



## **Smoke-Free Parks and Playgrounds**

Submitted to:

Government of Alberta

By:

Campaign for a Smoke-free Alberta

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## The Case for Select Outdoor Smoking Restrictions

### Introduction

The Alberta public is becoming more concerned about the consequences of outdoor smoking. These concerns go far beyond involuntary exposure to second hand smoke.

Outdoor smoking:

- Negatively impacts the environment through smoking related litter;
- Is a frequent cause of fire;
- Results in Outdoor Tobacco Smoke (OTS).

This paper provides background information on the broad consequences of outdoor smoking, OTS and the resulting impact on the environment and people. Information on smoke-free outdoor policies in other jurisdictions is provided and public support for outdoor smoking restrictions is highlighted. The paper concludes with recommendations for smoking restrictions in select outdoor public places.

### 1. Litter

Over 4.5 trillion cigarettes are littered worldwide each year and are most littered item in the world.<sup>1</sup> The Great Canadian Shore Cleanup reports that 7,102 kg of trash was collected by volunteers from 115 sites around Alberta in 2007. Smoking related litter, including cigarette and cigarillo butts, wrappers, packages and lighters, was the most common form of litter found on Alberta's beaches outnumbering other forms of litter by more than 3 to 1.<sup>2</sup>

Composed of cellulose acetate, a form of plastic, cigarette butts can persist in the environment as long as other forms of plastic. The plastic package wrapper and cigarette butts do not biodegrade; they only break down into smaller components.<sup>3</sup> The distinction is important as wrappers and cigarette butts end up as a plastic residue that contaminates ecosystems for decades; unlike biodegradable material such as plant or animal matter which is neutralized by enzymes or sunlight.

Additionally, cigarette butts are poisonous to children and wildlife.<sup>4</sup> Ingestion of more than 1 cigarette can cause serious symptoms in a toddler.<sup>5</sup> Cigarette filters have been found in the stomachs of fish, birds, whales and other marine creatures that mistake them for food.<sup>6</sup>

Studies conducted by Clean Virginia Waterways show that the chemicals in cigarette butts easily leach out and are deadly to water fleas or daphnia (a small but important animal that lives in most freshwater lakes and streams as well as the ocean). As these organisms are the foundation of the aquatic food chain, they are an important source of toxin bioaccumulation or biomagnification. Biological magnification is an increase in concentration of a substance, such as the pesticide DDT, which occurs in a food chain.

Toxins or pollutants can become more concentrated as they move up the food chain when larger species feed on smaller species that contain these toxins.<sup>7</sup> The loading of arsenic, nicotine and

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<sup>1</sup> Cigarettelitter.org.

<sup>2</sup> Great Canadian Shore Clean Up, 2007.

<sup>3</sup> Ocean Conservancy, July 24, 2006

<sup>4</sup> Kathleen M. Register, American Littoral Society, *The Underwater Naturalist*. August 2000

<sup>5</sup> National Capital Poison Center

<sup>6</sup> Clean Virginia Waterways

<sup>7</sup> Gray, J.S., 2002. *Biomagnification in marine systems: the perspective of an ecologist*. Mar. Pollut. Bull. 45: 46-52.

heavy metals such as lead, copper, chromium, cadmium and polycyclic aromatic hydrocarbons (PAH) from cigarette butts into the environment has been confirmed by scientific study.<sup>8</sup>

The bottom line: old cigarette butts only get diluted or buried. They never truly vanish.<sup>9</sup> As these discarded cigarette butts take such a long period of time to disappear from our environment, they are an increasing and ongoing threat to the natural beauty of our parks and beaches.

The natural beauty of our beaches and parks is a cornerstone of the Alberta Government Parks mission and vision statements<sup>10</sup> and is a component of the Alberta Parks Strategy.<sup>11</sup>

## **2. Fires Caused by Smoking**

Smoking related fires accounted for 36% of all fires in Alberta Parks in 2007.<sup>12</sup> As of June 24 2009 Alberta Sustainable Resources and Development reported a total of 840 wildfires in Alberta with a total area 6,214.33 hectares burned. Within the last 5 years losses due to wildfires total 21,625 hectares.<sup>13</sup> Alberta is the only province that tracks cigarette butts as a separate ignition source.<sup>14</sup>

Estimated economic losses from fighting wildfires not only address the actions that take place to extinguish a fire, (i.e., human resources, ground and air support, strategic placement of resources in anticipation of wildfire starts) but also include losses to the forestry industry as well as losses to an already shrinking wildlife habitat within Alberta.

The Provincial Forest Service has the authority to seek a Ministerial Order for a fire ban or forest closure. Most often it will be a campfire ban - the restricting of fires to designated pits within recreation areas. The careless discarding of cigarette butts is not mentioned as a strategy.

Brian Emmett, Assistant Deputy Minister (ADM) of Natural Resources Canada's Canadian Forest Service notes that "Wildfires pose a sizeable threat to public safety, which is the responsibility of all levels of government in Canada,... more than 700,000 people and over 250 communities—many of which are inhabited by Aboriginal peoples—have been threatened by wildfires in the past ten years."<sup>15</sup>

Many Albertans have seen an area of burned grass in the medians of our highways and in grasslands around the province. A cigarette butt tossed out of a car window is a likely cause. Those that discard cigarette butts out of car windows, unfortunately, do not consider cigarette butts as litter.

The Campaign for a Smoke-Free Alberta believes that introducing smoking bans in parks and playgrounds with associated fines will raise awareness of the dangers and consequences of the careless discarding of smoking materials. This should have a positive impact on wildfire reduction and associated economic costs in our province and would help improve the quality of life of all Albertans.

## **3. Second-Hand Smoke and Outdoor Tobacco Smoke**

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<sup>8</sup> Moriwaki H, Kitajima S, Katahira K. Waste on the roadside, 'poi-sute' waste: Its distribution and elution potential of pollutants into environment. *Waste Management* March 2009; 29(3): 1192-7.

<sup>9</sup> Ocean Conservancy, July 24, 2006.

<sup>10</sup> Alberta Government 'Parks & Protected Areas Vision & Mission Statement'.

<sup>11</sup> Alberta Government 'Plan for Parks', May 2008.

<sup>12</sup> Alberta Emergency Management Agency ALBERTA PARK FIRE LOSSES CAUSED BY SMOKER'S MATERIAL 1996-2005.

<sup>13</sup> Alberta Emergency Management Agency, <http://aema.alberta.ca/>

<sup>14</sup> Alberta Emergency Management Agency, <http://aema.alberta.ca/>

<sup>15</sup> Declaration for the new Canadian Wildland Fire Strategy (CWFS) in October 2005.

Tobacco smoke contains at least 172 toxic substances, including 3 regulated outdoor air pollutants, 33 hazardous air pollutants, 47 chemicals restricted as hazardous waste, and 67 known human or animal carcinogens.<sup>16</sup>

Tobacco smoke pollution outdoors is determined by the density and distribution of smokers, the wind velocity (direction and speed), and the stability of the atmosphere. High smoker density, low wind velocities, and stable atmospheric conditions produce high second-hand smoke concentrations.<sup>17</sup> Research indicates that second-hand smoke concentrations persist for hours after smoking ceases indoors, however, OTS levels may be as high as second-hand smoke indoors, especially in close proximity to smokers.<sup>18</sup>

These findings have been echoed by recent research of OTS conducted in Canada by a team of researchers at the University of Waterloo who conducted a series of structured experiments measuring OTS levels.

The closer you are to a second hand smoke source outdoors the greater your exposure to its harmful effects.<sup>19</sup> In fact, being within a few feet of a smoker outdoors may expose you to air pollution levels that have been measured in homes and in bars that have allowed smoking.<sup>20</sup>

Scientific support for outdoor bans is based on scientific evidence, including the *2006 Surgeon Generals Report and the California Environmental Protection Agency's Air Resources Board Report declaring second-hand smoke to be a Toxic Air Contaminant*. Depending upon the specific situation, smoke will impact the surrounding environment. Generally the smoke from a single cigarette can be detected between 7-10 metres (25-30 feet approximately) away. This measurement easily encompasses the area/distance between people at a crowded beach, such as at Sylvan Lake, or a children's park or some campgrounds.

#### **4. Other jurisdictions**

Many jurisdictions in the United States, in Canada and around the world, have implemented smoke-free outdoor places legislation.

##### **Smoke-free beaches**

71 American municipalities in total: 31 municipalities in California, 19 on the eastern seaboard states and others throughout the country including Hawaii. Beaches in Australia and New Zealand have recently gone smoke-free and some beaches in England have been smoke-free since the mid 1990's. Most recently Vancouver Coastal Health announced an initiative to make Vancouver beaches and many other outdoor areas smoke-free. Many have done so due to the issue of litter.

##### **Smoke-free parks and playgrounds**

80 American municipalities have implemented laws including 57 in California, 18 in Alabama and 5 in Arkansas.<sup>21</sup> Municipalities in Canada, including Bridgewater Nova Scotia and Woodstock Ontario, have banned smoking in various outdoor venues including public parks. City-owned outdoor recreational facilities and playgrounds are smoke-free in Richmond B.C. and in St. John's

<sup>16</sup> Repace, James L., *Exposure Analysis 203* (Wayne R. Ott et al. eds., 2006).

<sup>17</sup> Repace, James L., *Benefits of Smoke-free Regulations in Outdoor Settings: Beaches, Golf Courses, Parks, Patios and in Motor Vehicles*.

<sup>18</sup> Repace, James L., *Benefits of Smoke-free Regulations in Outdoor Settings: Beaches, Golf Courses, Parks, Patios and in motor vehicles*.

<sup>19</sup> Repace, J. *Measurements of Outdoor Air Pollution from Second Hand Smoke on the UMBC Campus*, June 2005.

<sup>20</sup> Canadian Council for Tobacco Control. *Fact sheet on Second-hand Smoke and Outdoor Places*.

<sup>21</sup> American Non-Smokers Rights Foundation.

Newfoundland. Recommendations have been made to the Prince Edward Island Provincial Government to amend their Smoke-Free Places act to include provincially owned parks and beaches.

### **Smoke-free streets**

Truro, Nova Scotia has made Inglis Place, a popular downtown dining and shopping street smoke-free.

### **Comprehensive Smoke-free Outdoor Bylaws**

Whistler, British Columbia recently passed a smoke-free bylaw applicable to the following outdoor venues, as well as within 25 meters of these venues: locations used for such purposes as worship, entertainment, recreation, business or amusement, playgrounds, playing fields, venues where sporting events are occurring, transit shelters and school property. Restaurant and bar patios are included in the bylaw.

### **5. Public opinion**

The recent Alberta Tobacco Survey (2007) found that 61% of Albertans were exposed to second-hand smoke on sidewalks or in parks in the previous month.<sup>22</sup> The same survey also found that 70% of Albertans strongly support or somewhat support a ban on smoking in public parks and on beaches.

A Woodstock Ontario survey found similar results among the general population. When reviewing responses of only those people who smoke a majority at 59% were supportive of restricting smoking in national/provincial parks (46% agreed to restrict smoking to certain areas and 13% were in favor of not permitting smoking at all). Smokers were even more in favour of restricting smoking at patrolled public beaches, 61% stated they were in favor of some form of restrictions (40% agreed to restrict smoking to certain areas and 20% in favor of total bans).<sup>23</sup>

### **Conclusion**

Outdoor smoking has a negative impact on the environment and public health. To reduce the negative impact of outdoor smoking we recommend the following areas and venues become smoke-free:

- 1. As an interim and immediate measure we recommend that any outdoor fire ban in any jurisdiction include a complete ban on smoking until the fire ban is lifted.**
2. Outdoor recreational areas including public playgrounds, public parks (including provincial and national parks) public beaches, sports and entertainment venues, stadiums, sports fields, public docks, decks of public boats and outdoor shopping areas or markets;
3. Partially enclosed outdoor worksites;
4. Outdoor waiting areas (transit stops, line-ups for venues, etc...)

<sup>22</sup> Alberta Tobacco Survey. Alberta Cancer Board December 2007

<sup>23</sup> Kennedy, RD (October 23, 2008) Personal Communication -- Unpublished results from the first wave of "Evaluation of the city of Woodstock's outdoor smoking by-law - A longitudinal study of smokers and non-smokers", as described here: <http://www.ctcri.ca/~ctcri/en/index.php?option=content&task=view&id=26&Itemid=45> received ahead of publishing October 22, 2008.