

**\*These facts have been provided by Beyond Plastics. This is to be used as a resource to lobby, but not as a one pager to give to legislators\***

## **Plastic Facts & Why We Need Policies to Reduce Packaging**

- The production, use, and disposal of plastic is one of the greatest environmental and health threats of our time

## **Plastics, Climate, and Environmental Justice**

- Environmental Justice:
  - Plastic pollution—from extraction to production to litter to disposal—disproportionately impacts low-income communities and communities of color.
  - More than 90% of the climate pollution that the plastics industry reports to the EPA occurs in just 18 communities, most of which are communities of color.
  - People living within 3 miles of these petrochemical clusters earn 28% less than the average U.S. household and are 67% more likely to be people of color.
  - The recent train derailment in East Palestine, OH resulted in a release of vinyl chloride, a carcinogenic chemical used exclusively to make PVC plastic packaging, shower curtains, pipes, and children’s toys. Ohio residents are paying the price for toxic plastics when safer alternatives exist.
- Climate change:
  - Plastics are the new coal: by 2030 emissions from plastics will surpass those from coal fired power plants in the United States.
  - The Climate Law Scoping Plan directs the New York State legislature to pass an Extended Producer Responsibility (EPR) bill.
  - The climate scoping plan calls for a complete phaseout of single-use packaging, a reduction of toxics in materials and products, investments in reuse and refill systems, and major improvements to recycling and composting infrastructure, with disposal being the absolute last resort.
- Plastics are made from fossil fuels.
  - Polyethylene, a common single-use plastic, is made from ethane from hydrofracked gas.
- Plastic production is rapidly increasing in the U.S., unless we enact policies to reduce demand.
  - Plastic production could triple by 2050, from 44 million metric tons to more than 120 million metric tons.
  - This planned expansion would cause a dramatic increase in air pollution, climate pollution, and plastics in the environment and in our bodies.

## **Plastics and Health**

- Plastics contain thousands of added chemicals, many of which are known toxins. Perhaps more alarmingly, the bulk of the chemicals used in plastics have *never* been tested for safety.<sup>1</sup>

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<sup>1</sup> “Plastic Products Leach Chemicals That Induce In Vitro Toxicity under Realistic Use Conditions.” Environ Sci Technol. 2021 Sep 7;55(17):11814-11823.

- Some of chemicals that have been studied (including phthalates, PFAS, benzene, toluene, heavy metals, and bisphenols) are known endocrine disruptors and carcinogens.
- Plastic has been found in human blood, placenta, lungs, breastmilk, and stool. Hull University and Hull York Medical School published a study in February 2023 showing plastic particles found in human veins.
- As plastics break up into smaller and smaller pieces, these microplastics are released into the environment, where they circulate in the air, soil, and water.
- Due to the proliferation of single-use plastics in recent decades, and the resulting plastic pollution, it is likely that every living organism is affected by plastic pollution, with many yet unknown consequences.

### **Plastics in the Environment**

- Plastic pollution is turning our ocean into a watery landfill – with more than 33 billion pounds entering the ocean each year<sup>2</sup> – threatening marine life and seafood quality.
- 70-80% of this plastic is from land-based sources.
- By 2025, there will be 1 ton of plastic in the ocean for every 3 tons of fish.<sup>3</sup>

### **Plastics and Incineration**

- Production and incineration of plastic will add more than 850 million metric tons of greenhouse gasses to the atmosphere annually - equivalent to the emissions from 189 coal fired power plants, according to the report *The New Coal: Plastics and Climate Change*.<sup>4</sup>
- In the next 10 years, emissions from the plastics lifecycle could reach 1.34 gigatons per year - the equivalent of emissions from more than 295 coal fired power plants.
  - Carbon dioxide emissions from incineration are 80% worse than burning coal.
  - Greenhouse gas emissions from trash incineration are roughly twice that of landfilling the same waste, no matter the transportation distance involved.
  - Incineration does not replace landfills - makes them more dangerous by filling them with toxic ash. For every 100 tons of waste burned, about 30 tons of toxic ash are produced and shipped to landfills
- Toxic chemicals from consumer products and packaging including PFAS, formaldehyde and arsenic are contaminating leachate from landfills. Researchers report incinerators may be contributing to plumes of airborne PFAS pollution and could be spreading PFAS significant distances also contaminating water and soil. <sup>5</sup>

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<sup>2</sup> "From pollution to solution." United Nations Environment Program (UNEP). Accessed 1/23/23.

<sup>3</sup> "The New Plastics Economy: Rethinking the future of plastics." World Economic Forum, 2016.

<sup>4</sup> <https://www.beyondplastics.org/plastics-and-climate>

<sup>5</sup> "Characterizing the air emissions, transport, and deposition of per- and polyfluoroalkyl substances from a fluoro polymer manufacturing facility, Environmental Sci Tech, Jan 2021