

## General

- U.S. consumers use approximately 100 billion plastic shopping bags annually (Scientific American, 2014)
- The use and manufacturing of single-use carryout bags has severe impacts on the environment on a local and global scale, including greenhouse gas emissions, litter, harm to wildlife, atmospheric and ocean acidification, water consumption and solid waste generation; (Scientific American, 2014)
- Plastic bags are particularly harmful to marine life. Plastic bags and their associated plastic pieces are often mistaken for food by animals, birds, and marine life like fish and sea turtles. The consumed plastic then congests the digestive tracts of these animals, and can lead to health issues such as infections and even death by suffocation.

## Human Health

- Nearly all commercially available plastics tested in a 2011 study contained compounds (such as or similar to BPA) that release estrogen-mimicking chemicals that have adverse human health affects
  - In mammals, chemicals having estrogen activity can produce many health-related problems, such as early puberty in females, reduced sperm counts, altered functions of reproductive organs, obesity, altered sex-specific behaviors, and increased rates of some breast, ovarian, testicular, and prostate cancers especially in small children and fetuses. (Yang et al. 2011)
- Phthalates are a common ingredient in plastics that make them softer and more pliable. They act as an endocrine disrupter as they accumulate in our bodies. (Bag it!, 2010).
- Plastics are working their way up the food chain into the fish that we consume (Rochman et al. 2015, Kinver 2017).

## Micro-plastics

- Plastic is not bio-degradable, it just breaks down into smaller pieces forming a 'plastic dust' called micro-plastics
  - Micro-plastics are capable of absorbing environmental contaminants including DDT, PCB's, etc. (Endo et al. 2005, Rios et al. 2007) which are consumed by the fish we eat and sell through our fisheries (<http://www.npr.org/sections/thesalt/2013/12/12/250438904/how-plastic-in-the-ocean-is-contaminating-your-seafood>).
  - In a study of fish from California and Indonesia, human derived debris (including plastic debris and fiber) was found in the stomach's of 25% of individual fish and in 67% of all species in California and in 28% of individual fish and in 55% of all species in Indonesia. This study, showing anthropogenic debris in more than 25% of individual animals and over half of the species purchased and/or collected from fish markets and fishermen selling fish for human consumption, demonstrate that anthropogenic debris has infiltrated marine foodwebs to the level of humans via seafood. Because anthropogenic debris is associated with a cocktail of priority pollutants, some of which can transfer to animals upon ingestion, this work supports concern that chemicals from anthropogenic debris may be transferring to humans via diets containing fish and shellfish (Lonnstedt and Eklov 2016)
  - In parts of the Pacific there is more plastic to plankton by a ration of 10:1 (Bag it!, 2010)
  - Micro-plastics enter the food web and can accumulate in humans

# Plastic Bag Facts

## Citations:

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- Rios, L.M., Moore, C., Jones, P.R., 2007. Persistent organic pollutants carried by synthetic polymers in the ocean environment. *Marine Pollution Bulletin* 54, 1230–1237
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- Yang CZ, Yaniger SI, Jordan VC, Klein DJ, Bittner GD. 2011. Most plastic products release estrogenic chemicals: a potential health problem that can be solved. *Environ Health Perspect* 119:989–996.996; doi:[Online 2 March 2011]10.1289/ehp.1003220 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3222987/>
- Do Plastic Bag Bans Work? (2014). Retrieved November 29, 2016, from <https://www.scientificamerican.com/article/do-plastic-bag-bans-work/>

For more information on plastic bags or the Bags for Change group contact:

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The Bags for Change group is group of concerned Sitkans whose goals are to:

- 1) teach people about the problems and dangers associated with plastic bags,
- 2) provide reusable bags to those needing them, and
- 3) increase the use of reusable bags and decrease the use of disposable bags in Sitka by implementing a bag fee of \$0.25/bag on plastic disposable bags and \$0.10 on paper bags.



**Bags for Change****Why should we use fewer plastic bags?**

**For our health:** Plastics contain chemicals that mimic estrogen. These chemicals affect human health – causing cancers, infertility, low sperm counts, and feminize boys and masculinize girls. They especially affect small children and fetuses. Plastics also break down into tiny pieces that are working their way up the food chain into the fish we eat. **For our marine environment:** Chemicals in plastic affect fish and kill thousands of birds, turtles, and whales every year.

**The Bags for Change group's goals:**

- 1) teach people about the problems and dangers associated with plastic bags,
- 2) provide reusable bags to those needing them, and
- 3) increase the use of reusable bags and decrease the use of disposable bags in Sitka by implementing a bag fee on disposable bags.

**Keep your reusable bags clean!**

Like clothes, your reusable bags need to be cleaned regularly or when they get dirty or contaminated. Most reusable bags (including those made of heavy duty plastic) can be washed in the washing machine along with your clothes and hung to dry. Consider turning bags inside out to make sure the inside gets cleaned. Insulated/heavy plastic reusable bags can be cleaned by spraying with a disinfectant spray (especially seams) and wiping dry.

**Need plastic bags around the house?** Here are some ideas to help reduce or replace plastic bags:

- For collecting dog poo or cat litter – try empty bags from potato chips, cereal or noodles
- For wet or gooey waste – use the bottom of a cut milk carton or the empty sour cream container
- For trash can liners – try bread bags or save the liner! Rather than throw away the liner each time, just dump the trash into a single large trash-can size bag and keep individual can liners.
- For yard and house waste – try empty dog or cat food bags, cat litter bags, or empty boxes
- For transporting clean items – try a backpack, dry bag, reusable bag or a box.
- For containing food – use reusable containers with lids – glass is especially a good choice because you can often reheat in glass in the microwave or oven. Jars with wide mouths can be reused and are usually spill proof.

Still need plastic bags? Consider purchasing “green” bags that are made from plant materials. While these bags don’t break down in Sitka’s cold temperatures, they are still better than bags made from oil.

Interested in Bags for Change or need more reusable bags? Contact Michelle at 747-2708 for more info.

**Motion approved by the Health Needs and Human Services commission at their June 14, 2017 meeting.**

M – Platson/S – Arndt moved that the Health Needs and Human Services Commission supports the reduction of plastic bags in our community because of their detrimental impacts on the health and environment. The Commission also supports the approach and work of the volunteer group Bags for Change. Motion carried unanimously on a roll call vote.