

## Roushes: Disconnect – smokers don't think cigarette butts are litter

Contributed by Dave and Jeannette Roush  
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An estimated 5.5 trillion commercially produced cigarette butts were flipped by smokers last year into the environment. Over three million plastic wrappers from cigarette packages are tossed into the environment each year.

Tobacco debris is the most littered item in the world. These butts are flipped all over the country, in parks, zoos, hiking trails, campgrounds, beaches and piers.

Against popular belief, cigarette filters are not made of cotton. They are made from cellulose acetate, which is a plastic. Most filters decompose in approximately ten years, but it can take up to 22 years for one filter butt to decompose in some situations.

Tobacco litter poses a serious health hazard to children and animals. The toxic residue in butts not only litters the environment, but seeps into underground water systems and poisons the soil.

There are over 4,000 chemicals in each cigarette, with over 60 known carcinogenic. Examples of chemicals found in cigarette litter are: formaldehyde, arsenic, ammonia, nicotine (a natural occurring insecticide in tobacco leaves), acetone, carbon monoxide, and benzene. It is a complex mixture which cannot be changed by nature. There is no safe level of exposure of these dangerous chemicals.

How do cigarette butts contribute to water pollution? The chemicals contained in tobacco litter contribute to non-point source pollution when carried through storm drains by rainfall and urban runoff to our lakes, rivers, wetlands, coastal waters, and even our underground sources of drinking water. Non point source pollution has harmful effects on drinking water supplies, recreation, fisheries, and wildlife (Source: [www.CigaretteLitter.org](http://www.CigaretteLitter.org) ).

How do cigarette butts impact aquatic life? The EPA's aquatic bioassay studies provide evidentiary conclusion that one cigarette butt per 2 liters of water is 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. Water fleas are widely used to determine acute toxicity of chemicals in aquatic invertebrates. The toxic chemicals that leach from a cigarette's cellulose acetate filter and remnant tobacco are a biohazard. 100 percent of the animals died after 48 hours in the concentrations that were equivalent to the chemicals found in two or more used cigarette filters (Source: US EPA, Aquatic Invertebrate Acute Toxicity Test for Freshwater Daphnids, 1996).

How does cigarette butt litter affect beaches? In 2008, and for more than 20 consecutive years, cigarette butts have ranked as the No. 1 littered item collected in public parks and on beaches during Annual Clean Up Days. Ecologically, sand and dirt on beaches is an essential habitat to many lake dependent species – including egrets, herons, ducks, pelicans and the many more species living on the shores of Clear Lake.

Birds feed on microscopic creatures, diatoms and bacteria found in grains of sand and dirt. Birds often ingest discarded cigarette butts, poisoning their entire systems. According to the UN International Maritime Organization, all birds and local wildlife are affected by tobacco litter causing unnecessary malnutrition, starvation, and death (Source: California Coastal Commission 2008, UN International Maritime Organization 2003).

Twenty seven of the 50 states in the U. S. have communities with outdoor tobacco smoke free ordinances at parks, youth sports, trails and beaches. Smoke-free parks and piers is the only effective way to protect our beautiful county and all residents and visitors, including children, animal and fish.

The Lake County Tobacco Coalition works to educate residents of Lake County about the toxic effects of tobacco use and tobacco litter, youth tobacco product access issues, and cessation programs.

If you would like more information about the coalition, call us at 707-263-7177 or Lowell Grant at 707-263-4235.

Dave and Jeannette Roush are members of the Lake County Tobacco Education Coalition. They live in Lakeport.