

Damaging During Production

Tobacco is grown in more than 100 countries worldwide, mostly in developing countries. As a crop, it is responsible for damage to ancient forests (deforestation), soil nutrient depletion, green tobacco disease in farm workers, and water pollution from pesticides and fertilizers. Indigenous trees are cut down to provide fuel for curing, and the construction of curing barns. Tobacco is a sensitive plant prone to many diseases, and requires up to 16 applications of pesticide ~ including DDT and methyl bromide ~ during a 3-month growing period. Methyl bromide contributes significantly to ozone depletion (Source: Action on Smoking and Health).



You Can Create Long Lasting Change By Protecting Our Environment

- Stop smoking and encourage others to do the same.
- Don't throw butts in storm drains, out of car windows or into the environment.
- Make sure cigarettes are always fully extinguished.
- Carry and use a portable or disposable ashtray.
- Encourage business owners to install appropriate cigarette disposal receptacles.
- Take personal responsibility for your cigarette litter and encourage others to do the same.
- Volunteer to clean up a beach, park or outdoor area in your community.

Join the Growing Number of Concerned Citizens in San Mateo County

Citizens for Clean Open Spaces is an alliance of San Mateo county residents, organizations, businesses and visitors dedicated to promoting greater sanctity of sensitive ecosystems by connecting public health and environmental education to stewardship and citizen action initiatives.

Log on onto www.cleanopenspaces.org to learn more about the issue and how to get involved in preserving and protecting our open spaces. Volunteer, donate and sign up for education trainings to help reduce tobacco litter in your community and our coastal watershed.

For more information on how to quit smoking, contact the San Mateo County Health Services Agency at (650) 573-3989.



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TOBACCO'S IMPACT

THE WHOLE LIFE CYCLE OF A CIGARETTE TAKES A HEAVY TOLL ON THE ENVIRONMENT

BUTTS ARE A BIOHAZARD

Filters are Plastic

95% of cigarette filters are made from cellulose acetate, a thermoplastic that takes up to 3 years or more to degrade in the environment.



☠ Pellets of Poison

A cigarette butt filter traps the dangerous by-products of smoking by accumulating particulate smoke components and **165 toxic chemicals** that pose risks to people, wildlife and water quality. The poisonous agents that leach into the environment include:

- Arsenic:** used in rat poison
- Acetic acid:** found in photo developing fluid
- Acetone:** main ingredient in paint thinner and nail polish remover
- Ammonia:** a typical household cleaning fluid
- Benzene:** found in rubber cement
- Butane:** cigarette lighter fluid
- Cadmium:** found in batteries
- Carbon Monoxide:** a poisonous gas in car exhaust
- DDT/Dieldrin:** insecticides
- Formaldehyde:** used to embalm dead bodies
- Hexamine:** in barbecue lighter fluid
- Hydrazine:** used in jet and rocket fuels
- Hydrogen Cyanide:** used in gas chambers
- Lead:** a highly poisonous metal
- Napthalene:** used in explosives and moth balls
- Nitrobenzene:** a gasoline additive
- Phenol:** used in disinfectants and plastics
- Polonium-210:** a highly radioactive element
- Toluene:** found in embalmer's glue

Most cases of nicotine poisoning among children result from ingesting cigarette butts (Source: American Association of Poison Control Center).



Accumulating In Our Waste Stream

Cigarette butts are the most littered item accumulating in our waste stream. Worldwide, 4.3 trillion are littered annually. In the US, more than 87,000 tons of cigarettes wind up as landfill or discarded as litter ~ more than twice the weight of oil spilled by the Exxon Valdez in 1989 (Source: CigaretteLitter.org).

Carrying Chemicals to Our Water Sources

Chemicals in cigarette butts combined with non-point source pollutants are carried through storm drains by rainfall and water runoff to our lakes, rivers, wetlands, coastal waters, and even our underground sources of drinking water. Aquatic ecosystems are particularly threatened or damaged by water pollution.

Aquatic Toxicity Study

Butts have been found to be acutely toxic to water fleas ~ a planktonic animal that occupies a critical position in the food chain of aquatic ecosystems by transferring energy and organic matter from algae to higher consumers such as fish. 100% of the animals died from exposure to the chemicals found in one used cigarette filter per 2 liters of water. (Source: The Underwater Naturalist, Bulletin of the American Littoral Society [using Aquatic Invertbrate Acute toxicity testing Protocols for Freshwater Daphnids, USEPA, 1996]).



Contaminating Outdoor Air

The EPA classifies environmental tobacco smoke, or secondhand smoke, as a Class A carcinogen, in the same category as asbestos and radon. Secondhand smoke contains **more than 4,000 chemicals**, including arsenic, benzene, formaldehyde, carbon monoxide and polonium 210 ~ a radioactive element. While smoke dissipates more quickly outdoors, combustion particles and gases in secondhand smoke are heavier than air. Deadly particles linger in the air long enough to be breathed into the lungs (Source: Secondhand Smoke Consultants, RepaceAssociation, Inc.).

Impacting The Food Chain

A visible consequence is being witnessed higher up on the food chain by field biologists and wildlife rehabilitators who routinely find cigarette butts in the intestines, stomachs, and X-rays of dead or sick sea turtles, birds, fish, and dolphins. Seabirds that forage for food near dunes have been observed ingesting cigarette butts. Biologists suspect even trace amounts of chemicals such as nicotine may have harmful effects at the origins of the food web.

Polluting Our Beaches

In 2003, and for more than 15 consecutive years, butts have ranked as **the #1 littered item collected from beaches** during California’s Coastal Cleanup Day. Ecologically, sand on beaches is an essential habitat to many coastal-dependent and endangered species. Shorebirds feed on microscopic creatures, diatoms and bacteria found in grains of sand. Sea lions, elephant seals and harbor seals haul out daily on beaches to absorb the heat from the sun, give birth and feed their newborn pups. According to the UN Maritime International Organization, 177 marine animals and 111 species of seabirds are affected by tobacco. Tumors found in turtles returning to beaches to lay eggs in the sand have been linked to cigarette butt pollution in Hawaii.

A Littered Butt is Unlawful

California’s litter law includes the willful or negligent act of discarding **a lighted or non-lighted cigarette, cigar, match, or any flaming or glowing material** on land or water in other than appropriate storage containers or areas designated for such purposes. Violators can receive mandatory fines up to \$1,000.

Causing Wildfires

From an ecological perspective, fires caused by lit cigarette butts unnecessarily destroy wildlife habitat and do not fit within a natural occurrence where ecosystems adapt to periodic recurrences to recycle nutrients and renew system functions.