

Cigarette Litter—IMPACTS

Source: [Clean Virginia Waterways](#)

The impacts of cigarette litter are many (each discussed below):

- **Toxic chemicals** leach out of cigarette butts and can kill small animals
- **Fires** (destroys habitats for animals, homes; Economic costs of fires)
- **Ingestion by children and small animals** which mistake butts for food
- **Cost of cleaning up** litter & lost revenue from visitors

Toxins in Cigarette Butts

Cigarette butts are not just ugly—they also present a threat to wildlife. Plastic pieces have been found in the stomachs of fish, birds, whales and other marine creatures that mistake them for food. So ingestion of plastic cigarette filters is a threat to wildlife.

Studies conducted by Clean Virginia Waterways show that the chemicals in cigarette butts easily leach out of the butts, and are deadly to water fleas (a small but important animal that lives in most freshwater lakes and streams as well as the ocean). The evidence indicates that the toxic chemicals leached from discarded cigarette butts present a biohazard to the [water flea](#) at concentrations of more than 0.125 butts per liter, or about **one butt per two gallons of water**. The leachate from the remnant **tobacco portion** of a cigarette butt is deadlier at smaller concentrations than are the chemicals that leach out of the **filter portion** of a butt.

Read all about it! [Click here to read an article](#) that was published in the August 2000 issue of the American Littoral Society journal, *The Underwater Naturalist*. This article, by CVW's Executive Director Kathleen M. Register, includes background data, such as the fact that 2.1 billion pounds of cigarette filters were discarded worldwide in 1998, along with results of her research showing that leached chemicals from cigarette filters are deadly to the water flea *Daphnia magna*, a small crustacean at the lower end of, but important to the aquatic food chain.

When eaten, the toxins in cigarette butts also can make small children sick. See below for more information.

Fires caused by cigarette butts

According to the [American Burn Association](#), about 900 people in the United States die each year in fires started by cigarettes, and about 2,500 are injured. About 100 of the fire deaths each year are children and nonsmokers. Nationally, annual human and property costs of fires caused by careless smoking total about \$6 billion. In 1997, there were more than 130,000 cigarette related fires.

<http://www.tobacco.org/articles/category/fires/> has a list of fires that started from cigarettes, and several examples are listed below.

Assorted articles about cigarette butts and fires:

According to the National Fire Protection Association, cigarette-caused fires result in more than 1,000 civilian deaths, 3,000 critical injuries (many among firefighters), and \$400 million in direct property damage each year. (Source: Albany Times Union, June 13, 2003)

March 2004, **Richmond, Virginia**: Cigarette butts tossed in a jammed trash chute likely sparked a March 26 fire that destroyed 26 buildings and caused \$20 million in damage, fire officials said Thursday. Arson has been ruled out, a preliminary report released by the city said. The wind-whipped fire started about noon in a five-story apartment building under construction to house Virginia Commonwealth students. A chute used by workers to toss debris and sawdust was likely the source of the fire when still-smoldering cigarette butts were tossed into the chute with other trash. Wind gusts of 20 mph blew embers onto homes, some of them six blocks away. It took 200 firefighters about five hours to control the fire. One death was blamed on the fire when power to the area was shut off and a woman's oxygen tank quit. (Source: CBS 6-TV, Richmond)

In January 2001, a motorist driving along Interstate 8 in **San Diego County** flicked a cigarette butt onto the center median, sparking a fire that eventually burned more than 10,000 acres, destroyed 16 homes and charred 64 vehicles.

* In 1999, a lorry driver in **France** threw a butt from the cab window. The smoldering cigarette ignited a fire inside the Mont Blanc tunnel that killed 39 people.

* Investigators are still searching for the cause of the massive Durango fire in **Colorado** that has destroyed 56 homes since it began last month. The leading theory, however, is a discarded cigarette butt. Local police received 10 calls from drivers who saw other drivers flicking butts out the window at about the time the blaze began.

September 18, 2002:

CAMP PENDLETON (CA)- A wildfire that scorched 247 acres on the base Monday afternoon was started by a cigarette butt tossed by a passing motorist, fire investigators said. The fire burned for about four hours along Vandegrift Boulevard, near the airfield, before firefighters got it under control. Scott Simpson, an investigator with the Camp Pendleton Fire Department, said there are thousands of cigarette butts on the ground in that area, but he was able to find the specific one that ignited Monday's fire. "Burn patterns helped indicate the point of origin," Simpson said

Cigarette-caused fire threatens four San Andreas (CA) homes:

Smoking blamed for San Andreas fire; crews keep flames away from homes

Smoking is blamed for a grass fire that threatened at least four homes just south of San Andreas on Friday. The fire started about 11:44 a.m. behind a house on O'Connell Lane off Highway 49 and quickly ran up a hill of dry grass and trees fed by the vegetation and fanned by a stiff breeze.

A citation was issued to the smoker, according to information from the California Department of Forestry. At least one firefighter was treated for heat-related injuries as the temperature climbed above 100 degrees. As a precaution, PG&E shut down power along a line in the area, disrupting service to

about 2,300 people, PG&E spokeswoman Emily Barnett said. The blaze consumed five acres of grass and oak.

A long stretch of hot days and warm nights has local fire officials urging residents to use a little more caution when working around the house and nearby fields. Case in point n smoking is blamed for a grass fire that threatened at least four homes just south of San Andreas on Friday. The fire started about 11:44 a.m. behind a house on O'Connell Lane off Highway 49 and quickly ran up a hill of dry grass and trees fed by the vegetation and fanned by a stiff breeze. (Source: **Calaveras (CA)** Enterprise, 2003-07-23. Author: Craig Koscho)

Cigarette-caused fire responsible for Canadian Forest Fire

Thousands Flee Canadian Forest Fires

A cigarette-caused fire is currently responsible for one of the largest forest fires in Canadian history. The smoker has been identified, but Canadian authorities are trying to determine whether he should be charged with a crime. Premier Gordon Campbell said the state of emergency was aimed at helping crews fighting fires in McLure and surrounding areas, and to ensure a coordinated response to evacuating residents threatened by the expanding wildfires.

"This is the worst situation we've had and the driest circumstances that we've measured in the last 50 years," Campbell said. "In all likelihood British Columbians have never lived through a drier forest situation than we are living through this summer."

The fire apparently was started Wednesday by a discarded cigarette, fire information officer Kevin Matuga said. Fanned by high winds, it exploded Thursday night. (Source: AP, 2003-08-02. Author: Associated Press)

Southend: Pier faces smoking ban

Smoking on Southend pier could be banned after a fire at the weekend on the recently refurbished walkway. Southend Council will consider making the pier a smoking free zone after a beam caught fire. The blaze happened on the first day of a week of free entry to the pier for Southend residents so they can see how their 3 million over the last three years has been spent. The fire was almost certainly caused by a discarded cigarette. (Source: *This is Essex (United Kingdom)*, July 21, 2003)

Up-to-date articles about cigarette litter and fires can be found on the tobacco.org website.

Ingestion of Cigarettes and Cigarette Butts by Children

[Click here for an article by the U.S. Center for Disease Control](#)

The CDC studied 146 children aged six months to two years who had ingested cigarettes or cigarette butts. One-third of them experienced illness—the most common symptom reported was vomiting. Most ingestions occurred in homes where children were exposed to smoke and where cigarettes and ashtrays were kept within the reach of children.

The study also found the following:

- Children in households where cigarettes were smoked in their presence were four times as likely to ingest cigarettes or cigarette butts as children in households where smoking does not occur around children.

- The ages of children in the study who had ingested cigarettes or cigarette butts were 6-24 months. Among children who had ingested cigarettes or cigarette butts the highest number of exposures occurred among children aged 6-12 months (76.7%).
- A third of children who ingested cigarettes or cigarette butts developed symptoms. Spontaneous vomiting occurred among 87 percent of children who developed symptoms. Other symptoms included nausea, lethargy, gagging, and a pale or flushed appearance.

The Cost of Litter

The cost of litter is great—whether the litter is cigarette butts, fast-food containers, beverage containers, or illegally dumped tires. Some of the costs are associated with the manpower it takes to pick up litter. Who picks up litter? Employees of schools, parks, hotels, restaurants, grocery stores, and local governments have to pick up litter, as do volunteers who care about the environment. Other costs are incurred when a cigarette butt starts a fire that destroys a forest, a field, or people's homes. And then there are the costs of "lost revenue." Tourists will not spend their vacation dollars to visit a beach or riverside park that is full of litter and trash.

Cost of picking up litter—Some Examples:

"School officials say landscapers who should be planting flowers and pruning shrubs are spending time instead picking up butts on the 15,000-acre campus: Some 13 landscapers spend 10 hours a week picking up discarded cigarettes at an estimated cost of \$150,000." -- Philadelphia Daily News, March 27, 2000 on Penn State Cigarette Litter Costs

Marshall University in Huntington:

"Maintenance spends a lot of time picking it up and it seems like we can't keep up," Dr. K. Edward Grose, vice president of operations, said. Andrew Sheetz, supervisor of roads and grounds, said a conservative estimate would be that at least \$30,000 is spent by his department alone picking up cigarettes and other litter. He has one employee who does nothing but pick up litter and empty trash from the nearly 100 trash cans around campus, Sheetz said. The worker's salary alone, not including overtime, benefits or insurance, comes to about \$27,000, Sheetz said."

Virginia's Department of Transportation (VDOT) spends more than \$6 million every year in picking up litter along Virginia's roads.

[Click here for newspaper articles](#) about how communities are trying to reduce cigarette litter. Up-to-date articles about cigarette litter and other tobacco-related topics can be found on the tobacco.org website. [Click here for information about workplace smoking bans](#), and how they impact cigarette litter in the environment.

Read all about cigarette butt litter!

[Click here to read an article](#) that was published in the August 2000 issue of the American Littoral Society journal, *The Underwater Naturalist*. This article, by CVW's Executive Director Kathleen M. Register, includes background data, such as the fact that 2.1 billion pounds of cigarette filters were discarded worldwide in 1998, along with results of her research showing that leached chemicals from cigarette filters are deadly to the water flea *Daphnia magna*, a small crustacean at the lower end of, but important to the aquatic food chain.

Students and Teachers:

Are you interested in doing a science fair project on cigarette litter? [Click here for ideas and information.](#)