

# ALASKA STATE LEGISLATURE



## REPRESENTATIVE ANDY JOSEPHSON

Dear House Community & Regional Affairs Committee Members,

Please find the answers to outstanding questions from the February 10<sup>th</sup>, 2018 hearing below:

1. Stats request from JKT – 10:58

What proportion of plastic pollution is made up of plastic bags?

From my research, it seems like plastic pollution is measured by weight, not type. This is likely due to the staggering numbers of different plastic types, which are difficult to separate during cleanup efforts. Further, on this metric, a flimsy single-use bag is not going to amount to a significant source of plastic pollution – they are extremely light and compact relative to many other plastics. However, plastic bags are often mistaken by wildlife for food, making them a particularly troublesome form of plastic pollution, regardless of their size and weight. Further, they are delicate and photo-degrade easily (break apart into tiny pieces), so enter the food chain more readily than many other plastics.

We did manage to find the below graphic; relative proportions (volume/weight) were not available.



2. Other locations that have banned bags? Rep. Lincoln – 11:07

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Communities in Alaska that have banned or taken measures to curtail use of plastic bags		
Community	Authority/Notes	Year
Arctic Village	Not actual ban, but the village council successfully asked the store to stop using plastic bags	Not Known
Bethel	Municipal Code 8.12; Ordinance 09-12 § 2	2009
Chefornak	Have not been able to confirm, but a few years ago Chefornak was reportedly working on a plastic bag ban and purchasing canvas bags for the store to use	Not Known
Chevak	No actual ban, but started a recycling program in 2003, which encourages residents to drop off bags where they are used to make crocheted bags for the community	2003
Cordova	Municipal Code 8.37; Ordinance 1137	2015
Emmonak	Municipal Code 8.04	2002
Fort Yukon	City Ordinance and Tribal Council Resolution	2003
Galena	Municipal Code 13.04.045; Ordinance 09-01	1998
Hooper Bay	City Ordinance	2009
Kodiak	City Ordinance 1372	2018
Kotlik	Banned by City Ordinance. Stores have not used plastic bags in over a decade. At the time, plastic bags were so rampant that the sheer numbers of them were impacting fish habitat and subsistence fishing grounds.	~2005
Koyuk	Resolution 07-03-01-01 Native Village of Koyuk IRA Council. A grant from Alaska Conservation allowed Koyuk to give two canvas bags to each household. The Koyuk Native Store also provided canvas bags to customers.	2001
New Stuyahok	The Traditional Council convinced local store to stop ordering plastic bags. Paper bags with handles are now used.	Not Known
Newtok	Tribal Council; Nelson Island Consortium. Stores no longer use plastic bags.	~2008
Saint Paul	Bags not officially banned, but the city of Saint Paul in lease agreement with AC Store and Tribe negotiated with them to stop using plastic bags.	Not Known
Tanana	Banned by Resolution of Tanana Tribal Council, according to the city clerk, the city typically follows tribal resolutions.	~2014
Wasilla	City Ordinance No. 17-24	2018

3. Do unincorporated towns comply? Rep. Lincoln – 11:10  
Yes, it appears so (see table from previous question).

4. Kodiak Borough or city? Towns that ban and continue to ban or have repealed ban? – Rep. Drummond – 11:16  
Kodiak City. See previous table for current list. Homer (ban) and Fairbanks (fee) had regulations that were repealed.

5. Environmental impact of plastic vs paper vs cloth? Rep. Saddler – 11:21

PAPER: It takes three reuses of a paper bag to neutralize its environmental impact, relative to plastic.

Manufacturing a paper bag requires about four times as much water as does a plastic bag. Additionally, the chemicals used in paper manufacturing contribute more to eutrophication of waterways.

In terms of disposal, paper bags are much better than their plastic counterparts. Paper is compostable and if the bag isn't overly contaminated with food, paper, it can go in any municipal recycling bin.

PLASTIC: A standard disposable plastic bag is made from high-density polyethylene (HDPE). These bags carry the smallest ecological footprint (in their production) of plastic bags, as a class. But, plastic is derived from petroleum, a non-renewable resource that is damaging to the environment (both in extraction and consumption).

Further, recycling plastic bags can be difficult. They often gum up machinery and many cities do not accept them in the municipal recycling stream. Some large grocery stores offer plastic bag recycling options on site. But unlike metal or glass, plastic can only be reincarnated a limited number of times before it is too costly to revive. Most disposable plastic bags end up in landfills or simply blow away to degrade in the environment

Many people can only reuse plastic bags once or twice, because they're so delicate. And this does lower their carbon footprint — but only to a point. Plastic bags simply don't have the reusable potential of cloth or even paper bags.

REUSABLE: Reusable bags may be made from many different materials, but the two most common types are cotton and nonwoven polypropylene (a more durable plastic than HDPE).

An average cotton shopping bag would need to be reused 131 times to account for its higher impact on the production side; note that this should be well within the bag's expected life span. Nonwoven polypropylene, on the other hand, is less costly than cotton. These bags need to be reused only 11 times to break even with the conventional plastic.

6. Who is the Zero Waste Coalition (and plastic bag committee)? – Rep. Saddler – 11:24 –

This may have been answered adequately from public testimony. They are a volunteer committee in the Mat-Su working towards reducing waste, and specifically plastic bag pollution.

Chevak has a  
crochet program  
that turns  
disposable  
plastic bags into  
reusable.

