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**SENATE COMMITTEE ON ENVIRONMENTAL QUALITY**

**Senator Allen, Chair**

**2021 - 2022 Regular**

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**Bill No:** AB 881  
**Author:** Lorena Gonzalez, et al.  
**Version:** 4/12/2021  
**Urgency:** No  
**Consultant:** Rylie Ellison  
**Hearing Date:** 6/28/2021  
**Fiscal:** Yes

**SUBJECT:** Plastic waste: diversion: recycling: export

**DIGEST:** This bill establishes standards for mixed plastic waste exported for recycling in order to be credited toward a local jurisdiction's solid waste diversion rate.

**ANALYSIS:**

Existing law:

- 1) Under the Integrated Waste Management Act of 1989 (IWMA), establishes a state recycling goal of 75% of solid waste generated to be diverted from landfill disposal through source reduction, recycling, and composting by 2020; and requires each local jurisdiction to divert 50% of all solid waste through source reduction, recycling, and composting activities. (Public Resources Code (PRC) §§41780.01, 42921, 42924.5)

This bill:

- 1) Specifies that the export of mixed plastic wastes does not constitute recycling for purposes of calculating a local jurisdiction's diversion rate, unless the plastic waste meets both of the following:
  - a) It is a mixture of plastic waste consisting of polyethylene, polypropylene, or polyethylene terephthalate and it is destined for separate recycling of each material.
  - b) It is not prohibited by an applicable law or treaty of the county of destination and the import of the plastic waste into the country of destination will be conducted in accordance with all applicable laws and treaties of that country.
- 2) Specifies that "export" does not include export to Canada or Mexico until the later of the following:

- a) January 1, 2024; or
- b) The expiration of a trade agreement or arrangement with Canada or Mexico.

## Background

- 1) *Solid waste in California.* For over three decades, the Department of Resources Recycling and Recovery (CalRecycle) has been tasked with reducing disposal of municipal solid waste and promoting recycling in California through the IWMA. Under IWMA, the state has established a statewide 75% source reduction, recycling, and composting goal by 2020 and over the years the Legislature has enacted various laws relating to increasing the amount of waste that is diverted from landfills. According to CalRecycle's *State of Disposal and Recycling* report in for Calendar Year 2019, published February 12, 2021, of the 77.5 million tons of waste produced in California, almost half was sent to landfill, meaning that California did not meet its 2020 goal. Approximately 37% was recycled or diverted, down from a peak of 50% in 2014. Based on these trends, it is unlikely that the state will meet its diversion goals.
- 2) *Market challenges for recyclable materials.* The U.S. has not developed significant markets for recyclable content materials, including plastic and mixed paper. Historically, China was the largest importer of recyclable materials. In California, approximately one third of recyclable material is exported, including about two-thirds of recycling in the blue bins, according to CalRecycle. China used to be where the world sent their recyclable material, but beginning in 2017, the country began significantly restricting the types of materials and levels of contamination that would be accepted. However, effective January 1 of this year, China has announced that it would no longer be accepting all waste imports. Before this year's blanket waste ban, China accepted 32 types of scraps for recycling and reuse and limited contamination levels of those materials to 0.5%. The initial ban left waste-exporting countries such as the U.S. scrambling to find alternative destinations, including Southeast Asian nations like Thailand, Vietnam, and Indonesia, which quickly became overwhelmed by the volume of refuse received. Soon after, those countries began to impose their own bans and restrictions on waste imports. Without a global market to send these "recyclable" materials, the contents of many blue recycling bins are being diverted to landfills.

Further, many types of packaging and products add to the complex recycling issue by being a combination of materials such as aluminum layered with different plastics to make baby and pet-food pouches. These "hybrid" items are difficult to recycle, if at all.

Prices for materials can fluctuate wildly over both the short term and the long term, leading to instability in recycling markets. In order for material to be recycled and not end up in a landfill, the cost of processing and using the recycled material must be less than that of “virgin” material, derived from fossil fuels. In 2020, virgin plastic prices fell by 14-43% depending on type, due to the drop in the price of crude oil.

- 3) *Environmental costs of plastic pollution.* Plastic, most of which does not decompose, is a significant driver of climate change. According to the report, *Plastic & Climate: The Hidden Costs of a Plastic Planet*, greenhouse gases are emitted at each stage of the plastic lifecycle and these emissions threaten the ability of the global community to meet carbon emission targets. After disposal, plastic is primarily landfilled, recycled, or incinerated – each of which produces varying amounts of greenhouse gas emissions. Landfilling emits the least greenhouse gas emissions on an absolute level, although it presents significant other risks. Recycling has a moderate emissions profile but displaces new virgin plastic on the market, making it advantageous from an emissions perspective. Incineration leads to extremely high emissions and is the primary driver of emissions for plastic waste management. The United States burns six times more plastic than it recycles, according to research in April 2019 by Jan Dell, a chemical engineer and former vice chair of the U.S. Federal climate committee. In 2019, the production and incineration of plastic will have added more than 850 million metric tons of greenhouse gases into the atmosphere, which is equal to the emissions from 189 five-hundred megawatt coal power plants. Some, however, argue that other packaging products can cause more emissions than plastics; because plastic is light, it is indispensable for the world’s consumers and can help reduce emissions.

A significant portion of plastic waste is lost to the environment, much of which ends up in the ocean. Plastics are estimated to comprise 60-80% of all marine debris and 90% of all floating debris. By 2050, by weight there will be more plastic than fish in the ocean if we keep producing (and failing to properly manage) plastics at predicted rates, according to *The New Plastics Economy: Rethinking the Future of Plastics*, a January 2016 report by the World Economic Forum. Plastic on the ocean breaks down into fragments and microplastics, which are often ingested by marine animals and birds. Additionally, hydrophobic chemicals present in the ocean in trace amounts (e.g., from contaminated runoff and oil and chemical spills) bind to plastic particles where they enter and accumulate in the food chain.

Ocean plastic predominantly enters the ocean from river runoff. The largest contributors are rivers primarily located in Southeast Asia. While some have used this information to place the blame on those countries, a significant portion of the plastic pollution is generated in the United States and sported to those countries as mixed plastic scrap for recycling. The material is sorted and the material with value is recycled while the rest burned for energy generation or discarded. In countries with inadequate waste management systems, waste plastic finds its way into waterways that flow to the ocean.

- 4) *Health costs of plastic pollution.* In addition to environmental impacts, there is increasing concern on the impacts that plastic has on human health. According to the report *Plastic & Health: The Hidden Cost of a Plastic Planet*, plastic poses distinct risks to human health at every stage of its lifecycle, but especially after disposal. Some of the health concerns include toxic releases from plastic waste management; fragmenting and microplastics; additional exposure to plastic additives as plastic degrades; and ongoing environmental exposures by contaminating and accumulating in food chains through agricultural soils, terrestrial and aquatic food chains, and water supply.

The report recognizes, however, that there are gaps in knowledge that prevent researchers from being able to fully evaluate the health impacts of plastic. These include not knowing exactly what chemicals are in plastic and its production processes; limited research into the impacts and movement of plastic and microplastics through terrestrial environments, marine ecosystems, and food chains; and limited understanding of the impacts of microfibers and other plastic microparticles that are increasingly being documented in human tissues.

- 5) *The Basel Convention.* The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention) is an international treaty, opened for signature in 1989, which limits the international transfer of hazardous waste in response to the discovery that toxic wastes were being exported to less developed countries. For the 188 parties of the Convention (to which the United States and Haiti are the sole absentees), there are obligations to, among other specifications, prohibit both the import and export of hazardous waste without prior informed consent, to reduce and appropriately dispose domestic hazardous waste, to consider and appropriately enforce non-compliant hazardous waste trafficking as illegal, and to make other efforts to ensure waste is disposed only in environmentally sound ways.

In May of 2019, it was amended to include most plastic scrap (i.e., recycled plastic) destined for recycling or disposal beginning January 1, 2021. The

specific types of plastic material covered by the amendment are: plastic scrap and waste that is contaminated (e.g., with food residue or other non-hazardous waste); plastic scrap and waste mixed with other types of scrap and waste; and, plastic scrap and waste containing halogenated polymers; mixed plastic scrap and waste, with the exception of shipments consisting of polyethylene (PE), polypropylene (PP), and polyethylene terephthalate (PET) that meet specified criteria. Generally, plastic scrap that is “almost exclusively” limited to one polymer or resin type, as specified, are not subject to the Basel Convention.

## Comments

- 1) *Purpose of Bill.* According to the author, “Simply shipping plastic waste to other countries who lack sufficient waste management capacity is not recycling. Instead, these exports cause lasting harm to our planet as plastic waste ends up back in the environment, and to local communities as incineration and dumping lead to respiratory and other health issues. It is time to be honest with ourselves about where our trash goes, how it is being disposed of, and whether or not it is actually recyclable. Assembly Bill 881 would close the loophole in California law that enables exported plastic waste to be deemed recycled even when it is landfilled, burned, or dumped; and increase transparency and accountability in our state’s waste management.”
- 2) *Reducing impacts of waste diversion.* While California is often seen as a leader in recycling policy, it has long relied on exporting plastic material to meet waste diversion goals. Estimates vary on the percentage of that material that is recycled when waste is shipped abroad, but all estimates indicate that a large amount of that material has no value and is disposed of in the destination country. In most cases, the material is shipped to countries that lack the infrastructure to safely manage solid waste and the material that is not recycled ends up in the environment through open disposal or open burning contributing to ocean plastic pollution and toxic air and greenhouse gas emissions.

AB 881 would improve the accuracy of accounting for how much waste is truly recycled. By eliminating that incentive to export mixed non-recyclable plastic waste, this bill would reduce plastic pollution, and the environmental and health impacts imposed upon the countries to which our waste is exported.

- 3) *Adhering to Basel Convention restrictions.* While the United States has not ratified the Basel Convention, AB 881 would restrict plastic exports counted as diversion to those that adhere with the Convention. That includes limitations on the resin types that are readily recyclable identified in the Convention, as well as prior agreements with countries importing plastic scrap.

- 4) *Future opportunities for recycling in California.* If the export of waste is no longer incentivized to meet diversion goals, then new markets and strategies are needed to do so. Some say that it is upon the government to improve waste management infrastructure and develop domestic markets for recycling. This could encourage innovation to develop new technologies and facilities for recycling more types of plastics. A more robust processing and manufacturing infrastructure domestically could help to reduce some of the volatility for California recyclables by providing a more stable market. California's plastic processors also provide economic benefits and green jobs within the state.

This bill would encourage improved waste processing domestically and more careful sorting of waste plastic to ensure that the material we do export is ultimately recycled.

- 5) *Challenges for implementation.* CalRecycle calculates local diversion rates based on estimated waste generation and reported disposal amounts. The current reporting structure lacks the specificity needed to implement this bill.

*The author may wish to work with CalRecycle to develop new reporting requirements to calculate the amount of waste exported and whether or not it meets the criteria established by the bill.*

### **Related/Prior Legislation**

AJR 4 (Christina Garcia, 2021) would urge the United States' ratification of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention) at the earliest opportunity. AJR 4 is awaiting hearing on the Senate Floor.

SB 54 (Allen, 2021) would prohibit producers of single-use, disposable packaging or single-use, disposal food service ware producers from offering for sale, selling, distributing, or importing in or into the state those products manufactured after January 1, 2032, unless it is recyclable or compostable. SB 54 has been moved to the Senate Inactive File.

**SOURCE:** Californians Against Waste (Sponsor)

### **SUPPORT:**

350 Silicon Valley  
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The Last Beach Cleanup  
Upstream  
Wishtoyo Chumash Foundation

Zanker Recycling  
Zero Waste USA

**OPPOSITION:**

None received

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