



Cigarette butts littered along ocean beach
<https://marinedebrisblog.wordpress.com>

BAN THE BUTTS

Recommendations:

Regulate Filters

- Require biodegradable alternatives
- Tax filter use

Reduce the Litter

- Increase litter fines
- Expand disposal system
- Clean-up initiatives

Goal:

- Reduce the impact non-biodegradable cigarette butts are having in Canadian aquatic ecosystems.

Executive Summary

Currently cigarettes are a significant problem facing aquatic ecosystems. The threat exist due to inability to effectively manage and enforce proper disposal of leftover cigarette butts. Policy needs to be developed to require the tobacco industry to develop ecofriendly alternatives for cigarette filters, similar to that observed from the microbead ban.

Why cigarette butts?

The ban on microbeads is a substantial movement towards the safety and protection of aquatic ecosystems, and received great public support. Another predominant pollutant comes from the tobacco industry, the cigarette butt. These insignificant leftovers can have big impacts on aquatic ecosystems they end up in, yet can be seen nearly everywhere smoking occurs.

Canadians smoke upwards of 60 million cigarettes per year², and estimates find that upwards of 40 million of these may be littered. Nearly every one of these cigarettes has a filter, made of non-biodegradable plastic fibres, responsible for the cigarette butt that remains after smoking. This construct means that once littered, a cigarette butt can remain for years.

Collection in Aquatic Systems:

The problem with this littering doesn't stay where a cigarette butt is littered. Once littered, many cigarettes are carried away by drainage systems and eventually deposited amongst streams, rivers, and oceans.¹ When considering the frequency, defectiveness and longevity of cigarette litter, it is no surprise that cigarettes are the most frequently collected item in numerous shoreline clean-ups.⁴



Cigarette butts collecting near storm drain
<http://www.e-know.ca/news/cigarette-butts-in-our-community/>

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Biological Impacts:

Aquatic species have been observed to mistakenly eat discarded cigarette butts, including turtles, fish, and sea birds. This consumption not only impairs digestive functionality, but also introduces toxic chemicals to these organisms. But cigarettes butts also leach toxic chemicals into the water they reside. These toxins affect fish development ^(3&5), showing the impact absent direct consumption. The effect of one cigarette may be small, but at the scale observed impacts significantly increase.

Problem & Solution

Problem:

Despite efforts to enforce and encourage proper disposal, cigarette butt litter still frequent. Increased efforts to discourage waste at consumer level expensive, and may not work.

Solution:

Require tobacco industry to utilize environmentally friendly alternatives to construct cigarette filter, minimizing impact the inevitable litter can have.



Recommendations & Implications

Recommendations

- 1. Introduce Ban on Plastic Cigarette Filters**
Implication: Reduces impact cigarette butt litter can have on ecosystems and wildlife.
- 2. Implement Target Date**
Implication: Provide a fair date for tobacco companies to implement alternative filters, but also marks a date required for ban.
- 3. Support Clean-up Projects**
Implication: Remove the cigarette butts currently present, and those collecting until target deadline.
- 4. Expand Disposal Systems**
Implication: Expand system to encourage increased disposal of both plastic and eventual alternatives to minimize impact
- 5. Temporarily Tax Plastic Filter Use**
Implication: Raises funds to improve cigarette disposal systems and support clean-up initiatives. Will also encourage companies to adopt alternatives prior to target deadline.

Overview

Current efforts to minimize cigarette litter at the consumer level are not working. Implementation banning the use of harmful materials in cigarette filters will full reduction in the impact aquatic communities experience from cigarette litter. The time to introduce such policy is now, to save our ecosystems, but also build upon the success and support observed around the ban of microbeads.

References

- 1- Novotny T.E., et al. 2009. Cigarettes butts and the case for an environmental policy on hazardous cigarette waste. *Int. J. Environ. Res. Public Health*.
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- 4- International coastal clean-up, 2015 report. *Ocean Conservancy*.
- 5- Lee, W., et al. 2015. Development toxicity of cigarette butts- an underdeveloped issue. *Ecotoxicology and environmental safety*.