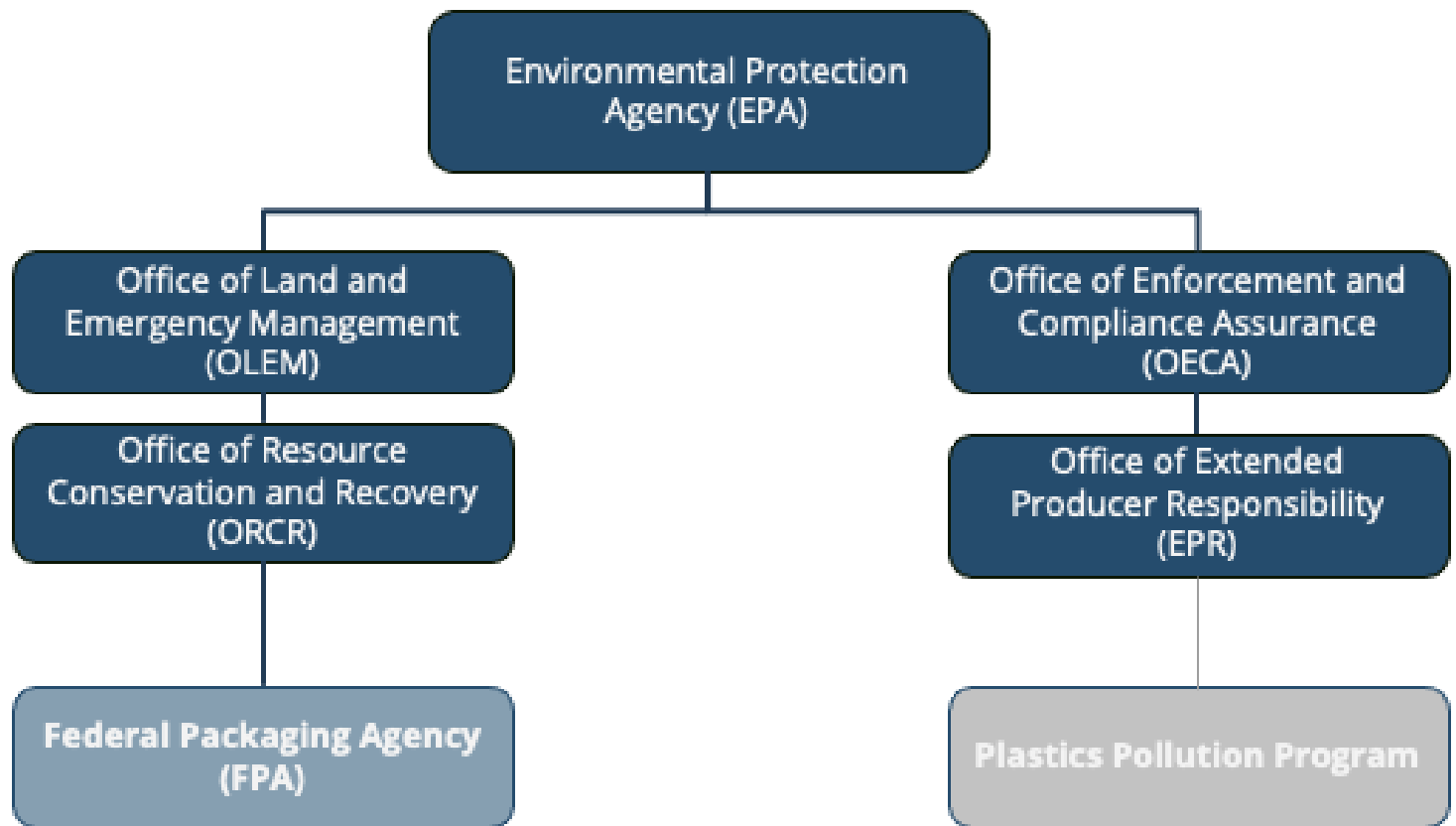
USD Thousands; total budget \$ 6,112,200



III. Master Calendar



IV. EPR Office Establishment



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